magnus Group
Share, Receive & Grow !

3rd Edition of International Conference on

Diabetes and Endocrinology

October 23-25, 2025
Orlando, Florida, USA

COME AND JOIN US IN

ORLANDO, USA OR VIRTUALLY

+1 (702) 988-2320 +1 (779) 429-2143

BOOK OF ABSTRACTS

5th Edition of

World Obesity and Weight Management Congress

3rd Edition of International Conference on

Diabetes and Endocrinology

OCT

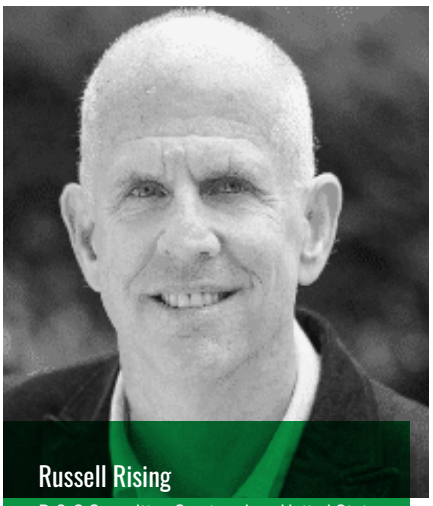
23-25

BOOK OF

ABSTRACTS

Index

Keynote Speakers

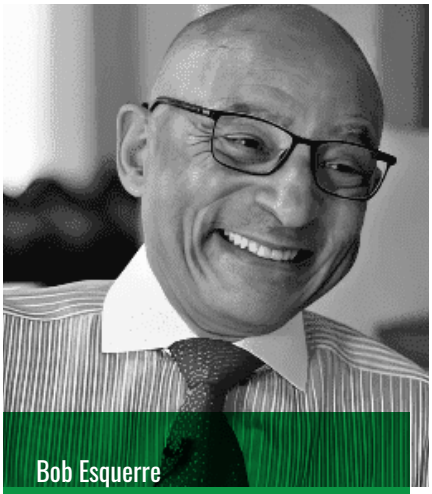


Russell Rising
D & S Consulting Services Inc., United States

F Buck Willis
Christian College of Medicine, Belize

Yong Xiao Wang
Albany Medical College, United States

Jeane Silva
Augusta University, United States

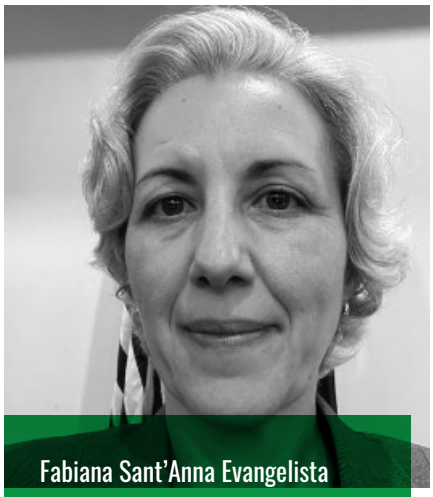


Bob Esquerre
Esquerre Fitness Group International, United States

Ann Gilbert
BS Purdue University, United States

Andrzej Bissinger
Medical University of Lodz, Poland

Allison B. Reiss
NYU Grossman Long Island School of Medicine, United States



Fabiana Sant'Anna Evangelista
University of São Paulo, Brazil

Keynote Speakers

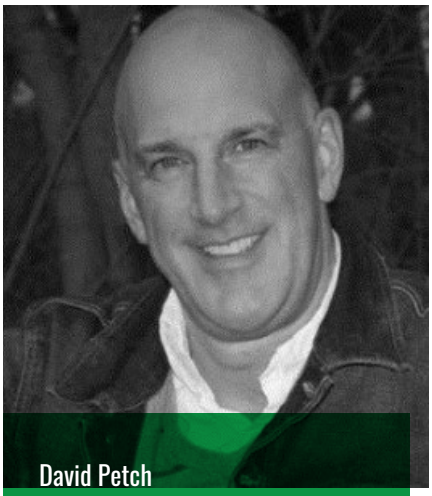
Ashok Sharma
Indraprastha Apollo Hospital, India

Amy Gutman
AdventHealth; ToughLoveMD, United States

Joshua De Leon
NYU Grossman Long Island School of Medicine, United States

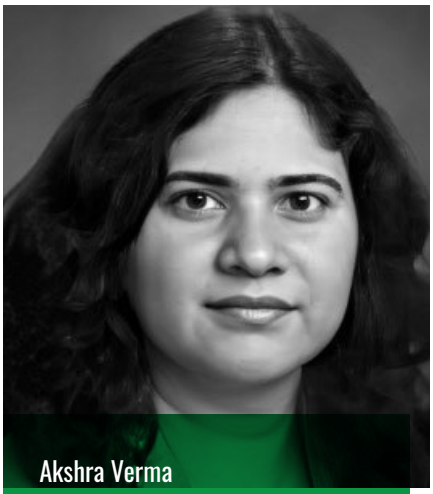
Vicky Midwood
Go Figure Coaching, United Kingdom

Wan Rosli Wan Ishak
Universiti Sains Malaysia, Malaysia



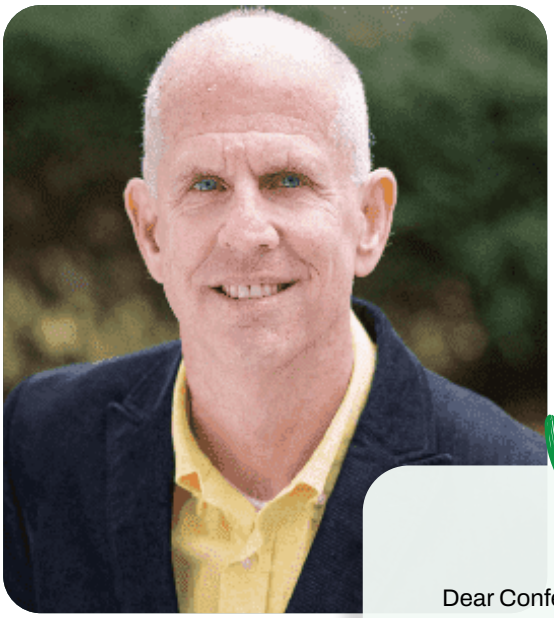
David Petch
utR Biotech, Canada

Sujith Rajan
NYU Long Island School of Medicine, United States



Akshra Verma
Southern Illinois University, United States

Thank You All...



Welcome Message

Dear Conference Attendees,

It's an honor to write these welcome notes for the session entitled Obesity and weight management. Despite all the advances in our knowledge of obesity, this disease still plagues many individuals worldwide. Part of the reason many individuals fail to lose weight is due to inaccurate exercise prescriptions. Many obesity treatment programs rely on outdated methodologies to provide measurements of exercise energetics. Furthermore, these measurements are limited by connection to the instrumentation of metabolic carts thus limiting exercise to running or cycling. It would be prudent to have a methodology that could accurately measure the energetics of just about any physical activity. Many obese individuals are more likely to perform a physical activity they enjoy as a form of exercise, improving their treatment outcome. The WOC is a great opportunity for all participants from various research and clinical backgrounds to gain knowledge with up-to-date methodologies regarding exercise metabolic testing.

Russell Rising, Ph.D.

President, D & S Consulting Services Inc., USA

Welcome Message

Dear Conference Attendees,

As the Chair, I am very honorable and delightful to write these welcome notes.

The current conference is focused on Obesity and Diabetes. As you may know, we are living in the era of ever-escalating national crisis of obesity and its related comorbidities including type-1 and type 2 diabetes in both adults and youth. A multi-disciplinary approach linking basic, clinical and public health research is desperately necessitated to advance our understanding of the growing pandemic of obesity and diabetes. In line with this, our session offers a variety of research topics including: (1) Diabetes and Endocrinology; (2) Genomics, Diabetes and Obesity; (3) Diabetes and Metabolic Disorders; (4) Diabetic Nephropathy and Urine; (5) Diabetic Retinopathy; and (6) Clinical Researches in Diabetes. It will be a great opportunity for all the participants including young and senior researchers, scientists, clinicians and academicians to gain the excellent knowledge with the up-to-date research and clinical care in obesity and diabetes.

Prof. Dr. Yong-Xiao Wang

Albany Medical College, United States

Welcome Message

Welcome Attendees!

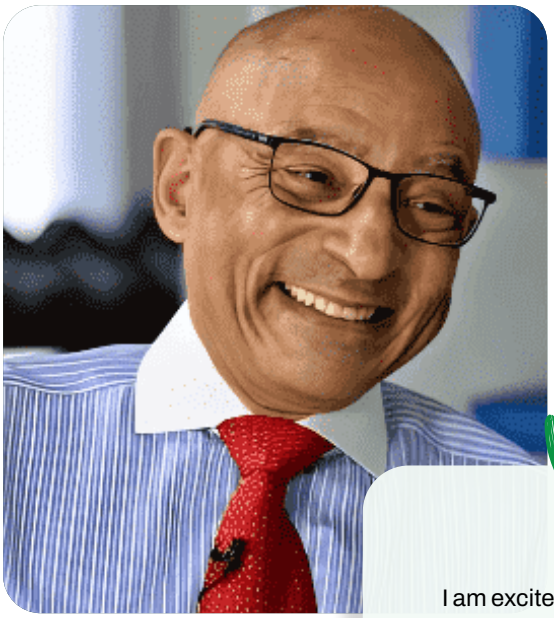
Our sessions in Diabetes 2025 will present novel, integrative protocols that research has shown could help reverse Prediabetes and Type 2. Obesity with diabetes is now affecting 30% of the Caribbean and Central America, and our session will discuss the following: 1) Correlations between pre-existing food allergens and diabetes, 2) Effective food allergen testing/elimination for treating prediabetes with obesity, 3) Associations between prediabetes, immunological intolerance of fructose, sugar cane, sugar beets, and the TCF7L2 gene.

Further, our session will illustrate specific tools that clinicians can use to treat diabetes with obesity and how Integrative treatments can have greater efficacy than metformin. Diabetes has grown by 455% increase In Latin America and the Caribbean, and it will be our honor to present the material that can help reverse the global growth of diabetes with obesity.

F Buck Willis, PhD, MD, FACSM, FIDF

Professor of Clinical Research and Physiology,

Christian College of Medicine, Belize



Welcome Message

I am excited to be invited back to present before the WOC Family. WOC 2024 was a great experience. WOC 2025 will be even better!

I feel truly honored to work alongside global colleagues who are dedicated to supporting individuals as they navigate their obesity management journeys. In my session, Empowering Successful Outcomes: Support Strategies for Individuals Using AOMs, we'll look at programming options that reach beyond AOMs—embracing the diverse paths people may take, including bariatric surgery and personalized behavioral change strategies. The goal is to create flexible, supportive approaches that empower people to succeed, no matter where they are in their journey.

Bob Esquerre

Esquerre Fitness Group International,

United States

Welcome Message

Dear Conference Attendees,

It is an honor and great pleasure to write a few welcome notes for the session entitled Diabetes and Endocrinology. On behalf of the Organizing Committee, it is my honour to welcome you to the 3rd Edition of International Conference on Diabetes and Endocrinology (Diabetes 2025), scheduled as a Hybrid event on Oct 23-25, 2025. The conference will explore the theme The Endocrine Network: Connecting Research, Care, and Community. Our goal is to enhance therapeutic strategies, foster patient-centric care, and leverage emerging technologies to improve significant outcomes. We invite you to engage with fellow experts, share insights, and explore collaborative opportunities that can reshape patient experiences.

The Organizing Committee looks forward to interacting with you and discovering the impactful contributions you bring to our field. This conference is an international platform for presenting research outcomes about diabetes management and therapeutics, enhancing ideas about it, and thus, contributing to disseminating knowledge in the management of disease for the benefit of society.

Join us in Diabetes 2025 to explore the latest breakthroughs and play a pivotal role in shaping an eco-friendly tomorrow. We are thrilled to have you with us and anticipate an inspiring exchange of knowledge and ideas.

Andrzej Bissinger MD, PhD, FESC

Medical University of Lodz, Poland

Welcome Message

Dear Congress Attendees,

It is with great joy and excitement that I welcome you to the 5th Edition of the World Obesity and Weight Management Congress, taking place in Orlando, Florida, USA!

Over the past four editions, this congress has grown into a global forum where knowledge is shared, innovations are unveiled, and collaborations are built. This 5th edition promises to be our most dynamic yet, showcasing groundbreaking research, forward-thinking strategies, and practical solutions for promoting healthier lives.

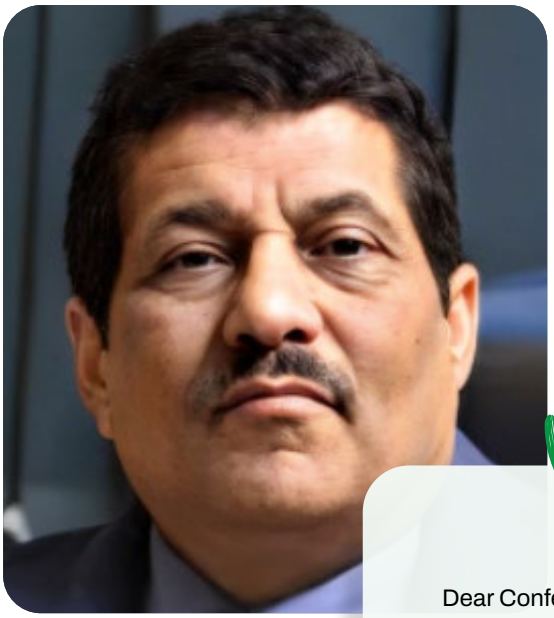
Beyond the sessions, this anniversary edition is also a celebration of our collective progress and shared commitment. We invite you to participate fully - whether in thought-provoking discussions, networking opportunities, or collaborative initiatives—as together we continue to shape the future of obesity and weight management.

Thank you for being part of this landmark moment in Orlando. Let us celebrate five years of learning, progress, and partnership, and look forward with renewed energy to the healthier future we are building together.

Wishing you an inspiring, rewarding, and festive 5th Congress experience!

Prof. Dr. Wan Rosli Wan Ishak, PhD

Universiti Sains Malaysia, Malaysia



Welcome Message

Dear Conference Attendees,

It is an honor and great pleasure to write a few welcome notes for the session entitled Obesity and Diabetes. We are living in the era of ever-escalating national crisis of obesity and its related comorbidities including type 2 diabetes in both adults and youth. A multi-disciplinary approach linking basic, clinical and public health research is desperately necessitated to advance our understanding of the growing pandemic of obesity and diabetes.

In line with this, our session offers a variety of research topics including: (1) Diabetes and Endocrinology; (2) Genomics, Type 2 Diabetes and Obesity; (3) Diabetes and Metabolic Disorders; (4) Diabetic Nephropathy and Urine; (5) Diabetic Retinopathy; and (6) Clinical Researches in Diabetes. It will be a great opportunity for the WOC participants including young and senior researchers, scientists, clinicians and academicians to gain knowledge with the up-to-date research in obesity and diabetes.

Ashok Sharma

Indraprastha Apollo Hospital, India

ABOUT
MAGNUS GROUP

Magnus Group, a distinguished scientific event organizer, has been at the forefront of fostering knowledge exchange and collaboration since its inception in 2015. With a steadfast commitment to the ethos of Share, receive, grow, Magnus Group has successfully organized over 200 conferences spanning diverse fields, including Healthcare, Medical, Pharmaceutics, Chemistry, Nursing, Agriculture, and Plant Sciences.

The core philosophy of Magnus Group revolves around creating dynamic platforms that facilitate the exchange of cutting-edge research, insights, and innovations within the global scientific community. By bringing together experts, scholars, and professionals from various disciplines, Magnus Group cultivates an environment conducive to intellectual discourse, networking, and interdisciplinary collaboration.

Magnus Group's unwavering dedication to organizing impactful scientific events has positioned it as a key player in the global scientific community. By adhering to the motto of Share, receive, grow, Magnus Group continues to contribute significantly to the advancement of knowledge and the development of innovative solutions in various scientific domains.

ABOUT

CPD Accreditation

APPROVED PROVIDER
#780643

Continuing Professional Development (CPD) credits are valuable for WOC & Diabetes 2025 attendees as they provide recognition and validation of their ongoing learning and professional development. The number of CPD credits that can be earned is typically based on the number of sessions attended. You have an opportunity to avail 1 CPD credit for each hour of Attendance. Some benefits of CPD credits include:

Career advancement: CPD credits demonstrate a commitment to ongoing learning and professional development, which can enhance one's reputation and increase chances of career advancement.

Maintenance of professional credentials: Many professions require a minimum number of CPD credits to maintain their certification or license.

Increased knowledge: Attending WOC & Diabetes 2025 and earning CPD credits can help attendees stay current with the latest developments and advancements in their field.

Networking opportunities: WOC & Diabetes 2025 Conference provide opportunities for attendees to network with peers and experts, expanding their professional network and building relationships with potential collaborators.

Note: Each conference attendee will receive 27 CPD credits.

F BUCK WILLIS

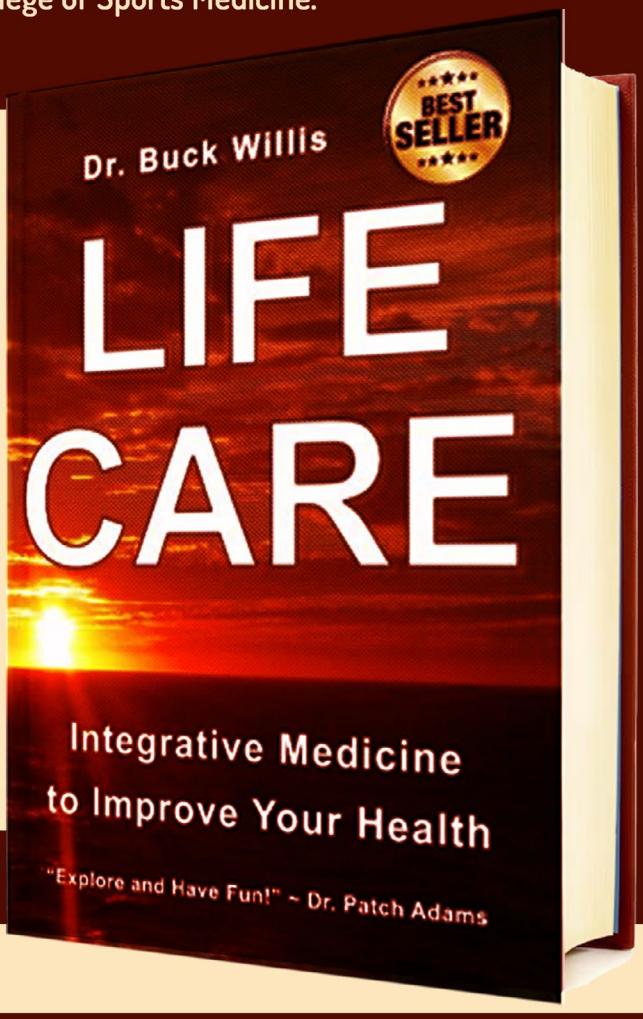
Christian College of Medicine, Belize

ABOUT THE AUTHOR

Dr. Buck Willis started his life again following what the FAA categorized as a "Fatal Plane Crash." He overtook the challenges from a 3-year series of 16 operations to rebuild his legs by later Squatting 230kg. After the crash he also earned four degrees, now including his MD, and his research has changed the standard of care in rehabilitation medicine (over 50 publications with eight books and 45 presentations). After earning his PhD in kinesiology, he was chosen to be a Fellow of the American College of Sports Medicine.

ABOUT THE BOOK

The purpose of LIFE CARE is to be the single-source guide for treating the most common diseases in the USA with holistic plus traditional medicine as home care. Plus, this book gives readers the perfect recipes and exercises when your doctor says you need to add "diet and exercise" for reducing anxiety to obesity.



Email: docwillis@yahoo.com

FUZZLE

FUZZLE

Fuzzle is an innovative weight management system that helps you build sustainable habits.

Sensory Disruption

Fuzzle's patent-pending design alters oral sensory feedback through temporary separation of the tongue and teeth. This behavioral mechanism is intended to modulate sensory reinforcement pathways associated with cravings and food-related cues.

Neural Pathway Modulation

Emerging research shows that taste and texture signals in the mouth can influence neural pathways related to hunger and satiety. Fuzzle is designed to interact with these sensory pathways by temporarily altering tongue-to-teeth contact. This sensory feedback modulation is intended to help the brain recalibrate responses to food cues and support healthier eating behaviors over time.

Mindful Behavior Reprogramming

Fuzzle's intuitive app provides structured guidance on when and what to eat, helping users recognize triggers and patterns that lead to accidental snacking. By promoting awareness and intention, the system supports the development of mindful, consistent eating habits.

Fuzzle.com 833.389.9533 Team@Fuzzle.com

Table of Contents

BOOK OF ABSTRACTS

5th Edition of

World Obesity and Weight Management Congress

3rd Edition of International Conference on

Diabetes and Endocrinology

OCT

23-25

KEYNOTE PRESENTATIONS

Biography

Akshra Verma

General Internal Medicine, Southern Illinois University, Springfield, IL, USA

Dr. Verma is an Associate Professor of General Internal Medicine at Southern Illinois University, Springfield, IL. Dr. Verma is the director of GIM Federally Qualified Health Center clinics. After earning her medical degree in India in 2001, she completed a Master's in Microbiology and Immunology at Temple University, Pennsylvania in 2006 and an internal medicine residency at the University of Illinois at Urbana Champaign in 2009. Passionate about nutrition and weight management, Dr. Verma became a Diplomate in Obesity Medicine in 2018 and has presented at multiple regional meetings. Her interests include clinical weight management, clinic operations, process improvement, and physician wellness.

From cravings to clarity: Reclaiming power over food and feelings

Emotional eating is an increasingly prevalent behavioral pattern characterized by the consumption of food in response to emotional states rather than physiological hunger. It contributes significantly to challenges in weight regulation, mood disorders, and disordered eating patterns. The presentation explores how emotional states—such as stress, anxiety, loneliness, and boredom—activate conditioned responses that lead to food-seeking behavior. Foods high in sugar and fat stimulate dopaminergic and serotonergic pathways in the brain, mimicking addictive patterns and reinforcing short-term emotional relief. However, this temporary comfort is frequently followed by negative affect, guilt, and a perpetuating cycle of dysregulated eating.

Central to the discussion is the emotional eating cycle and the practical application of a behavioral intervention model known as the 5 Ds: Delay, Distract, Distance, Determine, and Decide. This approach integrates cognitive-behavioral principles with mindfulness-based strategies, enabling individuals to interrupt automatic eating responses and develop greater emotional self-regulation. The presentation highlights the importance of identifying emotional triggers and enhancing interoceptive awareness as foundational steps in behavioral change.

In addition to psychological strategies, the presentation addresses lifestyle modifications including the reduction of ultra-processed food intake, incorporation of mindful eating practices, intermittent fasting, sleep optimization, physical activity, journaling, and when appropriate, psychotherapeutic intervention. These methods are positioned not as restrictive tactics, but as integrative tools to restore autonomy and improve emotional resilience.

Allison B. Reiss M.D., Joshua De Leon M.D

Department of Medicine, NYU Grossman Long Island School of Medicine, Mineola, NY 11501, USA

Heart and brain: Linking obesity-related inflammation, cardiovascular disease and cognitive function

The heart and brain are interconnected and risk factors that impact the heart can negatively affect the brain and cognition. Among the underlying features that foster both poor brain health and poor heart health are obesity, diabetes, physical inactivity and low sleep quality. Obesity and type 2 diabetes are associated with an increased likelihood of cognitive impairment and dementia. Further, obesity is a causal factor in obstructive sleep apnea leading to intermittent hypoxemia, neuroinflammation and cognitive dysfunction, Cerebrovascular disease with reduced cerebral blood flow brings on stroke and elevates dementia risk. Like cardiovascular disease, cerebrovascular disease is also accelerated in the setting of obesity, likely through the same mechanisms involving endothelial dysfunction and damage to macrovasculature and microvasculature from hypertension, dyslipidemia and inflammation. Obesity is considered a risk factor for recurrent stroke. The protracted low-grade chronic elevation of inflammatory markers found with excess adiposity leads to oxidative stress and promotes both endothelial dysfunction and a pro-thrombotic state. Greater loss of brain volume has been documented in middle-aged and older adults with obesity compared with young adults with obesity. Obesity poses a threat to the cardiovascular and cerebrovascular health and well-being of individuals worldwide. Unfortunately, treatments directed at reducing caloric intake are of

Biography

Allison B. Reiss, M.D. is a Board-Certified internal medicine physician, educator and molecular biologist who studies inflammatory mechanisms underlying the development of cardiovascular disease and cognitive impairment. Her laboratory research is centered on discovering disease-modifying therapies for these major clinical challenges. Recently named a Trailblazer, she has a passion for community outreach and is dedicated to improving healthcare, especially for older populations. Dr. Reiss is Head of the Inflammation Laboratory and Associate Professor of Medicine at NYU Grossman Long Island School of Medicine. She is both an editor and author, well-published in medical journals and has chaired national and international symposia.

limited effectiveness. This presentation will focus on the latest research into the link between excess adipose tissue and brain health with attention to dietary and lifestyle interventions that may be protective of brain integrity and function. The destructive consequences of food advertising and availability of highly processed foods with low satiating potential will be addressed.

Biography

Joshua De Leon, M.D., is a Board-Certified cardiologist and Associate Professor of Medicine at NYU Grossman Long Island School of Medicine. After completing a fellowship in clinical and molecular cardiology, he went on to clinical work treating patients with cardiovascular disease, focusing on Acute Coronary Syndromes (ACS). His research efforts are directed toward understanding the cellular and molecular mechanisms underlying ACS as well as the more chronic processes underlying atherogenesis. His research has included extensive collaboration with Dr. Allison Reiss. Their work has been highly productive, leading to multiple publications. He is Associate Editor of the Journal of Investigative Medicine.

Amy Gutman MD, FACEP

AdventHealth; Orlando, Florida, USA

ToughLoveMD; Winter Park, Florida, USA

The first responder obesity epidemic: Practical solutions to our major cause of morbidity and mortality

Obesity poses a significant threat to the health and safety of first responders. It increases the risk of job-related disabilities and various illnesses such as neurovascular, cardiovascular, endocrine, and oncologic diseases. It is a primary contributor to sudden cardiac events, the most common cause of on-duty firefighter and prehospital provider mortality.

The number of overweight, obese, and unfit first responders has risen to alarming levels in EMS and fire departments across the nation, mirroring the world's population. All first responders must maintain good physical condition and adequate cardiovascular fitness to cope with job-related physical and mental stressors and perform their duties with minimal health risks. Without high levels of health and wellness, first responders may not be able to perform the strenuous physical requirements of their job and risk injury and even death for themselves, their colleagues, and the general population. Being overweight or obese interferes with job performance and increases the risk of injury during prehospital activities and training.

Despite first responders' bravery and commitment to public service, this obesity epidemic threatens their ability to respond effectively to emergencies. This lecture addresses this obesity epidemic practically and empathetically while offering practical solutions to protect those who protect us all.

Biography

With over three decades of clinical, corporate, and research experience, Dr. Amy Gutman, MD, FACEP, is board-certified in Emergency Medicine with multiple fellowships and specialized certifications, including leadership/ administration, occupational medicine, and nutritional and ketogenic coaching. She is a nocturnist emergency physician and CEO of ToughLoveMD, a private practice that optimizes physical and mental health through evidence-based medical practices. She has spoken to thousands of global conference attendees, dedicated to utilizing transformational medical science to empower personal and professional resiliency.

Objectives

1. Explore morbidity and mortality statistics of first responder LODDs.
2. Review the epidemiology C physiology of obesity.
3. Examine how job requirements contribute to obesity occurrence.
4. Practical management strategies.

Amy Gutman MD, FACEP

AdventHealth; Orlando, Florida, USA

ToughLoveMD; Winter Park, Florida, USA

The menopausal mind: Reframing female senescence as a neuroendocrine disorder with root cause management strategies

Uncover the science supporting the profound influence of proper nutrition on menopausal and neurological senescent changes. Dr. Amy Gutman, an emergency medicine physician and researcher now focusing on preventative and functional medicine, delves into evidence-based science showcasing the transformative advantages of letting food be thy medicine as a natural source of vitality and longevity. Spend an enlightening hour exploring the remarkable and rejuvenating benefits of adopting optimal nutrition as a non-pharmaceutical-based fountain of youth for your brain and body.

In this enlightening session, you'll discover how specific dietary modifications can empower you to counteract the negative physical and mental effects of menopause, all while avoiding the often harmful side effects of hormone replacement therapy. This presentation illustrates how diet influences fertility, alleviates menopausal symptoms, and mitigates the menopausal effects of vasomotor and cognitive decline, inflammation, infertility, and memory loss.

Objectives:

1. The physiology of menopause includes a review of androgen hormone production and utilization.
2. Review of Hormone Replacement Therapy (HRT), including the significant adverse effects.

Biography

With over three decades of clinical, corporate, and research experience, Dr. Amy Gutman, MD, FACEP, is board-certified in Emergency Medicine with multiple fellowships and specialized certifications, including leadership/ administration, occupational medicine, and nutritional and ketogenic coaching. She is a nocturnist emergency physician and CEO of ToughLoveMD, a private practice that optimizes physical and mental health through evidence-based medical practices. She has spoken to thousands of global conference attendees, dedicated to utilizing transformational medical science to empower personal and professional resiliency.

3. Improving androgen production and utilization via diet alone vs hormone replacement therapy.
4. Understanding how food choice and quality affect neurotransmitters and hormonal balance.
5. Understanding how ketones can replace estrogen for brain energy transport.
6. How to efficiently implement dietary and lifestyle strategies to improve menopausal symptoms and slow aging.

Andrzej Bissinger MD, PhD

Medical University of Lodz, Poland

Why does atrial fibrillation often affect obese people?

Atrial Fibrillation (AF) is the most common cardiac arrhythmia, and its prevalence is significantly higher in individuals with obesity. This association is driven by multiple interrelated pathophysiological mechanisms, including structural, electrical, and metabolic changes in the heart. Obesity contributes to AF development through atrial enlargement, fibrosis, and increased epicardial fat deposition, all of which promote atrial remodeling. Additionally, obesity is associated with systemic inflammation and oxidative stress, both of which exacerbate atrial electrical instability and increase the likelihood of AF episodes. Another key factor linking obesity and AF is increased left atrial pressure and volume due to obesity-related conditions such as hypertension, obstructive sleep apnea, and Heart Failure With Preserved Ejection Fraction (HFpEF).

Obesity also complicates the management of AF. Obese individuals often experience reduced efficacy of antiarrhythmic medications and catheter ablation procedures, making rhythm control more challenging. They are also at a higher risk for stroke and thromboembolic complications.

Evidence suggests that weight loss and lifestyle modifications can significantly reduce AF burden and improve outcomes. Studies have shown that even modest weight reduction leads to improvements in atrial size, inflammation, and arrhythmia recurrence.

Biography

Dr. Andrzej Bissinger is a cardiologist and cardiac electrophysiologist. He graduated Medical University in Lodz, Poland in 1993, received his PhD degree in 1997 at the same institution. He is certified cardiologist since 2003 and Cardiac Device Specialist of European Heart Rhythm Association since 2007. He is a member of International Society of Holter & Noninvasive Electrocardiology; Polish Cardiac Society; European Society of Cardiology; European Heart Rhythm Association. He has published more than 76 research articles in SCI(E) journals. He was an investigator in several clinical studies. At present he works as a Head of Cardiac Electrophysioloy Lab in Department of Cardiology, 'Kopernik' Hospital, Lodz, Poland. His fields of work are general cardiology, non-invasive and invasive treatment of arrhythmias and treatment patients with heart failure.

Ann Gilbert

Fit-her Health & Fitness for Women Brandon, Florida, United States

Redefining fitness: Time-efficient strategies for active living with AOM medications

As the use of Anti-Obesity Medications (AOMs) continues to grow, so does the need to adopt fitness strategies that complement their benefits while addressing the unique challenges faced by individuals on these treatments. This presentation focuses on breaking traditional exercise stereotypes and offering innovative, time-efficient solutions for incorporating movement into everyday life.

The participants will study proven strategies aligned to four specific case studies from customers within the fit-her community, while studying the need for motivational interviewing and an innovative customer integration process.

Key takeaways include:

- Identifying barriers to physical activity and strategies to overcome them.
- Learning tailored, time-saving exercise techniques that suit diverse fitness levels.
- Gaining confidence in redefining what it means to stay active in a manageable and enjoyable way.

Join us to discover how small, intentional movements can create lasting health changes, even for those with busy schedules or limited exercise experience. Empower yourself or your customers to embrace a balanced approach to fitness that complements their AOM journey.

Biography

Ann Gilbert is an owner of Fit-Her Health & Fitness for Women. Ann oversees the operations of as many as 10 certified Personal Trainers, 15 Group Fitness professionals, and coordinates small and large group training programs for all ages. Ann was awarded ACE/IHRSA Personal Trainer of the Year and has been a popular speaker at conferences internationally since 2002. Ann advises club/studio owners, fit pros, and corporate wellness coaches on creating operational strategies to enhance retention and referral. Ann is known as an expert in relationship building and creating customer success.

Biography

Dr. Ashok Sharma, MBBS, MD (Medicine), is the Director of Sharda Medical Centre, Jhilmil Colony, Delhi, and Visiting Consultant at Apollo Hospital, Sarita Vihar, Delhi. With over 35 years of experience in internal medicine, he has been recognized with several prestigious honors including the Dr. PN Bahl Award, Bharat Gaurav Award, Sadbhawna Award, and Aardha Shri Award. He is an active member of GAPIO, Delhi Diabetic Forum, and the Indian Academy of Echocardiography. Dr. Sharma delivered keynote addresses at the World Obesity Conferences (Orlando 2023, Magnus 2024, Baltimore) and received the Medical Excellence Award 2024 at Diabetes India.

Ashok Sharma

Indraprastha Apollo Hospital, India

Prevalence and pattern of dyslipidemia and its associated factors among patients of type 2 diabetes mellitus in India

Background: Dyslipidemia is a common comorbidity in Type 2 Diabetes Mellitus (T2DM) and contributes to cardiovascular disease. Understanding the associations between anthropometric indices and lipid parameters is important for risk stratification.

Methods: A cross-sectional study was conducted in adults with T2DM. Data collected included age, Body Mass Index (BMI), Waist Circumference (WC), lipid parameters (Total Cholesterol [TC], LDL-C, HDL-C, Triglycerides [TG], TC/HDL ratio), and comorbidities (hypertension, dyslipidemia, Coronary Artery Disease [CAD], Chronic Kidney Disease [CKD]). Lipid levels were classified using standard criteria. Pearson's correlation was used to assess associations between anthropometric measures and lipid parameters.

Results: A total of 51 patients with T2DM (22 males, 29 females) were included. Median age was 59 years and median BMI was 26.2 kg/m^2. Comorbidities included hypertension (58.8%), dyslipidemia (76.5%), CAD (9.8%), and CKD (9.8%). Median lipid values were TC 166 mmol/L, LDL-C 92.2 mmol/L, HDL-C 49 mmol/L, and TG 214 mmol/L. Hypertriglyceridemia (60.8%) and low HDL-C (17.6%) were the most frequent lipid abnormalities. BMI showed an inverse correlation with TC ($r=-0.2823$, $p=0.047$), and WC showed an inverse correlation with HDL-C ($r=-0.2893$, $p=0.0395$). No other significant associations were observed.

Conclusion: Among adults with T2DM in India, hypertriglyceridemia and low HDL-C were the predominant lipid abnormalities. BMI and WC demonstrated differential associations with lipid fractions, highlighting the importance of assessing both general and central adiposity in cardiovascular risk evaluation.

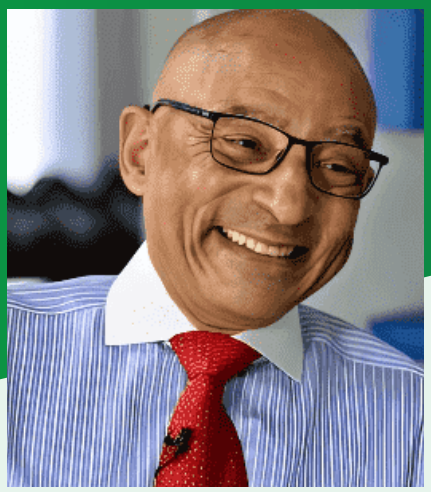
Bob Esquerre MA, NSCA-CPT

Esquerre Fitness Group International, United States

Empowering successful outcomes: Programming support strategies for customers on anti-obesity medications: 2025 programming updates

In 2013, the American Medical Association officially recognized Obesity as a disease. By 2030, clinically defined obesity is projected to affect over one billion people globally, representing a significant public health crisis. Defined by a Body Mass Index (BMI) of 30 or higher, obesity is linked to increased risks of comorbidities, including type 2 diabetes, cardiovascular disease, and certain cancers. The World Obesity Federation estimates that nearly one in five women and one in seven men will have obesity, with higher prevalence expected in low-and middle-income countries due to rapid urbanization and lifestyle changes. This epidemic necessitates urgent, globally coordinated efforts to implement effective prevention and treatment interventions. Bob will review and update the Anti-Obesity Medication (AOM) customer support concept that was initially introduced at the WOC 2024 Conference. His presentation will feature a series of interactive think piece discussions, designed to address the evolving goals and needs of customers using AOMs. The AOM support program's mission, that will be created, delivered & managed by the global health & fitness sector, is to create strategies that position customers, who are at various stages of their journeys-to-success, to be empowered to control and manage their journeys. On a global scale, Bob's AOM customer support program will change people's lives for the better.

Biography



Bob brings 38 years of expertise in the global Health & Fitness Sector, preceded by 13 years in Corporate America specializing in business planning and operations. A Trainer of Trainers and global lecturer, Bob advises club/studio owners, managers, and fitness professionals on business growth and operations strategies. He focuses on creating inclusive, customer-centric communities that engage the 80%+ inactive population and delivering diversified experiences. Bob emphasizes integrating Emotional Intelligence skills into fitness programs, empowering professionals to build meaningful relationships with active and inactive customers alike, while fostering safe and welcoming environments for all.

The program's vision is to provide a 3-tier set of blended programming options that can support successful customer-centric outcomes. These will include: (1) Movement, Activity & Exercise Strategies, (2) Nutritional Coaching, and (3) Lifestyle Change Strategies. The Program values will emphasize fostering a resilient, supportive and inclusive community that will motivate AOM customers to join, stay committed, and encourage others to participate. Bob's content will be based on all updated research that will be available as of the date of the WOC 2025 Conference.

David Petch

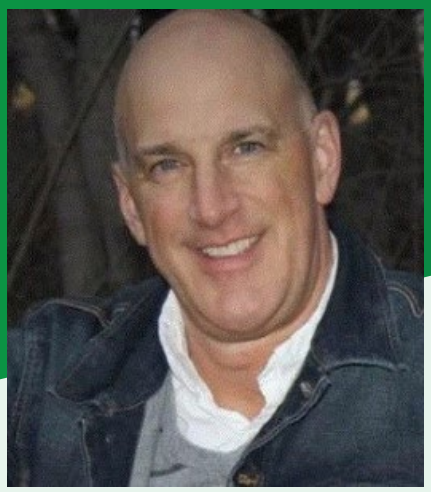
utR Biotech, Winnipeg, Manitoba, Canada

AI receptor binding studies reveal GPR146 conformational states across diabetic phenotypes: Analysis of C-peptide and insulin interactions in cholesterol metabolism, cortisol regulation, and the vitamin D-reninangiotensin axis

Recent advances in Artificial Intelligence (AI) have enabled deeper insights into peptide-receptor interactions relevant to diabetes management. In a collaborative study between utR Biotech and Innoplexus, AI-based molecular modelling was employed to investigate the binding profiles of insulin, C-peptide, and cholesin across key metabolic receptors. This presentation will discuss comprehensive receptor binding studies that reveal distinct GPR146 conformational states in type 2 diabetics, type 1 diabetics, and normal individuals, elucidating how these states regulate cholesterol and lipid metabolism through differential receptor dynamics.

The analysis confirmed that both insulin and C-peptide bind to the insulin receptor, with C-peptide demonstrating a notably stronger binding affinity. Both peptides also interact with GPR146 at distinct sites, while cholesin exhibits weaker binding and partial overlap with the C-peptide binding domain. Notably, GPR146 exists in five distinct conformational states. When C-peptide binds to GPR146, it induces receptor internalization, thereby reducing the total cellular signalling network of GPR146. This internalization naturally downregulates cholesterol and lipid synthesis and lowers cortisol levels, helping to prevent the onset of metabolic dysfunction.

Biography



David Petch brings over 30 years of biotechnology expertise as founder and CEO/CSO of utR Biotech Ltd. With extensive experience in mammalian cell culture, fermentation processes, industrial scale-up, and cellular metabolism. David holds an M.Sc. and B.Sc. Honours in Microbiology from the University of Manitoba, plus certificates in IP/Technology Commercialization and Project Management. Since founding utR Biotech in 2016, David has pioneered integrating C-peptide into insulin formulations—a breakthrough approach addressing severe diabetic complications including cardiovascular disease, neuropathy, and Alzheimer's. His company recently partnered with Innoplexus to leverage AI in determining novel binding sites of C-peptide and insulin, opening new biological pathways for diabetes treatment. utR Biotech focuses on developing affordable diabetes therapeutics for underserved populations worldwide, combining scientific innovation with global health equity. David's published research includes peer-reviewed work on continuous cell culture metabolism in Biotechnology and Bioengineering.

Pathway analysis revealed that insulin inhibits adenylyl cyclase, promoting lipid and cholesterol synthesis and elevating systemic cortisol levels. Cortisol, in turn, binds to the glucocorticoid receptor, upregulating 2,204 genes and downregulating 1,846, including approximately 40 genes implicated in diabetes-related comorbidities. Cortisol signalling also interferes with vitamin D synthesis, disrupting regulatory systems including the renin-angiotensin axis, sirtuin pathways, Wnt/β-catenin signalling, and nitric oxide production. Importantly, vitamin D synthesis participates in direct regulation of the renin-angiotensin system, affecting key components including renin, angiotensinogen, ACE, ACE2, and angiotensin receptor expression patterns.

The dynamic equilibrium of this system is highly dependent on the half-lives of insulin and C-peptide. The use of long-acting insulin analogues disrupts this balance by interfering with GPR146 internalization, potentially perpetuating comorbidities associated with diabetes. Additionally, C-peptide binds to the elastin receptor, which is implicated in upregulating AT2R expression—shifting the renin-angiotensin system toward an anti-inflammatory state.

These findings support the therapeutic potential of co-administering insulin and C-peptide in a 1:1 ratio to restore physiological signaling, reduce metabolic stress, and improve long-term outcomes in insulin-dependent diabetes. A brief overview of receptor binding studies and downstream signaling pathways will be presented, with particular emphasis on GPR146 conformational variations across diabetic phenotypes and their impact on cholesterol metabolism, cortisol synthesis regulation, and renin-angiotensin system components.

F. Buck Willis[1*] PhD, MD, FACSM; Bronson Flint[2] MD

[1]IUHS and La Loma Luz Adventist Hospital, Belize

[2]IUHS School of Medicine

Diabetes reduction (pre-diabetes and type 2) with integrative medicine

The CDC also reports that 35% of the American population in 2023 were diagnosed with Pre-Diabetes Mellitus (PDM) via HbA1c testing and half of that population are also obese. Currently it is estimated that 59,500,000 American adults currently have obesity with PDM).

The purpose of this session is to discuss current research on integrative medicine for both PDM and obesity reduction as a side-by-side comparison. Most recently a controlled pilot study for Obesity and PDM Reduction used ALCAT food allergen testing, nutritional counseling, showed a -1.1 BMI reduction and -12% HbA1c reduction in just six months. At the same time Metformin is now being accepted standard of care in treating PDM.

A previous longitudinal case/control study of food allergen elimination for obesity reduction (N=94) and all therapeutic groups showed a significant change in weight, BMI, BP, and waist circumference ($P<0.0001$). A financial post-hoc examination of 20 subjects from the experimental groups for 12 months beyond that trial revealed a significant financial savings.

Methods: We will discuss the side-by-side treatments for obesity and PDM reduction as we compare holistic & allopathic methods, to examine what the best Integrative treatment plan can be in primary care. We will also show comparable cases of patients (ages 17

Biography

Professor, Doctor Buck Willis started his life again following what the FAA categorized as a Unsurvivable Plane Crash. He overtook the challenges from a 3-year series of 16 operations to rebuild his legs by later Squatting 230kg. After the crash he also earned four degrees, now including his MD, and his research has changed the standard of care in rehabilitation medicine (over 60 publications, including 8 books with 45 research presentations). Ten years after earning his PhD his research and teaching were was recognized when he was chosen to be a Fellow of the American College of Sports Medicine.

to 75) who were treated with food allergen elimination plus the brief 2-minute Aerobic-surge exercises compared to patients treated with diet alone or metformin.

The financial savings will be discussed showing that diabetes and obesity reduction save an estimated $2,000/year in direct medical expenses and Pre-diabetes reduction reverses the pathway to a lifetime of over $80,000 expenses for treating T2D. This session will examine the paired, integrative methods as described in Dr. Willis' book LIFE CARE, Integrative Medicine to Improve Your Wellness.

Fabiana Sant'Anna Evangelista

School of Arts, Sciences and Humanities,
University of São Paulo, São Paulo, Brazil

Smart fat: Physical exercise-induced mechanisms for obesity prevention

Disruptions of biological processes operating within adipose tissue can disturb healthy systemic physiology and develop metabolic diseases such as obesity and type 2 diabetes. Uncovering the biomolecular processes regulating adipocyte functionality can be the key to mitigating metabolic diseases. More than an inert depot to store triacylglycerol, adipose tissue is a dynamic and metabolically active endocrine organ, with diverse adipocyte populations that can contribute to metabolic health and disease. Different strategies can be used to prevent or reduce body weight gain and fat mass, as well as to maintain healthy adipose tissue, and lifestyle interventions should be pillars in this process. In this talk, we will explore the morphological and functional characteristics of different types of adipocytes, mechanisms triggered by physical exercise to improve adipocyte functionality and contribute to the prevention of obesity.

Biography

Dr. Fabiana graduated in Sport at the University of São Paulo (USP) in 1998, and as master in Molecular Biology at the Federal University of São Paulo at 2001. She received her PhD degree at the same institution in 2004. She did postdoctoral research at the Heart Institute of the Clinical Hospital at the Faculty of Medicine-USP (2006-2008) and at the Georgia State University, Atlanta, USA (2013-2014). She is Associate Professor at the School of Arts, Sciences and Humanities-USP (EACH-USP), and Vice-Dean of EACH-USP. She has worked on the effect of physical exercise in the prevention of metabolic diseases.

Jeane Silva, PhD, MPA, EdS., EdD., MB(ASCP)^{CM}

Department of Health Management, Economics, and Policy, Augusta School of Public Health, Augusta University, GA, 30912, USA

Exploring the impact of MC4R gene variants on food preferences

Obesity is a significant risk factor for life-threatening diseases that increase morbidity and mortality rates. Currently, obesity is a worldwide epidemic, and the prevalence of obesity has been rising at unprecedented levels. The obesity rate among adults aged 20 and older is 40.5%, with a higher prevalence among those aged 40-59 compared to the 20-39 and 60 and older age groups (CDC, 2024). While dietary habits contribute to the rising obesity rates, genetics also play a significant role. The Melanocortin 4 Receptor (MC4R) gene is responsible for approximately 6% of obesity cases and significantly influences weight gain, particularly with the consumption of high-calorie foods. Many individuals are at a higher risk of obesity due to genetic variants associated with specific eating behaviors. Thus, identifying causal genetic variants can help understand which genes and biological mechanisms underlie food preference. Understanding the drivers of food choices may help address the escalating obesity problem. This study aims to investigate the influence of MC4R gene variants on food preferences in adults. By understanding the biological factors that drive individual food choices, we can potentially guide people toward healthier lifestyles and help reduce obesity.

Biography

Dr. Silva earned a Ph.D. in Pharmacology and is board-certified in Molecular Technology by the American Society for Clinical Pathology. She is currently an Associate Professor in the Ph.D. program in Applied Health Sciences at the School of Public Health, Augusta University. Dr. Silva also holds a doctoral degree in Education with a focus on educational innovation. Her research focuses on genetic biomarkers, particularly monogenetic variants associated with severe obesity that impact food intake and circulating microRNAs that predict drug resistance in patients with Multiple Myeloma. Dr. Silva has made significant contributions to science by publishing over 30 research articles in peer-reviewed journals. Her dedication to teaching and learning is reflected in her commitment to advising students to foster critical thinking skills and a lifelong love of learning.

Russell Rising Ph.D

D & S Consulting Services Inc., New York, USA

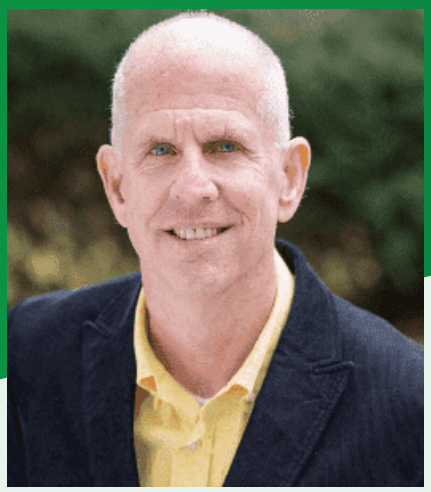
Proposed shorter duration protocols for measuring exercise energetics utilizing whole room indirect calorimetry

Background: Previously, 60 minutes was the shortest testing duration that was validated for measurement of exercise energetics (EXEE; kcal) utilizing Whole Room Indirect Calorimetry (WRIC). This comprised of 15, 30 and 15 minutes for warmup/stretching, steady state exercise and cool down periods, respectively (Rising et al, 2016).

The objective of this analysis was to show the validity of extrapolating (EXP) 30-minute EXEE from the first 15 minutes of moderate intensity steady state cycling exercise in human subjects. Furthermore, changing the warmup/stretching and cool down times to 10 and 5 minutes, respectively reduces the total testing time to just 30-minutes.

Methods: EXEE data involving 15 healthy subjects (Age: 28.3±10.8 years, BMI: 25.1±3.9 kg/m^2) from a prior study (Rising et al, 2016) were utilized for this analysis (Rising et al, 2025). In this study subjects cycled steadily at 65% heart rate max (Karvonen and Vuorimaa, 2016) for 30 minutes within the WRIC (10,000 liters). All 30-minute EXP metabolic data were calculated based on a theoretical 15-minutes of actual exercise. This equaled the average across the first 15 minutes of each subject's exercise bout for Ventilation (V;liters) of Oxygen (VO_2), Carbon dioxide (VCO_2) and EXEE (kcal) and multiplying by 30. The respiratory quotient (RQ; VCO_2/VO_2) was EXP from the mean across the respective first 15-minutes of exercise data.

Biography



Dr. Russell Rising obtained his Ph.D. from the University of Arizona, Tucson. He started his career by inventing the world's first Whole Room Indirect Calorimeter (WRIC) for infants at Maimonides Medical Center, Brooklyn, NY. Dr. Russell then created several types of animal WRIC's, including one for non-human primates. Finally, he has created eight human adult WRIC laboratories worldwide comprising of 23 metabolic rooms. Dr. Russell has over 55 publications, been featured on television broadcasts, as well as holding a full adjunct professorship at China's largest medical school. Currently, he is President of Research and Development of D & S Consulting services Inc.

To validate the WRIC for simulated shorter duration EXEE testing, 10 propane combustion tests with a new larger burner (Coleman Model 5431B, The Colman Company, Wichita, Kansas USA) were utilized. The burn rate (g/minute) equaled the weight (g) prior to and after completion of each combustion test using a calibrated analytical balance (Mettler Toledo Model MS1602S/03, Mettler Toledo LLC, Columbus, OH) and divided by the total testing duration (minutes). Prior to the propane combustion tests, the Promethion metabolic instrumentation (Sable Systems International, North Las Vegas, NV) was calibrated according to the manufacturer's instructions. All simulated metabolic parameters were calculated as described above for subjects and compared to that from the respective stoichiometries.

Statistical analysis was performed utilizing SPSS (Ver 30, Chicago, IL).

Results: According to the following table, there were no differences between actual and EXP metabolic parameters for both the human subject EXEE and that simulated by propane combustion.

	Mean	**± SD**	**Mean**	**± SD**	**p<0.05**	**Delta (%)**
Subjects (N=15)	Actual 30-min		EXP from 15-min			
EXEE (kcal)	253.6	52.6	252.1	58.5	NS	-1.0 ± 6.1
VO_2 (liters)	52.7	11.0	52.1	12.2	NS	-1.6 ± 6.6
VCO_2 (liters)	43.5	9.3	44.4	10.7	NS	1.6 ± 6.5
RQ (VO_2/VCO_2)	0.83	0.05	0.85	0.05	0.01	3.4 ± 1.8
Propane (N=10)	Stoichiometry (30-min)		Combustion (15-min)			
Burn rate (g/min)	0.5661	0.1180	-------	------	------	----------
EXEE (kcal)	202.4	42.2	196.8	43.2	NS	-2.9 ± 2.5
VO_2 (liters)	43.2	9.0	42.8	9.5	NS	-1.2 ± 2.8
VCO_2 (liters)	25.9	5.4	25.5	5.4	NS	-1.8 ± 1.9
RQ (VO_2/VCO_2)	0.60	0.00	0.60	0.01	NS	0.5 ± 1.9

Conclusions: It was found that utilizing the first 15 minutes of steady state cycling exercise data to reflect a 30-minute measurement duration is valid.

Sujith Rajan[1*], Michael Verano[2], Thomas Palaia[1], Chandana Prakashmurthy[1], Shahidul Islam[1,5], Lili Lee[2], José O. Alemán[3], Ira J Goldberg[3], Edward A. Fisher[4], M. Mahmood Hussain[1]

[1]Department of Foundations of Medicine, NYU Grossman Long Island School of Medicine, and Diabetes and Obesity Research Center, NYU Langone Hospitals - Long Island, Mineola, NY

[2]Department of Pathology and Laboratory Medicine, NYU Grossman Long Island School of Medicine, NYU Langone Hospitals - Long Island, Mineola, NY

[3]Holman Division of Endocrinology, Department of Medicine, NYU Grossman School of Medicine, NY, USA

[4]Department of Medicine (Cardiology), the Cardiovascular Research Center, and the Marc and Ruti Bell Program in Vascular Biology, NYU Grossman School of Medicine, NY, USA

[5]Biostatistics Unit, Office of Academic Affairs, Northwell Health, New Hyde Park, New York

Adipose MTP deficiency protects against hepatic steatosis by upregulating PPARα activity

MASH is a growing health concern. Better understanding of factors that prevent hepatic lipid accumulation may help design new strategies to prevent or treat MASH. We have previously shown that adipocyte MTP regulates intracellular lipolysis by inhibiting ATGL activity. Here, we show that adipose-specific MTP knockout mice (A-Mttp$^{-/-}$) fed an

Biography

Dr. Sujith Rajan is Assistant Professor at NYU Long Island School of Medicine, specializing in adipocyte biology and lipid metabolism. Dr. Rajan earned his Ph.D. from CSIR-Central Drug Research Institute, India, and has received numerous accolades, including the American Heart Association Postdoctoral Fellowship and the Charles Trey, MD Memorial Liver Scholar Award. Dr. Rajan's pioneering work on Microsomal Triglyceride Transfer Protein (MTP) in adipocytes has led to significant publications and a patent. His research aims to understand the role of adipose tissue in metabolic diseases, with a long-term goal to find better therapeutic intervention for obesity and related metabolic diseases.

obesogenic diet exhibit moderately high plasma triglyceride levels and less hepatic steatosis compared to their wild-type counterparts. A-Mttp$^{-/-}$ mice showed increased hepatic TG secretion compared to the wild type mice. Lipidomic analysis revealed significantly higher amounts of oleate, palmitate, linoleate, and stearate in the livers of A-Mttp$^{-/-}$ mice compared to Mttpf/f mice. A-Mttp$^{-/-}$ mice livers also showed significantly increased expression of genes in Fatty Acid (FA) uptake and utilization compared to Mttp$^{f/f}$ mice. Wildtype hepatocytes incubated with Conditioned Media (CM) from Mttp$^{-/-}$ adipocytes oxidized more FAs. Transcriptome analysis revealed hepatocytes treated with Conditioned Media (CM) from Mttp$^{-/-}$ adipocyte have significantly increased expression of genes involved in FA metabolism, oxidation and PPAR signaling compared to hepatocytes treated with Mttpf/f adipocyte conditioned media. Further mechanistic experiments showed that increased FA oxidation in A-Mttp$^{-/-}$ liver is mediated by PPARα activation and that adipose-derived FAs play a crucial role in activating liver PPARα. We conclude that increased availability of substrate for TG production might contribute to increased apoB secretion by the liver of A-Mttp$^{-/-}$ mice. Moreover, a positive adipose liver crosstalk mediated by the release of natural ligands of PPARα protect A-Mttp$^{-/-}$ mice from hepatic steatosis. Our study highlights the significance of the regulated movement of FFA from adipose tissue to the liver in maintaining a healthy liver. It is likely that adipocyte FA release can be modulated to reduce hepatic steatosis.

Vicky Midwood

Go Figure Coaching & Consulting, England, United Kingdom

Thin, sick & stuck: Why fat loss alone won't fix us

While new medications like GLP-1s offer rapid results for weight loss and diabetes management, they do not address the systemic, cultural, and behavioural drivers behind the crisis. Childhood obesity and type 2 diabetes continue to rise-even as awareness, access to treatment, and personal health tracking are at an all-time high. We are solving the wrong problem: Chasing smaller bodies while ignoring the environments, beliefs, and systems that are making us sick.

In this powerful and provocative keynote, Vicky Midwood explores the rising tension between rapid medical innovation and a society still failing to meet basic human health needs-especially in families, schools, and workplaces. From punishing food rules to sedentary screen culture, she unpacks how disconnection from our bodies, food, and movement is fuelling both obesity and eating disorders at the same time. Drawing on evidence, coaching insights, and cultural critique, she offers a radically human framework for building whole-person health-without shame, extremes, or shortcuts.

This talk will challenge health professionals, educators, and policymakers to rethink what true prevention and healing looks like. It's not just about weight loss. It's about connection, nourishment, emotional literacy, and structural change. Because thinner does not mean healthier-and sick systems don't create well people.

Biography

Vicky Midwood is a leading health and behaviour change expert, coach, and speaker known for transforming the conversation around alcohol, obesity, diabetes, and disordered eating. With a bold, no-nonsense approach, she helps high-performing individuals and organizations reclaim their energy, focus, and wellbeing without shame, restriction, or burnout. Her work bridges the gap between science, real-world behaviour, and lived experience-challenging quick fixes and cultural conditioning in favour of sustainable, whole-person health. Now invited to keynote for the third year, her impact is clear: She doesn't just inspire-she ignites change.

Wan Rosli Wan Ishak[1*], Che Anis Jauharah Che Mohd Zin[1], Majid Khan Majahar Ali[2], Nurzalina Abdul Karim Khan[3], Wan Mohd Izani Wan Mohamed[4]

[1]School of Health Sciences, Universiti Sains Malaysia Health Campus, 16150 Kota Bharu, Kelantan, Malaysia

[2]School of Mathematical Sciences, Univerisiti Sains Malaysia, Main Campus, 11800 Minden, Penang

[3]School of Pharmaceutical Sciences, Universiti Sains Malaysia, Minden, Penang, Malaysia

[4]School of Medical Sciences, Universiti Sains Malaysia, 16150 Kubang Kerian, Kelantan, Malaysia

Does winter melon (*Benincasa hispida*) improves nutritional values and ameliorating glycaemic parameters?

An excessive consumption of refined carbohydrates and a low intake of Dietary Fibres (DFs), notably from vegetables, has elevated the risk of diabetes, cardiovascular disease, and other illnesses. The incidence of chronic diseases is increasing, with the number of diabetics predicted to rise from 180 million in 2010 to 368 million by 2030. This is the leading cause of morbidity and mortality worldwide since it can create health issues and lower quality of life. This study aims to investigate the ability of dietary fibres from winter melon in improving glycaemic profiles for diabetic individuals. Our research reveals that the aqueous extract of winter melon exhibits a significant hypoglycaemic and protective effects of streptozotocin-induced diabetic

Biography

Wan Rosli Wan Ishak is a professor of Nutrition Program at the School of Health Sciences (SHS), Universiti Sains Malaysia (USM), Health Campus, Kota Bharu, Kelantan, Malaysia. Currently, he is a Dean of SHS of USM. His research theme emphasizes more on the utilization of natural agricultural by-products into popularly consumed processed foods. Various low Glycemic Index (GI) based on these agricultural by-products have been developed. He was selected among Top 10 Innovators for SYMBIOSIS project funded by Malaysian Technology Development of Malaysia (MTDC) to facilitate the commercialization of functional and health cookies from oyster mushroom (Nutri-Mush®Cookies). He has published more than 150 articles in various indexed journals.

rats. Winter melon-treated rat's liver and kidney show improvement of hepatic cells which resembles normal structure of hepatic cells. Besides, the incorporation of winter melon in granola bars proven in improving nutritional composition and DF content while improving the regularity of defecation behaviour and well accepted by consumers. In the intervention study, the group presented a significant reduction in diastolic blood pressure (Δ–7.0 mmHg, 95% CI: –11.4, –2.5). Mean fasting plasma glucose (Δ–0.8 mmol/L, 95% CI: –1.8, 0.2) showed a greater reduction in the intervention group compared to the control group (Δ–0.4 mmol/L, 95% CI: –1.2, 0.4). Mean lean body mass showed favourable trend of increment in Week 6 (Δ0.05 kg, 95% CI: -0.40, 0.49) and Week 12 (Δ0.16 kg, 95% CI: -0.33, 0.64) as compared to baseline in the intervention group but not in the control group which manifested decreasing lean body mass. In short, the use of B. hispida extract may potentially improve blood pressure and glycaemic control in patients with type 2 diabetes and it may be an attractive natural item for the development of functional food products. Being physically active and eating a sufficient amount of DF from vegetable and fruits are essential in reducing the risks of having diabetes, maintaining the health status and sustaining quality of life and societal well-being.

Yong-Xiao Wang

Department of Molecular and Cellular Physiology, Albany Medical College, Albany, New York, USA

Important roles and mechanisms of novel calcium signaling in diabetes-induced vascular dementia

A Vascular dementia is a common neurodegenerative disease. This dementia is caused by cerebral blood vessel dysfunctions. It has high morbidity and mortality. Diabetes is a leading factor in the development of this dementia. However, the essential roles, mechanisms and consequences of vascular dementia are still largely unknown. Moreover, the current treatments for vascular dementia are neither very specific nor effective. Dysfunctions of Cerebral Arteries (CAs) may cause blood hypoperfusion to the brain and then makes an important contribution in the initiation and progress of vascular dementia. Perfusion of CAs is predominantly generated and controlled by contraction and relaxation of Smooth Muscle Cells (SMCs). These two cellular processes are fundamentally produced and regulated by cell calcium signaling. The cell calcium signaling is primarily determined by ion channels on the plasma membrane and Sarcoplasmic Reticulum (SR) membrane. Therefore, we have started to explore whether and which ion channels might be essential for diabetes-evoked vascular dementia. Consistent with previous reports by us and other investigators, we have found that intraperitoneal injection of streptozotocin caused a large increase in blood glucose, leading to diabetes in mice. A series of our studies have also discovered that the diabetic mice had declined cognition, impaired memory, and increased anxiety, thereby exhibiting significant vascular dementia. This diabetic vascular dementia might occur due to cerebral

Biography

Dr. Yong-Xiao Wang has been a Full Professor in Department of Molecular and Cellular Physiology at Albany Medical College since 2006. Dr. Wang obtained his MD at Wannan Medical University, PhD at Fourth Military Medical University, and postdoctoral training at Technology University of Munich and University of Pennsylvania. He has made many important findings using complementary molecular, biochemical, physiological, and genetic approaches at the molecular, organelle, cellular, tissue and organism levels in animals and human samples, had numerous publications in Nature Commun (impact factor: 14.290), Antioxid Redox Signal (8.209), Proc Natl Acad Sci USA (9.432), Nature (34.480), Circ Res (9.214), and other highly peer-reviewed journals and academic books, and served as the editorial board member and/or section editor as well as the executive committee member and/or subcommittee chair for professional societies.

vasoconstriction and subsequent blood hypoperfusion, as revealed by Laser Speckle Imaging System. Diabetic cerebral vasoconstriction could result from increased intracellular calcium concentration ($[Ca^{2+}]_i$) in CASMCs. Increased $[Ca^{2+}]_i$ was attributed to the augmented Ca^{2+} release from the SR, the major intracellular Ca^{2+} store, which followed the hyperfunctional activity of type-2 ryanodine receptor (RyR2), the calcium release channel on the SR in CASMCs. Biochemical and genetic experiments indicated that the hyperfunction of RyR2 channel was a result of dissociation of FK506 binding protein 12.6 (FKBP12.6), an endogenous channel stabilizer (or inhibitor). In conclusion, our findings provide the first evidence that RyR2/FKBP12.6 dissociation exerts a novel essential role in the development of diabetes-caused vascular dementia; presumably, specific pharmacological and genetic inhibition of RyR2 and/or stabilization of FKBP12.6 in vascular SMCs may become specific and effective treatment options for diabetes-induced vascular dementia.

5th Edition of

World Obesity and Weight Management Congress

3rd Edition of International Conference on

Diabetes and Endocrinology

OCT

23-25

ORAL PRESENTATIONS

Aboubacar Oumar Bangoura[1*], Djiba Sidimé[1], Qian He[2], Yao Weirong[2]

[1]Institut Polytechnique, Département de Génie Chimique, Concentration Agroalimentaire, Université Gamal Abdel Nasser de Conakry, BP : 1147, République de Guinée

[2]School of Food Science and Technology, Southern Yangtze University (Jiangnan University), Jiangsu, Wuxi, 214036, P. R. of China

Yeast application for desalting fibersol-2 to control obesity and colon cancer

Dietary fiber has a number of other physiologically beneficial effects interrelated to reduce the risk of cancer and heart disease. (Barry V. and Leon P., 2001). Extensive epidemiologic evidence supports the theory that dietary fiber may protect against large bowel cancer. Correlation studies that compared colorectal cancer incidence or mortality rates among countries with the estimates of national dietary fiber consumption suggested that fiber in the diet may protect against colon cancer. Data collected from 20 populations in 12 countries showed that average stool weight varied from 72 to 470 g/day and was inversely related to colon cancer risk (Alberts DS et al., 2000). When results of 13 case-control studies of colorectal cancer rates and dietary practices were pooled, the authors concluded that the results provided substantive evidence that consumption of fiber-rich foods is inversely related to the risk of both colon and rectal cancers (Bonithon-Kopp C et al., 2000). The authors estimated that the risk of colorectal cancer in the US population could be reduced by about 31% with an average increase in fiber intake from food sources of about 13 g/day. Fibersol-2 is a soluble white powder fiber extracted from cornstarch, containing about 90% of indigestible component (Ohkuma et al., 1990). Ohkuma & Wakabayashi 2001 estimated that fibersol-2 reaches the large intestine undigested where it is partly fermented by bacteria, producing Short-Chain Fatty Acids (SCFA) with the remainder being excreted in the feces. Fibersol-2 can also help regulate blood sugar and reduce the risk of some lifestyle-related diseases. Test show fibersol-2 can increase both bowel regularity and fecal volume (Matsutani Chemical Industry Co. Ltd.).

In the present study, low cost and healthy method for desalting fibersol-2 is called yeast application for desalting fibersol-2; compare to ion exchange chromatography method for desalting fibersol-2. The product fibersol-2 desalted by yeast prevents obesity, diabetes and colon cancer. The method of yeast application for desalting fibersol-2 applied brewing yeast *Saccharomyces cerevisiae* to separate a high-molecular weight fraction from free glucose (A.O Banggoura et al., 2006). In this method *Saccharomyces cerevisiae* was inoculated into the hydrolysate pyrodextrin. Finally, the yeast was removed by centrifugation (700g for 40min). The glucose removal rate is proved by the absence of the glucose running time in the chromatogram; and the recovery is 64%. The use of strongly acid cation exchange resin for chromatography, produces chemicals substances mixed with the prepared fibersol-2, which is not healthy. The in-vivo evaluation results indicated that fecal volumes were increased for the mice fed with fibersol-2 desalted by yeast, compared to the other references groups. These results were also

the same for the weight of the urine from mice fed with fibersol-2 desalted by yeast, which were also increased as compared to the other groups with the same feed consumption. Consumption of fibersol-2 desalted by yeast helps digestive system clean, prevents against obesity and colon cancer.

Keywords: Fibersol-2 Desalted by Yeast, Strongly Acid Cation Exchange Resin, Obesity, Colon Cancer, *Saccharomyces cerevisiae.*

Biography

Aboubacar Oumar Bangoura, born on 18 December 1963, is a distinguished research scientist, educator, and former Minister of Higher Education and Scientific Research of Guinea. He is the son of Oumar Bangoura and Traore Mariama. Married to Aïssata N'Diaye since 2001, he is a father of four children: Safiatou, Ibrahim, Kany, and Aïcha. He holds a PhD in Food Science from the School of Food Science & Technology, Southern Yangtze University, China (2005), an MSc in Human Nutrition from Wuxi University of Light Industry, China (2000), and a B.Sc. Tech in Chemical Engineering (Food Technology) from the University Gamal Abdel Nasser of Conakry, Guinea (1991). His professional journey includes serving as Head of Advanced Studies Services at UGANC since 2022, previously as Head of Division in the same department (2018), and as Assistant to the Vice-Rector in charge of Scientific Research (2012). His academic career spans positions as Assistant Lecturer (2007–2013), Assistant Professor and Research Lecturer (2013–2020), and currently Professor and Director of Research since November 2020. Professor Bangoura has published extensively, including contributions to international books and journals such as Microbes in the Spotlight (2016), Industrial, Medical and Environmental Applications of Microorganisms (2014), Microbes in Applied Research (2012), and the International Journal of Food Science and Technology (2006). His research focuses on food applications of Fibersol-2, yeast desalting processes, and nutritional innovations. His achievements have earned him international recognition, including listings in Who's Who in the World (2016), Who's Who in America (2016), Great Men and Women of Science (2018), and the Cambridge Certificate for Outstanding Scientific Achievement (2016). He is an active member of several professional organizations, including the Formatex Research Center, EUREKA Science Ltd, and the Société Ouest Africaine de la Chimie (SOACHIM). He is currently based at the Chemical Engineering Department, Food and Agriculture Concentration, University Gamal Abdel Nasser of Conakry, Guinea.

Andrew Wanees[1], Reda H. Mithany[2], M Hasaan Shahid[3], Ahmed Aosmali[4*], Mohamed M. Abdelsalam[5], Mahmoud Moustafa Nafie[6*]

[1]General Surgery, Dar el Salam Hospital, Cairo, EGY

[2]Laparoscopic Colorectal Surgery, Kingston Hospital NHS Foundation Trust, Kingston Upon Thames, GBR

[3]Surgery, Glangwili General Hospital, Carmarthen, GBR

[4]Trauma and Emergency Department, Kings College hospital, London, GBR

[5]Surgery, Ain Shams University, Cairo, EGY

[6]King's College Hospital NHS Trust, United Kingdom

Impact of ligamentum teres reinforcement on hiatus hernia incidence in patients undergoing laparoscopic sleeve gastrectomy: A single-center, retrospective cohort study

Background: A hiatal hernia occurs when abdominal contents protrude into the mediastinum via the diaphragmatic hiatus, often due to weakened phreno-esophageal ligaments. Diagnosis involves clinical assessment, imaging, and endoscopy. Management varies from lifestyle changes to surgery, necessitating a comprehensive understanding.

Patients and Methods: This retrospective cohort study, conducted at Ain Shams University Hospitals' Bariatric Surgery Unit from October 2019 to January 2020, involved 60 individuals undergoing laparoscopic Sleeve Gastrectomy (SG), randomly assigned to groups A and B. Ethical approval and informed consent were obtained.

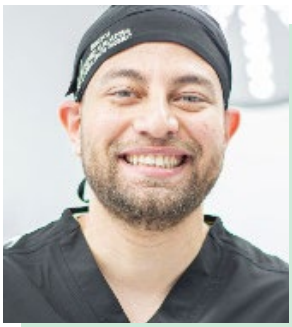
Results: In group A, SG patients without preoperative hiatus hernia showed a 10% incidence of postoperative hiatus hernia at 9 months. Contrastingly, in group B, where ligamentum teres reinforcement was applied during SG, the incidence was notably lower at 3.3% at the same interval. These results suggest a significant reduction in postoperative hiatus hernia occurrence with ligamentum teres reinforcement, indicating its potential benefit in mitigating this complication.

Conclusion: Incorporating ligamentum teres reinforcement during SG demonstrated a substantial decrease in postoperative hiatus hernia incidence compared to SG alone. Patients in group B experienced a halved or more reduction in hiatus hernia occurrence. While promising, larger studies and longer follow-ups are necessary to validate these findings and assess long-term efficacy.

Biography

Ahmed Aosmali: Ahmed Aosmali is a Senior Clinical Fellow in General and Emergency Surgery at King's College Hospital, London. Ahmed has seven years of experience in bariatric surgery and previously worked as a Consultant of General and Bariatric Surgery at Ain Shams University Hospitals, Cairo. Ahmed holds a Master's and PhD in General Surgery and has completed MRCS. Ahmed has presented research at international conferences, including the London International Bariatric Surgery Symposium, and has published multiple articles in bariatric surgery.

Mahmoud Moustafa Nafie: Mr. Mahmoud Moustafa Nafie, FRCS, MD, MRCS, is a Senior Clinical Fellow in General Surgery at King's College Hospital, London, with extensive experience bariatric Surgery, general, and trauma surgery. He trained in Egypt and the UK, with specialist interests in laparoscopic and robotic surgery, surgical oncology, and education. He has authored peer-reviewed publications, delivered national presentations, and actively contributes to audits and teaching. Passionate about clinical excellence and surgical research, Mr. Nafie is committed to advancing minimally invasive surgery while mentoring junior colleagues and participating in multidisciplinary patient care.



Osama Taha[1,2,3], Mahmoud Abdelaal[1,2,3], Mohamed Abozeid[2,4], Awny Askalany[1,2,3], Mohamed Alaa[2], Ahmed Aosmali[5*]

[1]Plastic and Obesity Surgery Department, Assiut University Hospital, Assiut, Egypt

[2]Overweight Clinics, Cairo, Egypt

[3]Bariatric Unit, Plastic Surgery Department, Assiut University Hospital, Assiut, Egypt

[4]General Surgery Department, Ain Shams University Hospital, Ain Shams University, Cairo, Egypt

[5]King's College Hospital NHS Trust, United Kingdom

Outcomes of omega loop gastric bypass, 6-years' experience of 1520 cases

Background: Omega Loop Gastric Bypass (OLGB) has been viewed with skepticism after the failure of the Bold Mason loop. ^During the past 15 years, a growing number of authors worldwide approved that OLGB is a safe and effective procedure, which appears clearly from the operative outcome and long-term follow-up of consecutive cohort studies of patients who underwent OLGB.

The Aim of This Study: Is to evaluate the outcomes of OLGB at the bariatric center of our university hospital between 2009 and 2015.

Methods: The data of 1520 patients who underwent OLGB from November 2009 to December 2015 at our center were reviewed. Mean age was 37.15 years, mean preoperative BMI was 46.8±6.6 kg/m2, mean preoperative weight was 127.4±25.3 kg, and 62.7% were women. Diabetes Mellitus (DM) affected 683 (44.9%) of the 1520 patients, whereas 773 of the 1520 patients (50.9%) presented with hypertension. The mean operative time was 35 min.

Results: The 1-year postoperative BMI mean decreased to 29.6±3.1 kg/m2, and at the 3-year follow-up, it was 27.5±3.4 kg/m2. The mean of weight decreased to 81.3±16.7 kg and to 78.9±16.9 kg at the 1-year and the 3-year follow-up, respectively. Mortality rate was 0.1%. Overall complications were 9.3%; 0.8% required reoperations. Early complications were encountered in 50 patients (3.3%), and the late complications rate was (6.1%).

Conclusions: In this study, greater excess weight loss was observed with OLGB which appeared to be a short, simple, low risk, effective, and durable bariatric procedure.

Biography

Ahmed Aosmali is a Senior Clinical Fellow in General and Emergency Surgery at King's College Hospital, London. He has seven years of experience in bariatric surgery and previously worked as a Consultant of General and Bariatric Surgery at Ain Shams University Hospitals, Cairo. He holds a Master's and PhD in General Surgery and has completed MRCS. Ahmed has presented research at international conferences, including the London International Bariatric Surgery Symposium, and has published multiple articles in bariatric surgery.

Alieva R.B*, Kim A.R., Akhmedova Sh.S., Shek A.B

Republican Specialized Scientific and Practical Medical Center of Cardiology of the Ministry of Health of the Republic of Uzbekistan Tashkent, Uzbekistan

Evaluation of the relationship between epicardial fat and metabolic syndrome components

Introduction: Epicardial fat covers about 80% of the heart surface. It is located along the coronary arteries, above the right ventricle, especially along the right border, anterior surface and at the apex. Three quarters of all Epicardial Fat (EF) is located on the surface of the right ventricle compared to the left. In recent years, Epicardial Adipose Tissue (EAT) has gained great popularity as a marker of visceral obesity and the development of cardiovascular diseases. This is due to the fact that it is an endocrine organ in which a number of biologically active substances are synthesized (tumor necrosis factor-a, chemokines, adipokines, proinflammatory markers, etc.). Thus, patients with Metabolic Syndrome (MS) have a more pronounced accumulation of EF, unlike patients without MS.

Aim of the study: To study the relationship between EF and clinical parameters in patients with MS.

Materials and methods: The study included 109 pts with one of the components of MS (obesity, arterial hypertension, dyslipidemia) with a confirmed diagnosis of CAD hospitalized in the RSSPMCC. All patients underwent an assessment of lipid and carbohydrate profile, measurement of anthropometric data, and assessment of EF using echocardiography.

Results: Analysis of the obtained data revealed that the average thickness of the EF was 10.9± 2.4 mm, which significantly exceeds the norm (5-7 mm), and the average BMI was 29.7±2.7 kg/ m^2. At the same time, the waist circumference also exceeded the recommended values of 100± 3.9 cm. The correlation analysis revealed a close relationship between the thickness of the endogenous fat with BMI and WS (r-0.35, p<0.001 and r-0.284, p<0.001). Lipid disorders were detected in the study group of pts: TC-226 dg/ml, LDL-C-138±21 mg/dl, TG 191 dg/ml. This was also reflected in the relationship between the endogenous fat and apoB, where r-0.254 p<0.005, which only confirms the presence of MS. However, one of the main atherogenic lipoproteins (LDL-C) did not show a reliable correlation with the endogenous fat, as well as with total cholesterol. However, an interesting fact was that a reliable direct relationship was found between EF and TG (r-0.201, p<0.005), which confirms the authors' data on elevated TG levels in the presence of excess weight. Having studied non-standard markers of metabolic disorders, the triglyceride-glucose index, as well as the ratio of triglycerides TG to HDL-C, a direct relationship was also found with EF (r-0.188 p<0.005 and r-0.234 p<0.005), which may indicate the presence of increased EF in patients with metabolic disorders.

Conclusion: In patients with MS, in particular with visceral obesity, the thickness of EF increases, which can serve as an additional diagnostic criterion for MS.

Alieva R.B*, Kim A.R., Akhmedova Sh.S., Shek A.B

Republican Specialized Scientific and Practical Medical Center of Cardiology of the Ministry of Health of the Republic of Uzbekistan Tashkent, Uzbekistan

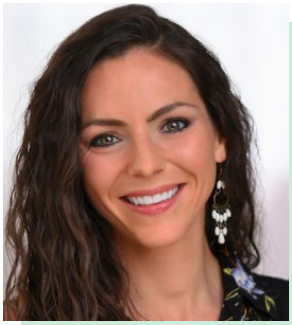
Comparison of patients with ischemic heart disease with and without a history of major cardiovascular events

Introduction: Cardiovascular Diseases (CVD) continue to occupy a leading place in the structure of mortality and disability of the population in most economically developed countries of the world. Prevention of adverse outcomes is the most important goal of treatment of patients with stable Ischemic Heart Disease (IHD), no less significant than a positive effect on the manifestations of ischemia. Since the beginning of the twentieth century, acute myocardial infarction and stroke have been considered and remain to this day the leading causes of death of patients worldwide. Arterial hypertension, dyslipidemia, obesity, diabetes mellitus, chronic inflammation remain some of the most important risk factors for the development of CHD, as well as the development of cardiovascular outcomes. In this regard, the aim of the study was to evaluate the markers of coronary heart disease in patients with and without MACE (Major adverse cardiovascular events).

Materials and methods: The study included 109 pts with an established diagnosis of CHD, hospitalized in the RSSPMCC due to destabilization or the need for revascularization. The patients were given anamnesis on the presence of MACE and divided into 2 groups with and without MACE. In this case, laboratory and instrumental data of the study were carried out with their subsequent interpretation and comparison of the groups.

Results: The 2 groups were comparable with each other and did not differ in age 59 ± 8.0 and 61 ± 2.0 years, respectively, for the MACE group and without. And the gender distribution was approximately equal 59.4% men and 41.6% women for the first group, and 57.7% men and 42.3% women, respectively. When evaluating laboratory data, a lower level of HDL-C was noted in patients with PCI (percutaneous interventions) (46±7 dg/ml and 40.00 dg/ml, $p<0.005$). However, when evaluating patients with a history of CABG, an increased Waist Circumference (WC) was noted 104±4.1 cm versus 99±5.2 cm in patients without CABG, $p<0.005$. Elevated lipid profile was noted in patients without CABG TC 225±27 mg/dl and 197±21 dg/ml, $p<0.001$, LDL-C 142±24 dg/ml and 121±29 dg/ml, $p<0.001$ for groups 2 and 1, respectively. The latter is most likely due to the fact that patients with CABG previously underwent PCI and lipid-lowering therapy was selected, but due to the fact that LDL-C remained above target values, destabilization and the need for subsequent revascularization occurred. But despite this, the inflammatory marker C-Reactive Protein (CRP) was elevated in patients with CABG (2.32 mg/l and 1.91 mg/l, $p<0.005$), indicating the presence of a chronic inflammatory process. Stroke was not assessed due to the small number of cases.

Conclusion: Patients with MACE have an elevated lipid profile and inflammation, as well as the presence of abdominal obesity represented by increased WS.



Alysha Moser, RD, LD, CSOWM
Form Health: Online Medical Weight Loss Clinic, United States

Optimizing weight loss with GLP-1 medications through integrated nutrition and exercise strategies

Glucagon-Like Peptide-1 (GLP-1) receptor agonists have revolutionized obesity management, demonstrating significant efficacy in weight reduction and glycemic control. While these medications facilitate weight loss primarily through appetite suppression and delayed gastric emptying, achieving sustainable, healthy outcomes necessitates a comprehensive approach that integrates tailored nutrition and exercise interventions. This discussion aims to provide an evidence-based framework for safely and effectively leveraging dietary and physical activity strategies in individuals utilizing GLP-1 medications for weight management.

The session will delve into critical nutritional considerations, emphasizing personalized dietary patterns that support satiety, preserve lean muscle mass, and prevent nutrient deficiencies. Key topics will include optimizing protein intake to mitigate sarcopenia, incorporating fiber-rich foods for digestive health and sustained fullness, and ensuring adequate hydration. We will explore strategies for mindful eating, portion control, and navigating potential gastrointestinal side effects often associated with GLP-1 agonists.

Furthermore, the discussion will highlight the pivotal role of structured exercise in enhancing weight loss, improving body composition, and promoting overall metabolic health. We will differentiate between the benefits of resistance training for muscle preservation and metabolic rate enhancement, and cardiovascular exercise for fat loss and cardiovascular fitness. Practical recommendations will be offered for gradually increasing physical activity levels, designing safe and effective exercise routines, and overcoming common barriers to adherence.

By integrating these practical nutrition and exercise principles, healthcare professionals and individuals can optimize the therapeutic benefits of GLP-1 medications, fostering not just weight loss, but also improved body composition, enhanced physical function, and long-term health. This holistic perspective ensures a safer, more sustainable, and ultimately more successful weight management journey.

Biography

A dedicated expert in weight management, Alysha Moser holds dual B.S. degrees in Biopsychology (UCSB, 2014) and Dietetics (UNC, 2020). After six years as Lead Health Educator for Sansum Clinic's Doctors' Weight Management Program, she completed a Dietetic Internship at the Minneapolis VA, specializing in Medical Nutrition Therapy. Now a Lead Registered Dietitian at Form Health: Online Medical Weight Loss Clinic, Alysha further solidified her expertise by earning the Certified Specialist in Obesity and Weight Management (CSOWM) certification in 2024, continuing to help individuals achieve their health goals.

Ana Paula Alves
University Faro, Portugal

Effect of a hypocaloric and low-carbohydrate diet on weight loss in overweight and obese patients: A retrospective study

Background & Aims: Obesity remains a major public health concern in Portugal. Hypocaloric diets with reduced carbohydrate content have shown promise in promoting weight loss and improving metabolic health, but long-term adherence remains a challenge. This study aimed to evaluate the effects of a hypocaloric and low-carbohydrate diet on body composition and adherence over 12 months in overweight and obese adults attending a hospital-based nutrition clinic.

Methods: This retrospective cohort study included adults with a Body Mass Index (BMI)≥25 kg/m² followed at the Nutrition Outpatient Clinic of the Algarve Local Health Unit. Anthropometric and body composition data were collected at baseline and at 1, 3, 6, and 12 months. Statistical analysis was performed using IBM SPSS Statistics®, version 27.

Results: Significant reductions were observed in weight (97.0±19.7 to 88.2±21.8 kg), BMI (35.6 ± 5.3 to 32.5 ± 5.4kg/m²) and visceral fat (VF; 13.3±5.5 to 11.3±5.3kg) over time, particularly within the first six months (n=41; P<0.01). Among those who completed the 12 months follow-up (n=11), average weight loss was 8.6%. BMI was strongly associated with VF (ρ=0.739) and inversely associated with FFM (ρ=–0.616). Age was positively associated with dropout (ρ=0.371) and VF (ρ=0.353).

Conclusions: This intervention resulted in clinically meaningful reductions in body weight and visceral adiposity. The findings suggest that participants who attended the nutrition consultations for longer periods achieved more significant results. However, the high dropout rate highlighted the importance of tailored strategies to support long-term adherence, particularly in older individuals.

Biography

Ana Paula Alves earned her degree in Clinical Nutrition from the Faculty of Food and Nutrition Sciences at the University of Porto in 1993, followed by a master's degree in 2004. She is currently pursuing a PhD in Clinical Research and Translational Medicine at the Faculty of Medicine and Biomedical Sciences of the University of Algarve, under the supervision of Professor Carla Pedrosa. Ana Paula Alves is actively involved in research, teaching, and innovation, and works in the Dietetics and Nutrition service at the Portimão Unit of the Algarve Local Health Unit. Since 2019, she has also served as a lecturer for the European Society for Clinical Nutrition and Metabolism.

Ana Paula Franco Pacheco[1*], Renata Leite Boczar Gali[2]

[1]Nursing Department, Centro Universitário Ceuma - Unieuro/ Brasília, DF, Brazil

[2]Department of Endocrinology, Cardiology Center (NCB)/ Brasília, DF, Brazil

A diabetic specialist and an unexpected diagnosis: Genetic and environmental influence (post COVID) between mother and daughter with T1D

Clinical Case:

Identification:

- Patient 1 (Mother): A.P.F., female, 38 years old.
- History: Diagnosed with T1D at age 5, 33 years ago.
- Profession: Nurse, PhD in the area of Diabetes.
- Patient 2 (Daughter): C.F, female, 8 years old.
- History: Diagnosed with T1D 2 years ago, at age 6.
- Family History: Mother with T1D since childhood.

History of Present Illness (Patient 1): [Mother A.P.F.] was diagnosed with T1D in 1992, at the age of 5, after presenting the classic symptoms. She has been using intensive insulin therapy and continuous glycemic monitoring. Her experience as a patient motivated her to pursue a career in the health field, dedicating herself to the study and care of people with DM for 17 years.

History of Present Illness (Patient 2): Two years ago, at the age of 6, [C.F.] began to present classic symptoms: Excessive thirst and fatigue. The mother, attentive to the signs, began to have denial about what she was observing, but on the second day she performed a capillary blood glucose test that revealed HI. In great despair, the mother immediately took her daughter to the hospital for the diagnostic confirmation. The child is on insulin therapy and monitoring and practices self-care very responsibly.

Discussion: The occurrence of T1D in mother and daughter raises the question of genetic predisposition to the disease. Although T1D is not considered a classic hereditary disease, genetics plays an important role in susceptibility. The exact probability of a mother with T1D transmitting the disease to a child is complex and influenced by several genetic and environmental factors. However, we can present a general estimate: 1 and 4%.

Several genes are involved in the susceptibility to T1D, mainly the HLA (Human Leukocyte Antigen) genes located on chromosome 6. The inheritance of these genes can increase or decrease the risk.

The possible influence of post-COVID on the development of T1D is an emerging and relevant research topic. Some studies have suggested a possible association between SARS-CoV-2 infection and an increase in the incidence of new cases of T1D. The exact mechanisms of this relationship are still being investigated, but some hypotheses include: 1. Molecular mimicry, 2. Immune dysfunction and 3. Direct damage to beta cells.

It is important to emphasize that this is an area of active research and further studies are needed to confirm and elucidate this possible link between COVID-19 and the development of DM1.

The tests showed that the child had COVID, and then had an allergic reaction throughout the abdomen, ruling out other causes and previous situations, which led to the second condition being considered. On the other hand, the C-peptide test performed had a practically zero result, which demonstrated a very sudden and strong attack, which suggests the third condition. It is important to emphasize that the child did not reach the stage of diabetic ketoacidosis and did not have the honeymoon phase.

Conclusion: This clinical case illustrates the complexity of type 1 diabetes mellitus, with the mother's story showing a life of adaptation, initially as a T1D patient, who had a professional career and as a researcher in the field, and that years later, her daughter faces the same diagnosis at an early age, possibly influenced by a combination of genetic predisposition and, who knows, environmental factors such as a previous viral infection.

Biography

Dr. Ana Paula Franco, graduated in nursing from the Federal University of Santa Catarina, Brazil, since 2008. Professor of the Nursing course at the Unieuro University Center. Specialist in Non-Communicable Chronic Diseases. Expert in Chinese Medicine from the Santiago de Compostela College, in Spain; Master in Health Education in Diabetes, with research conducted in England. PhD in Medical Sciences in Technology and Health System in Diabetic Neuropathy in 2017. Conducts research and publications in the area.

Andrzej Tomczak
Institute of Human Sciences, WSB Merito University in Torun, Poland

Assessment of the level of physical activity of soldiers of different types of troops of the Polish armed forces

Background: An important determinant of the profession of a soldier is maintaining a high level of physical fitness, which is periodically tested in the army. In order to maintain high physical fitness, one should regularly undertake physical activity of varying intensity, both during professional work and in free time. In principle, a soldier should be characterized by high physical activity. The aim of the study was to assess the level of physical activity of various types of troops (militaries) of the Polish Armed Forces.

Materials and Methods: The study involved 1148 soldiers from 3 types of troops: 394 soldiers from the army, 508 from the air force and 98 from the navy. The average age of the soldiers studied was 32.5±2.5 years. The research method used was the International Physical Activity Questionnaire–Polish version, developed by the team of E. Biernat, R. Stupnicki, A.K. Gajewski and published in 2007. Metabolic Equivalent (MET) was calculated for individual forms of physical activity (work, moving, housework, recreation). Based on the MET value, intensity of physical effort and frequency of physical effort, three levels of physical activity were determined: High, sufficient, insufficient. Thousand questionnaires (85% of all questionnaires) were qualified for analysis, because the remaining (15%) did not meet the credibility criteria.

Results: A high level of physical activity was revealed by 86% of all soldiers, 11% a sufficient level, and 3% insufficient. The average value of the overall MET was 13,710. No statistically significant differences were found between the groups of soldiers studied. Taking into account the individual types of troops, among land forces soldiers a high level of physical activity was revealed by 91%, sufficient by 8%, and insufficient by 1%. On the other hand, among air force soldiers 81% revealed a high level, 15% sufficient, and 4% insufficient. A similar level of physical activity was revealed among navy soldiers, i.e. 81% high level, 12% sufficient, and 7% insufficient. The worst results were achieved by navy soldiers.

Conclusions: Accepting the IPAQ criteria, it was found that the soldiers studied generally declare a high level of physical activity. This indicates that most soldiers have a proper approach to a healthy lifestyle. Nevertheless, it is a disturbing phenomenon that there remains a few percent group of soldiers who have been found to have an insufficient level of physical activity. Such a situation should not occur in the army. In relation to this group of soldiers, preventive measures should be taken to increase awareness of the role of physical activity in human life. In addition,

for this group of soldiers and soldiers with a sufficient level of physical activity, it is necessary to introduce health training classes.

Biography

Andrzej Tomczak is an Associate Professor and Habilitated Doctor in medical and health sciences with a specialization in sport science at the University of Physical Education in Krakow. He also holds a Doctorate in social sciences with a focus on security studies from the War Studies University in Warsaw, as well as a Doctorate in sport sciences (physical culture science) from the University of Physical Education in Wroclaw. His academic background is complemented by an MSc in physical education and a BEng degree. Professor Tomczak is the author of two monographs and has published more than 120 research papers. His main research areas encompass fitness and physical activity, coordination motor abilities, soldier training with an emphasis on survival school, nutritional status, and security education.

Anil Harrison[1*], Rayamajhi S.[2], Shaker F.[3], Schwartz T.[4], Moreno M.[5], Hosseini K.[3]

[1]Department of Medicine, Midwestern University Arizona College of Osteopathic Medicine, Glendale, Arizona, USA

[2]Department of Internal Medicine, University of Central Florida College of Medicine / HCA Florida West Hospital, Pensacola, Florida, USA

[3]Tehran Heart Center, Cardiovascular Disease Research Institute, Tehran University of Medical Sciences (TUMS), Tehran, Iran

[4]Department of Research and Statistics, HCA Healthcare Research, Nashville, Tennessee, USA

[5]Department of Mathematics and Systems Engineering, Florida Institute of Technology, Melbourne, Florida, USA

Comparative outcomes of antihypertensive therapy in Black vs non-Hispanic White patients with hypertension and cardiovascular disease

This retrospective, multicenter cohort study evaluated the comparative effectiveness of Calcium Channel Blockers (CCBs), Angiotensin-Converting Enzyme Inhibitors (ACEIs)/ Angiotensin Receptor Blockers (ARBs), and thiazide diuretics in reducing cardiovascular events among hypertensive African American and non-Hispanic White populations. Using data from HCA Healthcare's multicenter database (2016–2022), we analyzed over 6,000 adult patients with documented hypertension and cardiovascular comorbidities. Patients were stratified by race and first-line antihypertensive class. The primary endpoint was a composite of myocardial infarction, stroke, hospitalization for heart failure, or cardiovascular death. Among African American patients, CCBs and thiazide diuretics were more effective at reducing cardiovascular events compared to ACEI/ARBs. In contrast, ACEI/ARBs showed comparable effectiveness across both racial groups when combined with diuretics. This study supports current hypertension management guidelines emphasizing race-specific therapy and reinforces the need for individualized antihypertensive strategies to mitigate long-term cardiovascular risk.

Biography

Dr. Anil Harrison is Chair of Internal Medicine at Midwestern University Arizona College of Osteopathic Medicine in Glendale, Arizona. With a strong academic and clinical background, he has led and collaborated on multiple large-scale, retrospective studies examining cardiovascular risk, metabolic syndromes, and real-world treatment outcomes in diverse patient populations

Maheshwari P.K.[1], Rampal M.[1], Cornett B.[2], Tariq A.[3], Anil Harrison[4*]

[1]Department of Internal Medicine, HCA Florida West, Pensacola, FL, USA

[2]Department of Pharmacy, HCA Florida West, Pensacola, FL, USA

[3]Department of Endocrinology, University of South Alabama, Mobile, AL, USA

[4]Chair, Department of Internal Medicine, Midwestern University Arizona College of Osteopathic Medicine, Glendale, AZ, USA

Evaluating the severity of acute pancreatitis in type 2 diabetes patients treated with incretin-based therapies versus insulin: A multicenter retrospective analysis using APACHE II

This multicenter retrospective study investigates whether incretin-based therapies (GLP-1 receptor agonists and DPP-4 inhibitors) influence the severity of acute pancreatitis compared to insulin in patients with type 2 diabetes mellitus. Using the APACHE II scoring system as a validated predictor of severity and ICU-level outcomes, we analyzed 192 patient records from three institutions between 2017–2022. Patients were stratified into two cohorts: those on incretin-based therapies and those on basal/bolus insulin therapy. Findings demonstrated no statistically significant difference in APACHE II scores between the two groups; however, patients on incretin-based agents showed a modest trend toward lower ICU admission rates and reduced length of stay. These results suggest that incretin-based therapies are not associated with worse pancreatitis severity and may, in select populations, be a safer long-term glycemic option with pancreatic tolerability. Additional prospective research is warranted to further validate these findings and explore potential protective mechanisms

Biography

Dr. Anil Harrison is Chair of Internal Medicine at Midwestern University Arizona College of Osteopathic Medicine in Glendale, Arizona. He previously served as Program Director at HCA Florida West in Pensacola, where this study originated. With a longstanding commitment to clinical research, medical education, and mentoring, Dr. Harrison has authored multiple studies focused on cardiovascular and metabolic disease outcomes.

Anna K Azevedo-Martins*, Matheus P dos Santos, Fabiana S Evangestista
Escola de Artes Ciências e Humanidades/Universidade de São Paulo, São Paulo, São Paulo, Brasil

Maternal obesity and the development of gestational diabetes: What pathways connect these conditions?

Maternal obesity is a well-established risk factor for Gestational Diabetes Mellitus (GDM), a condition defined by glucose intolerance with onset during pregnancy. A central mechanism underlying this association involves dysfunction of White Adipose Tissue (WAT), an endocrine organ that regulates energy homeostasis, inflammation, and insulin sensitivity. In healthy pregnancies, insulin resistance physiologically increases in the second and third trimesters to ensure adequate glucose supply to the fetus. This state is normally counterbalanced by enhanced pancreatic β-cell mass and insulin secretion. However, in the context of obesity, this adaptive response is compromised. In obese individuals, WAT expansion occurs predominantly through hypertrophy rather than hyperplasia, reducing its lipid storage capacity and promoting elevated circulating Free Fatty Acids (FFAs). These FFAs accumulate in insulin-sensitive tissues such as the liver, skeletal muscle, and pancreas, exacerbating systemic insulin resistance. Moreover, dysfunctional WAT becomes a source of chronic low-grade inflammation, secreting pro-inflammatory cytokines (e.g., TNF-α, IL-6, leptin) and suppressing beneficial adipokines such as adiponectin. This altered adipokine profile directly impairs β-cell function. Reduced adiponectin levels, commonly observed in obese pregnant women, limit β-cell proliferation and survival, hindering compensation for gestational insulin demands. Concurrently, elevated FFAs and inflammatory mediators further disrupt insulin signaling and exacerbate β-cell dysfunction. Leptin excess, although typically associated with satiety, may also contribute negatively by interfering with insulin biosynthesis and secretion. Understanding how WAT dysfunction in obesity impairs β-cell adaptation is critical to elucidating GDM pathogenesis. Beyond metabolic implications, these interactions highlight the importance of achieving appropriate gestational weight gain and managing pre-existing obesity. In this session, we will explore the crosstalk between adipose tissue and pancreatic β-cells, emphasizing its relevance to maternal-fetal health and potential therapeutic targets.

Biography

Dr. Anna Karenina Azevedo-Martins studied Nutrition at the State University of Ceará, Brazil and graduated as MS in 1999 at the University of São Paulo (USP). Then she joined the research group of Prof. Sigurd Lenzen at the Medizinische Hochschule Hannover, Hannover, Germany, where she completed the first two years of her PhD. Anna received her PhD degree in 2004 at the Institute of Biomedical Sciences-USP. After a one-year postdoctoral fellowship supervised by Dr Rui Curi at the same institution, she obtained the position of Associate Professor at the School of Arts, Sciences and Humanities-USP. Since then, Anna has been studying beta cell biology in the context of gestational diabetes. She has published more than 20 research articles and 14 academic books and chapters.

Auston Cherbonneaux
United States

Physiology of the anti-calorie diet

There has been a misconception about energy in nutrition, exercise, and biological sciences, and that misconception is that we operate on the same thermodynamics as a combustion engine. This is the premise of the calorie measurement, and in this presentation, I will discuss the history of this measurement, how scientists got it wrong in application, and the real energy dynamics behind nutrition as we understand it with modern physics.

With this better understanding of the source of energy in nature, I will then discuss how our bodies mediate the use of materials needed to produce continuous the energy necessary for life function. This will reveal a more clear view of the physiology of weight loss and its relationship to the biophysics of energy in exercise and nutrition. This will allow scientists, doctors, and health professionals to better understand and recommend weight loss management strategies for their clients.

Biography

Auston Cherbonneaux began studying Kinesiology in 2011 at San Diego State University under Pete McCall, the creator of the American Council on Exercise's IFT model. Auston quickly became certified as an ACE Certified Personal Trainer, and expanded his studies to include more chemistry, management, nutrition, and psychology classes. Unable to finish his undergrad, he continues to pursue his research independently. Auston was previously certified as a NSCA CPT, NSCA Tactical Strength and Conditioning Facilitator, NASM Corrective Exercise Specialist, USA Olympic Weightlifting Coach, a USA Olympic Rugby Coach, and specialty certificates in athletic performance, weight loss, mental toughness, and nutrition.

Benjamin Sley

Texas Bar Association Member, U.S. Marine Corps Veteran, United States

Nutrition + gentle strength: Preventing sarcopenia for a vibrant life

Benjamin Sley is a Marine Corps veteran, chemist, certified nutritionist, and nationally recognized expert on permanent weight loss without injections or extreme exercise. After personally losing over 75 pounds and keeping it off for more than six years, Ben now helps others—especially men and women over 45—achieve the same transformation. His method is grounded in biochemistry and real-world results: Eliminate inflammatory, ultraprocessed foods; preserve and rebuild lean muscle; and restore metabolic health without relying on pharmaceuticals, crash diets, or hours in the gym.

In his engaging and practical presentation, Ben explains how modern lifestyles and common foods disrupt human metabolism, accelerate fat storage, and lead to sarcopenia—age-related muscle loss. He offers a clear roadmap to reverse these effects through nutrient-dense eating, gentle resistance training, and restoring metabolic flexibility. Attendees will learn why injections and extreme exercise are unnecessary—and even counterproductive—for long-term health and weight loss.

This talk is ideal for audiences seeking a sustainable, science-backed approach to regaining energy, muscle tone, and confidence. Ben's delivery is inspiring and actionable, combining his deep knowledge of human metabolism with the discipline and grit of a Marine. He speaks with clarity and purpose, equipping listeners with simple strategies they can apply immediately.

Learning Objectives:

1. Understand why most diets fail and how to correct metabolic damage naturally.
2. Learn to preserve muscle mass while losing fat, especially after age 45.
3. Discover which foods disrupt metabolism and how to replace them.
4. Gain strategies for reversing sarcopenia and restoring energy.
5. Build a personalized, sustainable action plan for lasting fat loss and vitality.

Ben's message is clear: You can reclaim your health without needles, pills, or punishing workouts—and his mission is to show you how.

Biography

Benjamin Sley is a Marine Corps veteran, chemist, and recognized expert on permanent weight loss without injections or excessive exercise having appeared on NBC TV, USA Today, MSN and LA Weekly. He combines science-based nutrition with real-world results, helping adults over 45 reclaim vitality, build muscle, and reverse metabolic damage through sustainable lifestyle changes. His method is proven, practical, and life-changing.

Betsy Jacob
Right Balanced Living, LLC, Bloomingdale, Illinois, U.S.A

Lifestyle medicine and holistic approaches to obesity

Obesity is an epidemic in America, proportionally way higher than the rest of the world. Three out of four Americans are overweight including obese. The focus of the talk is to discuss this preventable chronic disease by addressing the physical, psychological and spiritual pain that patients suffer. The talk focuses on holistic approaches to obesity including proper hydration, mindful eating, stress management, meditation and balanced life. With sample patient case studies, the goal is to inspire people to take action to achieve their healthy body and live an empowered proactive life.

Having worked over 15 years in obesity medicine my goal is to lay out a basic game plan to treat this disease with an integrative lifestyle root cause approach, not hist a quick fix of our symptoms. With personal and professional stories, I hope to inspire people to take five action steps to heal their health and achieve well-being. There is a place for prescription medicine, but the foundation of healthy living is a balanced lifestyle with a simple routine that the patients can implement consistently into their daily lives for long-term results.

Biography

Betsy Jacob is a certified Family Nurse Practitioner with over 15 years of experience in urgent care, obesity, functional, and lifestyle medicine. She earned her Bachelor of Science degree in Nursing and Psychology from Elmhurst University and went on to complete her Master of Science at the University of Illinois at Chicago, specializing in Family Nurse Practitioner/Public Health Nursing. Since graduating in 2003, she has worked with hundreds of patients, with a strong emphasis on wellness and disease prevention. Her professional mission is rooted in promoting therapeutic lifestyle changes and empowering her patients to live their best lives.

Dr. Bhaktavatsalam Peta

Department of Pathophysiology, St. George's University, St. George's, Grenada

Beyond the scale: How GLP-1 receptor agonists transform metabolic health in obesity

Obesity is one of the most pressing health challenges of the 21st century, contributing to diabetes, cardiovascular disease, and reduced quality of life. Traditional approaches such as diet, exercise, and behavioral modification, while essential, often yield limited long-term success. In recent years, Glucagon-Like Peptide-1 (GLP-1) receptor agonists have emerged as highly effective pharmacologic options, transforming the landscape of obesity treatment. Among them, semaglutide (Ozempic) has shown remarkable efficacy in both clinical trials and real-world practice.

Initially approved for type 2 diabetes, semaglutide demonstrated weight reductions averaging more than 15% of baseline body weight in large randomized controlled studies, outcomes that were previously seen only with bariatric surgery in selected patients. Its mechanisms include delayed gastric emptying, enhanced satiety via central nervous system pathways, and improved insulin sensitivity, leading to a dual benefit in weight control and metabolic health. In addition to significant weight loss, semaglutide improves glycemic control, lowers blood pressure, enhances lipid profiles, and reduces cardiovascular risk factors. The most frequent adverse effects are gastrointestinal in nature and generally transient.

Beyond semaglutide, the development of newer incretin-based therapies such as tirzepatide, a dual GIP/GLP-1 receptor agonist, demonstrates even greater promise by engaging multiple metabolic pathways simultaneously. Early evidence suggests superior weight reduction and metabolic outcomes compared with single-agonist therapies.

The integration of GLP-1 receptor agonists into comprehensive weight management strategies represents a paradigm shift, bridging the gap between lifestyle interventions and surgical options. These therapies provide durable, clinically meaningful outcomes that extend beyond the number on the scale, offering improvements in overall health and quality of life. As research advances, incretin-based drugs may redefine the future of obesity care, providing hope for millions affected worldwide.

Biography

Dr. Bhaktavatsalam Peta earned his MBBS from Gandhi Medical College, Secunderabd, India, and completed his M.S. in Community Health at Minnesota State University, USA. He has over 12 years of academic experience at St. George's University, Grenada, where he currently serves as Lecturer and Deputy Chair in the Department of Pathophysiology. His teaching focuses on integrating basic and clinical sciences for large cohorts of over 1200 students annually. His research focuses on innovations in medical education, complemented by regular contributions at international medical conferences.

Charles Bernard
Criteria for Success, Inc., United States

How to align stakeholders and accelerate obesity outcomes by enabling buy-in

Many of the most promising obesity initiatives struggle not because of clinical shortcomings, but because key stakeholders fail to commit.

- Patients drop out
- Programs lose momentum
- Funders hesitate.
- Internal teams misalign.

These are not just operational issues. They are decision challenges. This presentation introduces a simple but powerful framework for addressing those challenges. The problem-opportunity matrix is borrowed from strategic sales and adapted for healthcare, which we have done for several years already.

You will learn how to build your own matrix during the session. This exercise will help you:

- Clarify the real-world problem your initiative is solving
- Connect your strategy to measurable outcomes that matter to stakeholders
- Identify the right message and moment to drive engagement
- Use real success stories to support funding and implementation

By the end of the session, each participant will walk away with a way to customize your matrix that can be used to support:

- Grant applications
- Internal proposals
- Patient programs
- Community partnerships
- Executive presentations.

Problem-Opportunity Matrix for Attendees - Example

Feature or Strategy	Benefit	Problem	Engaging Question	Example
Community-based support model	Sustained patient engagement in obesity care	Patients disengage after enrollment	What causes patients or community members to drop out before completing care plans?	A rural program added peer support and increased adherence by 40 percent.
Interdisciplinary care coordination	Consistent, high-quality treatment across providers	Disconnected care leads to inconsistent experiences	Where do your patients fall through the cracks during transitions of care?	A hospital aligned its teams and reduced obesity-related readmissions by 22 percent.
Data-driven reporting and outcome measurement	Clear impact for funders and institutional leaders	Difficulty proving ROI or success over time	How do you currently show that your work is making a measurable difference?	A city program tied its work to reduced ER visits and secured long-term funding.
Patient-centered education and behavioral tools	Empowered individuals who follow through on care	Patients feel overwhelmed or uninformed	What do you use to help patients understand and commit to their care plan?	A primary care network introduced short mobile videos and improved follow-through significantly.
Collaborative proposal and grant development	Increased funding and institutional support	Funders and executives do not see alignment with their goals	What is missing from your proposal that would make it resonate with decision-makers?	A university and nonprofit co-authored a grant that secured $500,000 in obesity program funding.

Closing Reflection: What would change in your work if the right people were ready and willing to say yes sooner?

Biography

Charles Bernard is the Founder and CEO of Criteria for Success, Inc., a sales growth and management consulting company located in the heart of Manhattan. At Criteria for Success, Charles bridges the gap between a CEO's vision and what's possible for their company. Charles is an accomplished speaker that has trained thousands of CEOs, Sales Managers, and Salespeople on the art of business relationships, growing revenue, and overcoming challenges. With over 20 years of experience in direct sales, sales management, recruiting, and Training-Charles is a subject-matter expert with a knack for troubleshooting. As a Senior Account Executive for General Electric, he was the top revenue producer in his division. He founded the IBM DB2 software development consulting firm, Atlantis Vision Ltd, and later was a partner and Executive Director of Sales for one of New York's first systems integrators, NETLAN, Inc. Charles discusses new school thinking around an organization’s revenue generation practices, including addressing leadership, execution, and performance concerns. He not only welcomes but encourages active participation from his audience when delivering his talks. Charles has lived all over the world. He was born in Madrid, Spain and was educated in Surrey, England. Currently, Charles resides in New York City where he is authoring his first book, Enabling Buying in a World of Selling.

Christina Campbell, DO
Clarkston, MI, USA

Understanding and addressing the multifactorial nature of obesity: A comprehensive approach

Obesity is a complex, multifactorial condition influenced by an intricate interplay of dietary, lifestyle, genetic, and epigenetic factors. Effective weight management necessitates a deeper understanding of these root causes to develop targeted interventions that promote sustainable health outcomes.

This presentation explores dietary and lifestyle contributors to obesity, including the impact of inflammatory foods, dietary choices, hydration, toxic load, and exposure to endocrine-disrupting chemicals. Additionally, it highlights the critical role of circadian rhythms and lighting, sleep quality, exercise, and gut health, including the microbiome's influence on metabolic pathways and longevity. These foundational elements will be discussed as cornerstones for effective obesity management and prevention strategies.

Furthermore, the presentation delves into the genetics and epigenetics of obesity, emphasizing the role of specific Single Nucleotide Polymorphisms (SNPs) that, when activated, predispose individuals to obesity. Practical, evidence-based therapeutic options for modulating these genetic expressions will be explored, offering insights into personalized approaches for weight management.

Beyond genetics, the discussion expands to include cellular mechanisms that underpin obesity, such as cellular redox breakdown, immunometabolism, chronobiology, and cellular senescence. These processes disrupt cellular signaling, leading to metabolic dysfunction and weight gain. Strategies for restoring cellular signaling pathways and optimizing metabolic health will be shared, providing a comprehensive framework for addressing the biological drivers of obesity.

This holistic exploration combines cutting-edge research and practical therapeutic approaches, aiming to empower healthcare professionals with tools to address the root causes of obesity and support patients in achieving long-term health and weight management goals.

Biography

Dr. Christina Campbell earned her BA from the University of Florida in 1993 and her Doctor of Osteopathic Medicine degree from the University of New England in 1998. After completing a rotating internship at Grandview Hospital in Dayton, Ohio, she pursued a dual residency in Internal Medicine and Emergency Medicine at McLaren Oakland Hospital, graduating in 2002. A Fellow of the American Academy of Emergency Physicians and Board Certified in Emergency Medicine, she is also Certified in Functional Medicine. With nearly 30 years of clinical experience, she is passionate about uncovering root causes of disease and has served as Clinical Faculty at Michigan State University since 2005.

Clifford Morris PhD, FAAMM
Kihealth, Saint Augustine, FL, USA

Clinical applications of monitoring unmethylated insulin cfDNA associated with beta-cell death for diabetes and metabolic diseases

Metabolic disorders, including type 1 and type 2 diabetes, are significant global health challenges. The CDC estimates that 37.3 million Americans have diabetes, and another 96 million adults are diagnosed with prediabetes each year. Among individuals in Stage 2 diabetes, 75% will progress to full-blown diabetes within five years, highlighting the urgent need for early-stage monitoring tools. Current diagnostics rely on indirect markers, such as blood glucose and insulin levels, which do not capture real-time cellular damage. By the time of diagnosis, up to 60% of beta cell function may already be lost.

Our proprietary ßeta Test™ uses Droplet Digital PCR (ddPCR) technology to directly measure beta cell function by detecting unmethylated insulin cfDNA released when beta cells break down. This process can identify metabolic changes up to 625 days earlier than current methods, offering a critical advantage in early detection and prevention. Research shows that insulin cfDNA levels correlate with early-stage beta-cell stress in prediabetes and metabolic syndrome, autoimmune destruction in Type 1 Diabetes, and progressive beta-cell loss in Type 2 Diabetes. This technology also helps track treatment responses, including therapies like GLP-1 receptor agonists and immunotherapies.

Early intervention based on this technology can reduce beta-cell stress, improve metabolic flexibility, and delay or prevent disease progression. It enables early identification of high-risk patients, therapeutic efficacy monitoring, and personalized diabetes management. By integrating INS cfDNA testing into clinical practice, providers can enhance detection, optimize treatments, and ultimately reduce complications, providing a new non-invasive approach to metabolic disease management.

Biography

Dr. Morris is an integrative medical scientist with contemporary training and internationally published research. He started his career researching neurodegenerative diseases, supported by NIH and Alzheimer's Association grants. Later, he led clinical research labs focusing on novel integrative and regenerative medicine methods. As an A4M fellow, board-certified in Clinical Sciences of Anti-Aging, he applies cutting-edge medical sciences to improve the health and quality of life for underserved populations. Dr. Morris is dedicated to developing therapeutic strategies to enhance healthspan and make a tangible impact on patient well-being.

Dr. Colleen Lindsey
Co-Founder/CEO Leading Notes, San Antonio, TX, USA

Wellness from within: Mini mindset shifts to create lasting change

Dr. Colleen Lindsey loves helping people improve their lives. Using her 150-pound weight-loss journey to catapult further change in her own life, she has identified six steps necessary for change to occur for people.

Change happens when people understand themselves, adjust mindsets and habits, and address small daily practices to create incremental shifts. While the shifts seem small, the effect compounds over time to impact significant growth. Just as she adjusted her lifestyle over time to improve her mental, emotional, physical, spatial, and financial health, she inspires others to also find opportunities for growth.

Biography

Dr. Colleen Lindsey earned her bachelor's and master's degrees from Baylor University and her doctorate from the University of New Orleans. She is an award-winning speaker and author, praised by former students and audiences. Hurricane Katrina brought her back to her San Antonio hometown. She pivoted from her career in education to become a motivational speaker and consultant. Her goal is to help others find complete wellness for themselves to generate higher performing individuals and organizations.

Craig Mortimer

Research and Development Department, South East Coast Ambulance Service NHS Foundation Trust Crawley, West Sussex, UK

The hidden link: Exploring the asthma and diabetes connection in emergency care

Blood glucose regulation is a dynamic and ever present process in all of us, regardless of whether an individual has been diagnosed with diabetes or any related metabolic condition. Daily routines such as eating, exercising, sleeping, or even something as seemingly routine as driving can trigger significant fluctuations in blood glucose levels. These changes occur naturally, but when chronic conditions, medications, and acute illnesses are involved they can become far more complex and clinically significant.

One such condition with emerging relevance in this context is asthma. Increasing bodies of research suggest a significant relationship between asthma and diabetes where individuals diagnosed with either of these conditions face a heightened risk of developing the other over the course of their lifetime. This interrelationship is further complicated by the medications commonly used in treatment, many of which, while effective for one condition, can inadvertently worsen the other.

Healthcare professionals, particularly those working in urgent and emergency care settings, are often faced with this unique clinical challenge and the difficult task of making rapid treatment decisions that may carry unintended consequences. Treating an asthmatic patient, for instance, without awareness of underlying, possibly undiagnosed diabetic markers, can lead to adverse outcomes both in the immediate and long term setting.

This presentation will explore the clinical risks and considerations faced by frontline healthcare workers when managing patients with asthma who may also present with diagnosed or undiagnosed diabetic markers. We will examine the physiological interactions between treatments, discuss case based risks, and highlight how emergency interventions can influence glycaemic control, sometimes detrimentally. In addition, we will consider the broader context, including the lingering impact of the COVID-19 pandemic on patient health and comorbidity management.

Through discussion, we hope to shed light on the nuanced interplay between respiratory and metabolic conditions in emergency healthcare and begin shaping safer, more informed interventions for patients navigating both.

Biography

Dr. Craig Mortimer brings over 30 years of frontline experience in urgent and emergency prehospital care, underpinned by an MBA, MSc, and PhD. Craig has led and published research focused on improving care delivery, with particular interest in asthma and comorbidities like diabetes. As Research Manager in a major NHS ambulance Trust, Craig bridges clinical practice, research, and management/leadership. A seasoned educator across undergraduate and postgraduate education and researcher across varied healthcare sectors and HEIs he continues to shape the future of prehospital care through evidence-based practice and system wide improvement.

Danielle Heyer* B.S.N., R.N., C.C.T.C; Teresa Marzolf M.S.N. R.N; Ty S. Diwan M.D; Aleksandra Kukla M.D

Department of Transplant, Mayo Clinic, Rochester, MN

Bridging the gap between obesity and kidney transplant

In 2021, a review of our waitlist population indicated that 18% of our patients had a BMI>35, putting them at a higher risk of cardiovascular events post-transplant. 2% had a BMI>40, making them ineligible for transplant. If these patients took part in weight management services prior to organ transplant they could have better outcomes during their post-transplant course. The objective of this program was to make transplant an option for patients whose BMI would have made them ineligible for transplant. Additionally, it would address risk factors, specifically obesity, to optimize post-transplant outcomes for patients that have a BMI between 35 and 40.

These patients are less likely to complete a traditional bariatric program due to management of complicated chronic conditions involving multiple medical appointments and ongoing coordination. For the patient to be successful, it was critical to have a nurse coordinator develop a process that would guide the patient through a bariatric program specific for the kidney transplant patient.

Methods/Practices/Interventions: Mayo Clinic Rochester Transplant Center has specific BMI listing limits for kidney transplants. Our focus for this program is Kidney Transplant patients with a BMI of 35-40. This program had been using Endocrinology to address obesity needs in the past, however they were treating the general population rather than focusing on the transplant-specific patient population. Bringing this service into the Transplant Center provided us a greater opportunity to prepare for and coordinate specific weight loss efforts for transplant patients and to properly follow up for kidney transplant surgery. The initial team developed for the new program consisted of the transplant bariatric surgeon, Nephrologist, Endocrinologist (consulting), Psychiatry (consulting), and an RN credentialed Operations Manager. It also involved a dietitian.

The program is a multidisciplinary approach that touches on dietary changes, activity, psychological and behavioral therapies, medication therapies, and surgical procedures that can be used to facilitate weight loss prior to being listed for transplant. The process begins with a pre-transplant patient referred by the pre-transplant coordinator or a provider. If the patient has a BMI greater than 35 and based on the patient's needs and eligible benefits, the bariatric nurse coordinator will enter orders for Endocrinology and Psychology (a panel), an initial visit with the transplant bariatric surgeon, and an initial visit with Transplant Nutrition. After all visits are

completed, the patient can proceed to a pre-surgical assessment with the transplant bariatric surgeon. Once evaluated, a case request for surgery is created which ensures a holding place for surgery and sends a prior authorization. Once the prior authorization is approved, a surgery date can be scheduled, PAME orders are placed, and all required post-surgery visits are scheduled.

Findings/Solutions/Conclusions: The newly developed bariatric nurse coordinator role has been instrumental in coordinating patient care and facilitating the removal of barriers to optimize the patient's outcomes. They are the focal point for the practice and the patient. The success of this new program is largely due to the creation of the bariatric nurse coordinator role. The results show that we have performed 65 sleeve gastrectomies on pre-kidney transplant patients. 36 of them have gone on to receive a kidney transplant. 10 of them are actively waiting for a transplant. 3 of them have been made inactive because their kidney function improved post-sleeve and they are no longer eligible for a transplant, as they are too well. Overall, this indicates a 75% success rate as 49/65 patients who have received a sleeve through our program have gone on to either receive a kidney, are currently awaiting a kidney, or are too well to be listed.

Implications/Relevance: The opportunity for the number of obese patients receiving Kidney organ transplants has increased through this program. The unique needs of the transplant patient were also identified and addressed enabling better outcomes. The scope of the program and lessons learned can be broadly used with other organ groups, not just within our center but across other organ transplant programs.

Biography

Danielle Heyer earned her associate's degree in nursing in 2010, and her bachelor's degree in nursing in 2016 from Western Governor's University. She began her career at Mayo Clinic in 2016 and moved to the Transplant Center in 2018. Heyer earned her Clinical Transplant Coordinator Certification in 2021. That same year she began working with her colleagues to develop the Transplant Bariatric Program within the Transplant Center. Heyer lives in Minnesota with her Husband Jared, her 2 children, and her 2 dogs.

Davide Garrisi[1*], Andrew Bevan[2*], Mona Eskanderian[3], Eling Gaines[4], Graham Ellis[5] MD

[1]Vice President, Cardiovascular and General Medicine, PPD part of Thermo Fisher Scientific, Milan, Italy

[2]Executive Director, Integrated Project Solutions, PPD part of Thermo Fisher Scientific, Cambridge, UK

[3]Director, Cardiovascular and General Medicine, PPD part of Thermo Fisher Scientific, Brussels, Belgium

[4]Sr. Director, Cardiovascular and General Medicine, PPD part of Thermo Fisher Scientific, Arlington, Tn, United States of America

[5]Executive Director, Medical Science and Strategy, PPD part of Thermo Fisher Scientific, Cape Town, South Africa

Use of a large real-world dataset to define representative US populations for phase III obesity studies

Clinical development pipeline in weight management is expected to grow by 11/12% YoY (Year-on-Year) with more than 120 drugs at different stages of clinical development and a 64% PTSR1 (Phase Transition Success Rate) from phase II to III. Moreover, we expect that the number of patients needed to enroll for the transition from phase II to phase III in clinical trials in next years will increase substantially to from 30,000/40,000 in 2024 140,000/180,000 in 2026/20272. This substantial x20 increase in studies' sample size is caused by the transition from a median sample size of 250/260 patients in a standard phase II dose-finding study to at least 4,500 patients studies in phase III, to comply with the FDA Guidance for Industry requirements3, of a recommended sample size of 3,000 patients randomized to the investigational drug to assess safety and no fewer than 1,500 patients on placebo for at least 1 year of treatment at the maintenance dose.

The FDA guidance also recommends (row 238-239: subjects are expected to reflect) that the subjects' population reflects the population likely to use the drug in clinical practice with regard to age, sex, race, and ethnicity in the U.S. population. However, until recently the FDA has not provided guidance on how such populations might be defined. This is addressed in FDA draft guidance released in June 2024, which requires sponsors to develop Diversity Action Plans to improve enrollment of underrepresented populations in clinical studies. The FDA generally recommends, whenever possible, Sponsors use estimated US disease prevalence or incidence by demographic characteristic from publicly available data sources (e.g., published literature, publicly available epidemiological surveys, certain registries) to inform enrollment goals. However, this information may not exist for many conditions or may be many years out of date. In recent years, large Electronic Health Record (EHR) databases have been created that enable the rapid assessment of demographic data from millions of US healthcare consumers based on International Classification of Diseases (ICD) codes for medical conditions. These Real-World Data (RWD) provide an opportunity to readily define the demographic characteristics of patient populations and have been proposed for common conditions such as Alzheimer's disease,

but not obesity. To determine the demographic distribution (age, sex, race and ethnicity) of individuals living in the US with a diagnosis of obesity for clinical trial planning purposes, we used RWD collected from the TriNetX Network, which provides access to Electronic Health Records (EHRs) (diagnoses, procedures, medications, laboratory values, genomic information) from approximately 150 million individuals across approximately 80 Healthcare Organizations (HCOs) in the US. Using a combination of new ICD-10-CM E-codes for adult obesity (E66.811, E66.812, and E66.813) together with existing Z-codes for BMI ≥25 Kg/m^2) per recent Centers for Disease Control guidance, and excluding codes for hypofunction and other disorders of the pituitary gland or Cushing's syndrome or bariatric surgery, we identified 165,610 individuals. The demographic distribution was 66.7% Female, 33.3% Male, 69.3% White, 19.2% Black or African American (BAM), 2.4% Asian, 9.2% other/unknown Race, 74.2% Non-Hispanic or Latino, 9.1% Hispanic or Latino (HL) and 17.0% other/unknown ethnicity. Based on an analysis of binomial confidence intervals, a hypothetical US trial phase III obesity clinical trial of 4 500 patients would be statistically representative ($p<.05$) of the EHR-derived population if it included a range of 2939-3064 Females, 1435-1560 Male, 3057-3180 White, 811-915 BAM, 88-129 Asian and 357-433 HL subjects.

1. Clinical Development Success Rates and Contributing Factors 2011–2020, © BIO | QLS Advisors | Informa UK Ltd 2021.
2. Internal data elaboration by the Authors
3. FDA. (2025). Obesity and Overweight: Developing Drugs and Biological Products for Weight Reduction Guidance for Industry Obesity and Overweight: Developing Drugs and Biological Products for Weight Reduction Guidance for Industry. January.

Biography

Davide Garrisi holds a doctorate degree in Pharmaceutical Chemistry and Technology from the University of Padua (Italy) and an executive MBA from ALTIS/Catholic University of Milan/IlSole24 ore. He was appointed roles of increasing responsibilities in the CRO business, and he is currently Renal and Metabolic Therapeutic Area Lead in Cardiovascular and General Medicine at PPD, part of Thermo Fisher Scientific. He is also author and co-author of several posters and publications about the biotech industry and other topics in a variety of therapeutic areas.

Andrew Bevan holds a master's degree by research in Pharmacology form the University of Dundee (UK) and is a Chartered Scientist. His career in clinical research spans more than 20 years and he is currently Executive Director of Integrated Project Solutions at PPD part of Thermo Fisher Scientific. He has coauthored more than 20 publications and abstracts on a variety of topical areas of interest in clinical research.

Elias Ketiar*, Marcela Roy*, Lauren Crooks, Viani Figueroa Vazquez, Maria Visser

Department of Science and Medicine, Signant Health, PA, USA

Patient engagement strategies in weight management medication clinical trials: Addressing discontinuation challenges and improving retention

Background: Weight Management Medications (WMMs) demonstrate significant benefits including weight loss and improvement in cardiovascular risk factors (blood pressure, lipid profile, HbA1c levels, inflammation), while behaviorally reducing food cravings, food noise, and addictive behavior. However, recent evidence indicates a clinically meaningful rebound effect after stopping WMMs, including weight regain, return of cardiometabolic risk factors, and relapse into unhealthy behaviors. The STEP 1 extension study showed that one year after cessation of GLP-1 use, patients had regained two-thirds of the weight previously lost (despite receiving lifestyle interventions during initial clinical trial), and changes in cardiometabolic variables returned towards baseline. Among patients using GLP-1 agonists for the first time, 30% discontinued within 3 months and 50% discontinued within a year. Patients living with obesity are at high risk of dropping out of WMM trials due to gastrointestinal side effects (nausea, vomiting, and diarrhea), early dropout during dose escalation, delayed perceived benefit, preference for oral medications, in-clinic visit demands, and mismatch between expectations and reality.

Objective: To present evidence-based strategies for improving patient engagement and reducing attrition in weight management medication clinical trials.

Methods: This analysis draws from: (1) A systematic review by Pirotta et al. (2019) examining weight loss interventions across 57 studies with over 7,500 participants to identify effects of intervention strategies on attrition, (2) Signant Health's experience across 39 obesity Phase 2 and 3 studies implementing electronic patient-reported outcome (ePRO) collection and digital patient engagement solutions involving 8,836 patients in 35 countries at 579 sites, and (3) additional research including gamification studies (Forman et al., 2023) with 228 men and dietitian support programs (Delahanty et al., 2016) with 4,410 participants across 15 countries in Phase 3 trials.

Results: Systematic review findings (Pirotta et al., 2019) demonstrated:

- Financial incentives reduced risk of attrition by up to 43%
- Self-monitoring reduced risk of attrition by 41%
- Multicomponent interventions (nutrition, activity, psychological help) reduced attrition by 33%

Signant Health's case study data showed:

- 93.4% average study visit total compliance across weight management trials, exceeding mean study visit adherence rate of 64%
- 72% average total compliance in home-based compliance across patient engagement studies (obesity, neurofibromatosis, sickle cell disease) utilizing visit schedule module and telehealth, representing ~7% greater compliance compared to the average of 65% across long-term trials

Additional program outcomes:

- Dietitian support programs (Delahanty et al., 2016): 82% median 1-year retention
- Behavioral screening reduced dropout by 29% (US cohort)
- Attending five monthly dietitian support calls reduced dropout rates by 32%

Conclusions: Evidence supports that engagement strategies can significantly improve retention in weight management trials. The clinical trial community has an opportunity to understand and proactively mitigate the effects of WMM discontinuation through collaborative strategies including educating trial staff and patients about physical, behavioral, and emotional impacts of WMMs, training site staff to recognize and address obesity bias, implementing patient-centric digital solutions, and offering ongoing support to ensure patients feel informed and well-supported.

Clinical Implications: Given that there is no evidence that patients living with obesity will remain engaged for trial duration or will be able to access WMMs following the study, implementing patient engagement strategies is critical for obesity trials.

Biography

Dr. Elias Ketiar serves as the Clinical Vice President, Science & Medicine, at Signant Health. Dr. Ketiar draws on his wealth of more than 20 years of academic and clinical experience to advise on clinical trial design, execution, and governance. He has extensive experience in General Internal Medicine and Cardiology and is a Member of Royal College of Physicians (London), UK. Dr. Ketiar has been engaged in academic research and was involved in a pioneering project investigating genetic causes of congenital heart disease, which culminated in a Medical Doctorate with St George's University of London, UK. He also has peer reviewed papers published. He has always been involved in all phases of clinical development and interested in global clinical trial solutions.

Eric J. Rosenbaum M.D

Almased, Germany

Preventing muscle loss with dietary interventions during weight reduction and/or use of GLP-1 RAs: A review

Weight loss, whether achieved through caloric restriction or pharmacological therapy with Glucagon-Like Peptide-1 Receptor Agonists (GLP-1 RAs), is effective in reducing obesity and improving cardiometabolic health. However, a significant portion of this weight loss often comes at the cost of lean body mass, particularly skeletal muscle, which has important consequences for metabolic function, strength, and long-term weight maintenance. Recent clinical data suggest that up to 25–39% of total weight lost through these interventions may be attributable to lean mass. The role of targeted nutritional strategies, specifically higher protein intake and meal replacement in preventing muscle loss during caloric restriction or with GLP-1 RAs will be explored. Meal replacements enriched with high-quality protein have demonstrated efficacy in promoting fat loss while preserving muscle mass. For example, the use of a soy-yogurt-honey based meal replacement in a structured lifestyle program has shown significant improvements in weight management and metabolic health (Berg et al., 2025). An increase in both endogenous GLP-1 as well as in Biologically Active Peptides (BAPs) was seen with this soy-yogurt-honey meal replacement (Berg et al., 2022). Similarly, a randomized controlled trial by Rothacker (2000) found that meal replacements led to greater fat loss and better lean mass retention compared to traditional calorie-restricted diets. In another study, Frestedt et al. (2008) reported that a high-protein meal replacement containing leucine helped preserve lean body mass and improve metabolic markers in overweight adults. These findings suggest that the strategic use of protein-enriched meal replacements can be an effective tool in weight loss programs aimed at preserving muscle mass. This review synthesizes current evidence on the impact of both diet-induced and GLP-1–mediated weight loss on skeletal muscle, and discusses strategies to mitigate muscle loss—focusing on dietary protein intake, resistance training, and multimodal lifestyle interventions. A comprehensive, individualized approach that integrates nutritional and physical activity strategies is essential for preserving muscle mass and function in patients undergoing weight loss therapy.

Biography

Dr. Rosenbaum graduated from Yale University and Harvard Medical School where he completed his residency. He has lectured at Harvard Medical School on Fitness and Mortality. Dr Rosenbaum has been board certified in Physical Medicine as well as Functional Medicine and Anti-Aging Medicine. A sought after speaker, he has been featured on MSNBC, FOX News, and the BBC as well as in national magazines, radio and podcasts. Dr Rosenbaum is in private practice in NY where he specializes in Integrative Sports Medicine and Nutrition.

Cinara Costa de Melo[1], Fabiana Martins Kattah[2], Emilly Santos Oliveira[2], Nayra Figueiredo[1], Beatriz Bacheschi do Carmo Benetti[1], Gislene Batista Lima[2], Glaucia Carielo Lima[2], Mara Rúbia Nunes Celes[3], Rodrigo Mello Gomes[4], Paulo Reis Esselin de Melo[5], Lila Missae Oyama [6], Ana Raimunda Dâmaso, Aline de Piano Ganen[7], Flávia Campos Corgosinho[1,2*]

[1]Faculty of Medicine, Federal University of Goias, Goiânia/ GO/ Brazil

[2]Faculty of Nutrition, Federal University of Goias, Goiânia/ GO/ Brazil

[3]Institute of Tropical Pathology and Public Health, Federal University of Goias, Goiânia/ GO/ Brazil

[4]Institute of Biological Sciences, Federal University of Goias, Goiânia/ GO/ Brazil

[5]Alberto Rassi Hospital, Goiânia/ GO/ Brazil

[6]Department of Physiology, Federal University of São Paulo, São Paulo/ SP/ Brazil

[7]Sao Camilo University Center, Pompeia Campus, São Paulo/SP/ Brazil

Relationship of fibrosis in white adipose tissue with liver markers and food consumption in women with severe obesity

Fibrosis refers to the excessive accumulation of extracellular matrix, which is associated with metabolic dysfunction in White Adipose Tissue (WAT) in obesity. Factors such as energy imbalance and hepatic steatosis are related to the development and progression of this condition. Objective: To investigate the association between hepatic markers and dietary intake with the presence of fibrosis in subcutaneous and visceral adipose tissue in women with severe obesity. Methods: This is a cross-sectional study involving 49 women with Body Mass Index (BMI) ≥ 40 kg/m² who underwent Bariatric Surgery (BS). Anthropometric data, biochemical tests, dietary intake, WAT samples, as well as Aspartate Aminotransferase (AST) and Alanine Aminotransferase (ALT) levels were collected. Dietary intake was assessed using a 24-hour dietary recall and the Food Frequency Questionnaire (FFQ), ELSA-Brasil version (2013). Foods were categorized according to their level of processing, and consumption frequency was converted into a score. For the analysis of fibrosis in WAT, samples of Subcutaneous Adipose Tissue (SAT) and Visceral Adipose Tissue (VAT) were collected, stained with picrosirius red, and analyzed by the percentage of red staining (fibrosis). The sample was divided into groups according to the median percentage of fibrosis in each adipose tissue compartment. Results: The sample had a mean age of 40.18 ± 8.37 years and a mean BMI of 50.51 ± 6.88 kg/m². No significant differences were observed in the presence of fibrosis across different WAT depots. A higher score in the Hepatic Steatosis Index (HSI) was associated with an increased risk of fibrosis in VAT. No significant associations were found between fibrosis and dietary intake according to the level of food processing. However, higher protein intake was associated with lower fibrosis in VAT. Conclusion: Women with severe obesity and a lower percentage of fibrosis seem to have less liver damage, according to the HSI marker. In terms of diet, higher protein intake appears to have a beneficial role in visceral adipose tissue.

Biography

Dr. Flavia Corgosinho studied Nutrition at the Federal University of Jequitinhonha and Mucuri Valley, Brazil, graduated as nutritionist in 2009. She then joined the research group of Prof. Ana Dâmaso at the Federal University of São Paulo, Brazil for master's and PhD. In 2013 she went to Italy to do party of her PhD with the group of Dr. Saverio Cinti and received her PhD degree in 2015 at the Federal University of São Paulo. After 2 years she entered as a professor of the Nutrition course in the Federal University of Goiás. She has published more than 60 research articles and recently published an article at the Annals of the New York Academy of Sciences by invitation of the World Health Organization. She a permanent member of the Postgraduate Program in Nutrition and Health at the Federal University of Goiás and she coordinates the Goiânia Obesity Study Group (GEO-GO); She is also a researcher in Nutrition Physiology - UNIFESP; and a collaborator of the Anatomy Laboratory of the Università Politecnica delle Marche (Italy).

Fabiana Martins Kattah[1], Nayra Figueiredo[2], Kamilla Kenned Bezerra[1], Emilly Santos Oliveira[1], Cinara Costa de Melo[2], Gislene Batista Lima, Jocélia Paula Rocha Cavalcante[1], Beatriz Bacheschi do Carmo Benetti[2], Ana Raimunda Dâmaso[3], Glaucia Carielo Lima[1*], João Felipe Mota[1,2], Flávia Campos Corgosinho[1,2]

[1]Faculty of Nutrition, Federal University of Goiás, Goiânia, Brazil

[2]Faculty of Medicine, Federal University of Goiás, Goiânia; Brazil

[3]Paulista Medicine School-Universidade Federal de São Paulo, São Paulo, Brazil

Curcumin supplementation improves gastrointestinal symptoms in women with severe obesity

Background and Objective: Quality of life in severe obesity may be affected by gastrointestinal symptoms such as reflux, bloating, dyspepsia, stomach pain, and altered bowel patterns. Curcumin, bioactive compound found in turmeric (Curcuma longa L.), possess anti-inflammatory and antioxidant properties and has been investigated for its potential role in gastrointestinal health. However, its effects in individuals with severe obesity remain unclear. Thus, the goal of the study was to investigate the effect of curcumin supplementation on gastrointestinal symptoms in women with severe obesity.

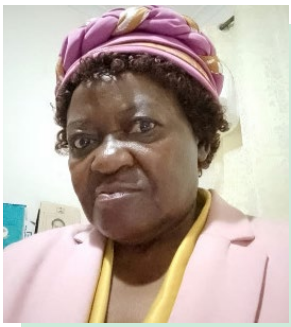
Methods: A double-blind, placebo-controlled clinical trial was carried out with thirty-one women with Body Mass Index (BMI) ≥40 kg/m² undergoing bariatric surgery. Participants were randomized to receive either 1,500 mg of curcumin (98.75%) or placebo (1,500 mg corn starch) daily for 13 weeks. Gastrointestinal Symptom Rating Scale (GSRS) and stool consistency by the Bristol stool scale were applied to verify gastrointestinal symptoms. Anthropometric measurements were also collected.

Results: Participants had an average age of 33.1±8 years and BMI of 45.6±3.31 kg/m². No differences were observed between groups at baseline. The curcumin group showed a significant reduction in GSRS total score compared to the placebo group (p=0.002), with improvements in constipation (p=0.007) and eructation (p=0.011) at the end of the study. Additionally, the curcumin group reduced BMI (p=0.019) and neck circumference (p=0.042).

Conclusions: These findings suggest that curcumin supplementation may alleviate some gastrointestinal symptoms and improve anthropometric measures in women with severe obesity, providing a potential dietary strategy.

Biography

Dr. Lima studied Nutrition at the Federal University of Alfenas, Brazil (2008); holds a master's degree (2011) and a doctorate (2015) in Food and Nutrition from the State University of Campinas (UNICAMP), Brazil. He has experience in the areas of Food Science, Experimental Nutrition and Clinical Nutrition, with an emphasis on nutritional biochemistry, visiting especially on the themes: bioactive compounds, prebiotics, fibers, diabetes and obesity. Member of the Research Group on Nutritional and Bioactive Resources of the Cerrado and of the Obesity Study Group (GEO).



Grace A Asiko[1*], Ngare M Samuel[2]

[1]Apiculture Platform of Kenya. C/o State Department of Livestock. P.O Box 34188-00100 Nairobi-Kenya

[2]University of Nairobi, Kenyatta National Hospital. P.O Box 20723-00200, Nairobi-Kenya

Incorporation of suitable nutrition in the management of diabetes: A case study

Diabetes upsurge is closely linked to climate change due to environmental degradation, negatively impacting on agricultural production. Related lifestyle diseases include Hypertension and cancer. Diabetes is a pandemic, with huge economic burden, affecting close to 2.3 million people in Kenya, with 50% undiagnosed. In children, 55% are either mis-diagnosed or underdiagnosed. Most diabetic cases (90%) are of type2. The good news is that type2 diabetes could be reversed, with proper management involving ardent monitoring for blood sugar, appropriate and healthy nutrition, exercise and lifestyle change. Challenges include: Lipid cholesterol risk and glycemic control. Delving into this, a case study was done on a volunteer diabetic individual for blood sugar monitoring after the initial insulin injection. Limited precision drugs were prescribed accordingly and a rich mixed diet, as per the World Diet classification, consisting of fruits and vegetables, introduced, in addition to exercise.

Results from routine monitoring for blood sugar stability, on a diabetic individual, incorporating mixed nutritious diets (Mediterranean and Indian) and exercise, showed reduction from high blood glucose reading of 8 to 5.4 mg/dL. The greatest positive impact from fruits and vegetables was achieved with the consumption of: Cucumber, Okra, Jew's mallow and Crotolaria spp. separately or in combination, in the lowering of blood sugar level. The inclusion of honey, specifically the stingless bee honey, had an additive benefit as a lower Glycemic Index (GI) product, producing a steady rise in blood glucose instead of a spike, hence able to manage diabetes type2.

Keywords: Diabetes, Lifestyle Diseases, Monitoring, Blood sugar, Nutrition, Diet.

Biography

Grace Adala Asiko, holds a PhD Degree in Agricultural Entomology, obtained from the University of Nairobi in the year 2012 and a Bachelor of Science Degree in Botany and Zoology, from the same University. She too has a Masters in Tropical Bees and Beekeeping in Tropical Climates, obtained in January 2004 from Utrecht University, Netherlands. She studied Geography as well. Dr. Asiko was employed by the Ministry of Agriculture, State Department of Livestock Production and rose through the ranks to Deputy Director of Livestock Production. She was appointed to Head the National Beekeeping Institute in Lenana-Nairobi in the year 2010, where her mandate included overseeing the functions of the institution, Policy formulation, training, research and innovation, in all aspects pertaining to the beekeeping industry. She authored and co-authored over 50 scientific publications and

articles on Beekeeping and the Agricultural sector at large. She is a recipient of Utumishi Bora Award presented by Kenya Christian Professional Forum in 2017, for work Excellence, Research and Documentation, particularly in the area of Stingless Bee research. Dr Asiko, among others, earned and the Anglican Church of Kenya Stewardship Award, 2015. She has actively participated in several National and International Seminars and conferences and continues to attend educative webinars. She is passionate on professional presentations and student mentorship. Dr. Asiko, progressively positioned herself on the executive and technical advisory committees of re-known Professional organizations/societies: The Animal Production Society of Kenya, The Kenya Business and Professional Women, The Apiculture Platform of Kenya, The Kenya Pollinator Initiative and the Bee health committee, where she served with great zeal and commitment. She too, has taught at the University of Nairobi, on part-time basis.

Graham Ellis[1*] MD, Davide Garrisi[2], Mona Eskanderian[3], Eling Gaines[4], Andrew Bevan[5]

[1]Executive Director, Medical Science and Strategy, PPD part of Thermo Fisher Scientific, Cape Town, South Africa

[2]Vice President, Cardiovascular and General Medicine, PPD part of Thermo Fisher Scientific, Milan, Italy

[3]Director, Cardiovascular and General Medicine, PPD part of Thermo Fisher Scientific, Brussels, Belgium

[4]Sr. Director, Cardiovascular and General Medicine, PPD part of Thermo Fisher Scientific, Arlington, Tn, United States of America

[5]Executive Director, Integrated Project Solutions, PPD part of Thermo Fisher Scientific, Cambridge, UK

Emerging frontiers in obesity clinical research: The impact of GLP-1-based therapies

The unprecedented weight loss efficacy of GLP-1-based therapies has fueled a rapidly proliferating market for GLP-1-based obesity treatments and spurred increased drug development for new weight loss agents with potential competitive advantages over existing therapies. We analyzed the total number of clinical trials from Phase 1 to 4 registered in clinicaltrials.gov registered from 2013 to 2024, divided in 3 periods: Period 1 (P1[2013 to 2016]), period 2 (P2[2017 to 2020]), and period 3 (P3 [2021 to 2024]). Our comparison between periods demonstrated a 68.1% increase in trials of medicinal products for or weight loss in P3 versus P2. Conversely, there was a 12.3% reduction in trials between P1 and P2. The marked positive trend reversal in P3 coincides with the publication of landmark GLP-1 Phase 3 trials, supporting the evidence that GLP-1-based therapies are key drivers of clinical research into weight loss in obese diabetic and non-diabetic populations, as well as their complications and comorbidities.

The increasing research into new weight loss treatments has highlighted BMI limitations and the need for more precise definitions of obesity to facilitate personalized and precision treatments for diverse obesity geno-and phenotypes. While BMI remains the regulatory gold standard for defining study populations, the impact of the Lancet Commission Recommendations on future clinical trial endpoints in cardiovascular, kidney, and metabolic syndrome trials remains to be determined.

Beyond BMI, there is a growing need to evaluate weight loss agents' effects on Body Composition (BC), such as bone density, skeletal muscle volume, strength and function, and organ-specific changes in adipose tissue (liver, heart, pancreas, and kidney). Understanding the differential effects of new weight loss agents on BC is particularly relevant in pediatric, adolescent, and elderly populations. Incorporating BC endpoints into study design may allow product differentiation in an increasingly crowded market.

The proven safety and success of new GLP-1-based obesity therapies have resulted in new challenges in the design, conduct, and oversight of weight loss clinical trials. The multifaceted benefits beyond weight loss and glycemic control of newer weight-loss agents are driving new therapy targets, necessitating multiple metabolic endpoints to enhance future protocol efficiency.

The rapid expansion in obesity research presents new challenges and exciting opportunities for competitive and cost-effective new drug development. This review highlights the emerging frontiers of obesity clinical research, and we share our insights and experiences on the impact of the rapidly expanding pipeline of obesity clinical trials on the design and execution of weight-loss protocols in persons living with obesity.

Biography

Dr. Ellis, a Specialist Physician, graduated cum laude from the University of Stellenbosch in 1985. With over 25 years of experience in diabetes, endocrinology, and osteoporosis, he founded and led a large and successful clinical research center. In 2021, he joined PPD/Thermo Fisher Scientific as Executive Director, Medical Science and Strategy for diabetes, obesity, and metabolic disease. He serves on the Scientific Advisory Board of the Faculty of Science at Stellenbosch and reviews for a high-impact diabetes and obesity journal. Dr. Ellis has spoken at numerous local and international academic conferences and has published in peer-reviewed international journals.

Grzegorz Piotrowski
Cardiooncology Department, Medical University of Łódź, Poland
Cardiology Department, District Multi-specialistic Center of Oncology and Traumatology in Łódź, Poland

Obesity and heart failure

Obesity is a major risk factor for the development and progression of Heart Failure (HF). It is present in approximately 70% of patients with Heart Failure with Preserved Ejection Fraction (HFpEF) when assessed using Body Mass Index (BMI), with an even higher prevalence when evaluated based on visceral adipose tissue accumulation around internal organs. Obesity contributes to HF through multiple pathophysiological mechanisms, including increased cardiac workload, metabolic dysregulation, and systemic inflammation. Excess adipose tissue leads to elevated circulating blood volume and cardiac output, which, over time, can result in left ventricular hypertrophy and subsequent systolic or diastolic dysfunction. Furthermore, obesity is frequently associated with comorbid conditions such as hypertension, diabetes mellitus, and dyslipidemia, all of which further elevate the risk of HF.

Implementing strategies aimed at weight reduction, including dietary modifications, behavioral interventions, physical activity, bariatric surgery, and pharmacologic therapy, may be beneficial for both the prevention and treatment of HF, particularly HFpEF. Currently, several clinical trials are investigating the efficacy of pharmacological agents such as semaglutide and tirzepatide in managing HFpEF in patients with concomitant obesity. Preliminary findings from these studies suggest favourable outcomes, particularly in terms of weight reduction and improvements in cardiovascular outcome. This pharmacological approach holds significant promise for enhancing both the quality of life and clinical outcomes in individuals with HF and obesity.

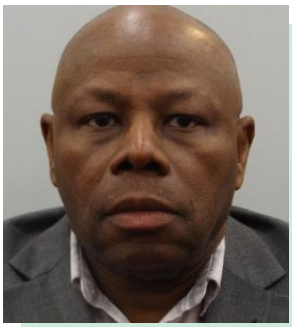
In patients with established HF, obesity exhibits a paradoxical effect. Several studies have suggested that individuals with overweight or mild obesity (BMI 27–35 kg/m^2) may experience better survival rates and improved cardiovascular outcomes compared to those with normal or low body weight, a phenomenon termed the obesity paradox. However, it is crucial to recognize that this paradox is primarily observed when obesity is defined by BMI. When obesity is assessed based on adipose tissue type and distribution—particularly visceral fat and its localization around internal organs—the paradoxical relationship is no longer evident. Notably, severe obesity is associated with worse clinical outcomes, including increased hospitalization rates, reduced exercise tolerance, and diminished quality of life.

The diagnosis of HF in obese individuals presents a clinical challenge due to overlapping symptoms, such as dyspnea and fatigue, which are common to both conditions. Furthermore, imaging modalities such as echocardiography and biomarkers like N-terminal pro–B-type natriuretic peptide (NT-proBNP) may be less reliable in obese patients due to altered hemodynamics and adipose tissue interference.

The management of HF in obese individuals involves a multifaceted approach, incorporating lifestyle modifications, pharmacologic therapy, and, in some cases, bariatric surgery. Weight reduction through dietary interventions and physical activity has been demonstrated to improve symptomatology, decrease hospitalization rates, and enhance overall cardiac function. Given the increasing global prevalence of obesity, addressing its impact on HF remains a critical aspect of contemporary cardiovascular disease management.

Biography

Grzegorz Piotrowski MD, PhD, is a professor at the Medical University of Łódź, Poland and head of the Cardiooncology Department. He has a specialist degree in cardiology and internal diseases as well as doctoral thesis on atrial function in acute coronary syndromes. With extensive clinical experience, he leads the Cardiology Department at the District Multi-specialistic Center of Oncology in Łódź. He has authored over 90 publications and is active in teaching cardiology. He participated in numerous clinical studies in the fields of cardiovascular and metabolic disorders. His professional interests include echocardiography, heart failure, cardiodiabetology, and cancer-related cardiovascular care. He is the Chairman of the Łódź Division of the Polish Cardiac Society.



Harris E. Phillip
Department of Obstetrics and Gynaecology, NHS, United Kingdom

Glucagon a plausible contributor, hiding in plain sight

We have been taught to believe that type 2 diabetes is result of insulin resistance. We know that glucose haemostasis is controlled by a variety of hormones. The two most spoken of are insulin and glucagon, the former more so than the latter. Our talk will focus on these two hormones. Insulin functions in the removal of glucose from the blood stream. Glucagon on the other hand functions in increasing the amount of glucose in the blood stream. Simply put these hormones act antagonistically to each other.

In our presentation we will present scientific evidence which indicates a higher-than-normal circulating level of glucagon in the diabetic patient. This to us suggests that glucagon in some way may be involved in the pathogenesis of diabetes. We see the almost immediate impact of bariatric surgery on the need for hypoglycaemic preparations, we recognise that there is a spike in glucagon levels following oral intake in a diabetic. Interestingly, that same spike is not seen in the same individual who is provided with a parenteral source of glucose which leads us to the singular conclusion that there is an additional source of glucagon which is not activated by glucose stimulation outside of the gut.

Conclusion: We have come to realise, therefore, that in our guts is an extra pancreatic source of glucagon in the diabetic. Are we saying that this source of glucagon develops in the individual predisposed to developing diabetes? No, we think this is the result of dysfunction in specialised receptors in the GUT, the GLP-1 receptors.

Biography

Dr. Phillip studied Chemistry and Biochemistry at the Prairie View A&M University as well as the Texas A&M University. He holds both a BSc (summa cum laude) and an MSc degree and spent a year in the Ph.D. program at Texas A&M University before going into medical school. Dr. Phillip studied medicine at the University of the West Indies, Jamaica where he obtained both his MBBS and his Doctor of Medicine degrees (DM). In the U.K, he has been a consultant Obstetrician and Gynecologist for almost two decades. Dr. Phillip has authored more than 10 books and is widely published in medical journals.

Hassan M. Heshmati

Endocrinology Metabolism Consulting, LLC, Hassan Heshmati and Valerie Shaw Endocrine Research, Anthem, AZ, USA

Transgenerational inheritance of obesity caused by epigenetic factors

Obesity is defined as a state of excess body fat responsible for increased body weight. It is a major health problem in several countries causing increased morbidity and mortality and high cost for the society. Obesity is a complex multifactorial disease with genetic and non-genetic interactions. Epigenetic transgenerational inheritance of obesity is an emerging new area of research where multiple environmental factors including Endocrine-Disrupting Chemicals (EDCs), nutrition imbalance, and stress are involved. EDCs are a heterogenous group of exogenous chemicals or chemical mixtures that interfere with the action of hormones. A subset of these EDCs alters regulation of energy balance and weight control to favor weight gain and obesity by promoting adipogenesis and lipid accumulation. These EDCs are called obesogens. The exposed subjects are predisposed to weight gain despite normal diet and exercise. Obesogens can also cause resistance to weight loss in subjects on anti-obesity diet and/or drug. Interestingly, the obesity pandemic in humans coincides with the exponential increase in the number of EDCs/obesogens in the environment over the past few decades. The metabolic programming of obesity risk and its transgenerational inheritance can be linked to parental (both maternal and paternal) exposure to obesogens (e.g., bisphenol A, phthalates, tributyltin, nicotine, and monosodium glutamate), nutrition imbalance (e.g., undernutrition and high-fat diet), and stress. The epigenetic mechanisms include deoxyribonucleic acid methylation (the most studied mechanism), histone methylation, histone retention, chromatin structure alteration, and non-coding ribonucleic acids expression. Through epigenetic mechanisms affecting germ cells (egg or sperm), the environmental factors (e.g., obesogens, nutrition imbalance, and stress) directly influence genetic variation, inheritance, phenotypic variation, and adaptation. The heritable changes propagate through multiple generations without any new exposure to the initiating factor and increase obesity susceptibility. An adverse maternal exposure (F0 generation) can affect the fetus (F1 generation) and the germ cells of the fetus (F2 generation). With a direct exposure of the parents (F0 generation) and the fetus (F1 generation), the true transgenerational transmission is the F3 generation and beyond for the exposure of a pregnant female and the F2 generation and beyond for the exposure of a non-pregnant female or a male. A better understanding of the mechanisms of the transgenerational inheritance is critical for the implementation of preventive strategies in the fight against obesity pandemic. Although exposure to EDCs/obesogens and the resulting transgenerational inheritance of obesity cannot be entirely avoided in many situations, every effort should be made to minimize or avoid the exposure to obesogens, especially during the windows of sensitivity of the embryo/fetus.

Biography

Dr. Hassan M. Heshmati, Endocrinologist, has 49 years of experience in clinical research in both Academia (University-Affiliated Hospitals, Paris, France and Mayo Foundation, Rochester, MN, USA) and Pharmaceutical/ Biotech Companies (Sanofi, Malvern, PA, USA, Essentialis, Carlsbad, CA, USA, and Gelesis, Boston, MA, USA). His research activity has been related to pituitary tumor, hyperthyroidism, thyroid cancer, osteoporosis, diabetes, and obesity. Dr. Hassan has extensive knowledge in the development of anti-obesity products. He has authored 355 abstracts, book chapters, and articles related to Endocrinology/Metabolism. Currently, he is Consultant at Endocrinology Metabolism Consulting, LLC, Dr. Hassan and Valerie Shaw Endocrine Research, Anthem, AZ, USA.

Mr. Himanshu Ahuja*, Dr. Deep Shree
Delhi Technological University, Shahbad Daulatpur,
Main Bawana Road, Delhi-110042, India

A thematic analysis of patient communication in obesity disease online health community

With the advent of increased usage of web-based tools and social technologies (such as blogs and social media networks) as well as post the outbreak of the COVID-19 pandemic, there has been a shift of health care delivery services from offline to online platforms. Many sectors (including health care) have started leveraging online communities as platforms to co-create value. Online Health Communities (OHCs) are a special type of online social network, wherein members interact with each other on health- or wellness-related topics to seek information, help, emotional support, and communication opportunities. Online health communities have become a popular source of information, advice, guidance, and emotional support for patients living with a range of health conditions. However, research has not commonly focused on patients living with obesity disease and their participation (activities and interactions) within computer-mediated support networks (online health communities). Hence, the aim of this study is to gain an understanding of online communication among patients through an analysis of messages exchanged within obesity disease discussion forums. Data was collected from forums under an identified OHC. ~300 posted messages (including replies) were studied and using the deductive thematic analysis, the messages were examined with reference to different categories and sub-categories of social support behaviour finalized during the study. The results of the thematic analysis strongly suggested that the 'experiential support' was the most prominent category of social support behaviour within the online health community, followed by the 'informational support' and 'emotional support'. Limitations and future research directions have been presented toward the end.

Biography

Himanshu Ahuja is currently a 'Research Scholar' at Delhi Technological University. He is a graduate and post-graduate in Commerce from the University of Delhi. He carries with him approximately 6 years of work experience in the field of 'Market Research'. His research interests are in the domain of Marketing Management with a prime inclination toward Consumer Behavior, Digital Marketing, and International Marketing. He has won several academic awards and accolades for his exemplary performance at the school and college levels. He has received awards for his brilliant performance at several 'National-level Olympiads' in the disciplines of Mathematics, Accountancy, and Management.

I. Chernyavska[1*], Yu. Karachentsev[2], V. Dubovyk[2]

[1]Kharkiv National Medical University, Kharkiv, Ukraine

[2]State Institution V. Danilevsky Institute of Endocrine Pathology, Kharkiv, Ukraine

Masks of obesity: Variability in clinical practice

Life in the frontline zone is characterized by daily multiple negative effects of extreme situations on humans. Social stressors associated with living conditions in frontline zones, such as sirens sounding around the clock, the threat to life at any time due to attacks and explosions, almost daily destruction of buildings, the inability to study offline in educational institutions, etc., lead to an increase in the incidence of obesity and thyroid dysfunction against a background of depressive and anxiety disorders.

During the week, 124 patients were consulted, including 75 (60.5%) patients with obesity. This is normal clinical practice. 65 patients with obesity (89.7%) reported that their weight gain occurred specifically in 2022.

The results of examinations of 34 female patients diagnosed with obesity and subclinical hypothyroidism due to autoimmune thyroiditis were analyzed. All patients received therapy to normalize their weight (GIP-1 agonists, metformin) for 9-12 months, but their weight did not change in the last 3 months, i.e., a plateau effect was observed. The average age was 38±2.4 years. The patients answered questions from the Spielberger-Hanin Reactive and Personal Anxiety Scale (SPAS). Correlations were determined between the degree of anxiety symptoms and Body Mass Index (BMI), the degree of insulin and leptin resistance. The clinical efficacy of obesity therapy was also assessed with the addition of methods to correct the neuropsychological state according to the dynamics of the SPAS test and according to BMI, insulin and leptin resistance.

Prior to the appointment of psychocorrectional therapy among patients with obesity and subclinical hypothyroidism living in the frontline zone, 28 (81.0%) individuals had high levels of reactive anxiety (46 points or more), while 21 people (60.2%) had high levels of personal anxiety. Against the background of psychocorrectional therapy, this indicator decreased to 44.0% for reactive anxiety (a decrease of 37.0%) and 36.2% for personal anxiety (a decrease of 24.0%). At the same time, the proportion of patients with low anxiety increased: reactive anxiety up to 30 points–from 5.4% to 18.8%, personal anxiety up to 30 points–from 4.3% to 35.5%.

Correlation analysis using Pearson's coefficient and the correlation graph showed that there is a very strong direct relationship between changes in BMI before and after treatment ($r=0.942$; $p<0.05$), a very strong correlation between changes in leptin levels before and after treatment ($r=0.942$; $p<0.0001$), and a moderately strong direct relationship between changes in the index HOMA before and after treatment ($r=0.669$; $p<0.0001$), indicating the presence of statistically significant associations between the studied indicators before and after treatment.

Clinically significant positive dynamics of anthropometric and metabolic parameters indicate the advisability of prescribing psychocorrectional therapy in patients with obesity in the prefrontal zone in order to achieve target in the complex treatment of obesity.

Biography

I. Chernyavska in 1999, she graduated from Kharkiv State Medical University. From 2006 to 2020, she worked as a senior researcher in the Department of Pharmacotherapy of Endocrine Diseases at the V. Danilevsky Institute of Endocrine Pathology of the National Academy of Medical Sciences of Ukraine. Since 2022, she has been an endocrinologist at the Military Medical Clinical Center of the Northern Region. Since 2023, she has been working as an associate professor in the Department of Endocrinology and Pediatric Endocrinology at Kharkiv National Medical University. She received her PhD degree in 2013 at the V. Danilevsky Institute of Endocrine Pathology of the National Academy of Medical Sciences of Ukraine. She has published more than 44 research articles in SCI (E) journals.

Jordan Hidalgo
Founder of Fuzzle, Based Out of Dover DE, United States

Fuzzle targets food noise and emotional eating through sensory disruption and personalized support

Fuzzle is an innovative, patent-pending weight loss system designed to address habitual and emotional eating through a novel intraoral device and personalized support. Unlike traditional approaches that rely on medications or restrictive diets, Fuzzle provides a drug-free solution by disrupting sensory reinforcement pathways tied to cravings and non-essential eating. The device creates separations in the mouth, particularly preventing the tongue from contacting the teeth. This reduces the sensory amplification of food cues and helps decrease the automatic responses that drive overeating and food noise.

Fuzzle is currently pending FDA approvals for the treatment of obesity as a Class II medical device. The program is positioned as an ideal step therapy prior to the use of GLP-1 medications and as an after-care option for individuals who have already lost weight and want to sustain results while building healthier long-term habits.

The system emphasizes human connection and accountability. Users meet one-on-one with a registered dietitian via weekly video or phone calls to track progress, measure changes in weight and body composition, and celebrate successes. Between sessions, users are supported by their assigned Fuzzle team member, who provides direct 24/7 messaging through the app. Meal plans are developed in collaboration with the dietitian and updated with AI assistance for ongoing personalization.

Early users have reported body weight reduction of up to 1.5 percent per month, along with a noticeable decrease in food noise and cravings. By focusing on sensory pathways rather than hormonal manipulation, Fuzzle introduces a behavioral and physiological reset that empowers individuals to make healthier food choices. Looking forward, future enhancements may include adherence-tracking sensors and expanded applications in oral wellness.

As the prevalence of obesity continues to rise, Fuzzle represents a promising intervention that leverages the intersection of AI technology and behavioral modification to address a critical public health challenge.

Biography

Jordan Hidalgo studied at Rutgers University and is a U.S. Army veteran, longtime business owner, and active member of Mensa. He is a certified master personal trainer, certified sports nutritionist, and amateur competitive bodybuilder. Having gained and lost hundreds of pounds over his life, he brings both personal experience and professional expertise to helping others achieve lasting results.

Jorge Cueto Garcia
Pebisut De Mexico, S.A., De C.V., Mexico

A new medical device II: Pebisut® (CPZO, carbohydrate polymer with zinc oxide) and its benefits of the treatment of diabetes foot

We present Pebisut® (Carbohydrate Polymer with Zinc Oxide) a Medical Device II, the result of our 23 years of research and the invitation of the National Institute of Health of the United States (N.I.A.I.D.) to obtain Grants R01 and R21 to continue with the same research line on: Non-antibiotic products with Antibacterial properties, non-toxic, for use in humans to be able to combat the Global problem of the new Pandemic of Multiple Bacterial Antibiotic-Resistance (A.M.R.), that has produced countless deaths and an enormous expense to global health systems that continues to increase. Pebisut® is protected by 7 patents (2 U.S.P.T.O., 2 Canada, 2 Mexico, 1 European Union) and supported by 13 scientific publications. Likewise, the G7 International Meeting committee at Cornwall invited us to review several publications on A.M.R. presentations for that meeting The G7 Summit 2021: Time for our world leaders to step up to the challenge of anti-microbial resistance access microbiology, in Cornwall, Uk, 11-13 June 2021.

Pebisut® does have potent antimicrobial properties to multi-resistant bacteria such as Methicillin-resistant Staphylococcus A., Pseudomonas A., Enterococcus, etc., without any undesirable effects after more than 40,000 applications in large medical institutions.

MC. José Carlos López Ramírez[1*], Dr. Mariela Vega Cárdenas[2], Dr. Celia Aradillas García[2], Dr. Nuria Patiño Marín[3], Dr. Yolanda Terán Figueroa[4], Dr. Nereyda Niño Martínez[5], Dr. Juan Manuel Vargas Morales[6], QFB. Jorge Flores Sánchez[6]

[1]PhD student in Dental Sciences, Autonomous University of San Luis Potosí, San Luis Potosí, San Luis Potosí, Mexico

[2]Coordination for Innovation and Application of Science and Technology, San Luis Potosí, San Luis Potosí, Mexico

[3]PhD program in Dental Sciences, Autonomous University of San Luis Potosí, San Luis Potosí, San Luis Potosí, Mexico

[4]Faculty of Nursing, Autonomous University of San Luis Potosí, San Luis Potosí, San Luis Potosí, Mexico

[5]Faculty of Sciences, Autonomous University of San Luis Potosí, San Luis Potosí, San Luis Potosí, Mexico

[6]Faculty of Medicine, Autonomous University of San Luis Potosí, San Luis Potosí, San Luis Potosí, Mexico

Dietary profile, soluble Receptor for Advanced Glycation End Products (sRAGE) and IL-6 in subjects with obesity or overweight with periodontitis

Periodontitis is a multifactorial chronic inflammatory disease associated with bacterial biofilm and progressive destruction of the tooth-supporting tissues. Recent evidence has linked periodontitis to systemic conditions such as obesity, in which pro-inflammatory markers like Interleukin-6 (IL-6) and Advanced Glycation End-products (AGEs) are elevated. AGEs exert their biological effects through interaction with their receptor, RAGE, and its soluble isoform (sRAGE), which acts as a decoy receptor, potentially modulating inflammation. Additionally, diet has been proposed as a modifiable factor influencing both obesity and periodontal disease. This cross-sectional study aimed to evaluate the dietary profile and the levels of IL-6 and sRAGE in serum and Gingival Crevicular Fluid (GCF) in 98 participants stratified into four groups according to their periodontal and nutritional status. Clinical, anthropometric, biochemical, and dietary assessments were conducted, and samples were analyzed by ELISA. Significant differences were found among the groups in clinical periodontal parameters, anthropometric measurements, and nutrient intake. Serum sRAGE levels were significantly lower in the overweight/obese groups regardless of periodontal status, suggesting that metabolic status may exert greater influence on circulating sRAGE than periodontitis. In contrast, sRAGE in GCF showed no significant group differences but correlated positively with the number of diseased teeth and IL-6 levels, suggesting a potential role in local inflammation. IL-6 levels in GCF were significantly elevated in periodontitis groups and correlated with pocket depth, attachment loss, and number of diseased teeth. Dietary analysis revealed that participants with obesity and periodontitis had the highest prevalence of inadequate intake of proteins, calcium, magnesium, and B-complex vitamins, with more than 45% not meeting dietary recommendations for key nutrients. These deficiencies may contribute to the chronic inflammatory state observed in this group. Our findings support the hypothesis that sRAGE and IL-6 play differential roles at the local and systemic levels in periodontitis. IL-6 was a stronger biomarker of local inflammation, while sRAGE appeared more reflective of systemic metabolic status. The observed correlations

between dietary inadequacies, clinical parameters, and biomarker levels underscore the importance of considering nutritional status in periodontal assessment. This is the first study to integrate anthropometric, clinical, dietary, and molecular variables in individuals with and without obesity and periodontitis. The results suggest that combined evaluation of IL-6 and sRAGE, along with dietary profiling, could offer valuable insights for the prevention and management of periodontitis, especially in individuals with metabolic risk factors.

Biography

MC. José Carlos López Ramírez studied Stomatology at the Faculty of Dentistry, Autonomous University of San Luis Potosí (UASLP), Mexico, and graduated in 2018. MC. José then joined the Master's program in Dental Sciences at the same institution, completing his degree in 2022. Currently, he is pursuing a PhD in Dental Sciences at UASLP, focusing on the relationship between obesity, inflammation, and periodontal disease. MC. José has published three research articles in peer-reviewed scientific journals.

Jun Dai[1*], Ming Leung[2], Gregory A Hawkins[3], Robert V. Considine[4], Tae-Hwi Schwantes-An[5]

[1]Department of Public Health, College of Health Sciences, Des Moines University, West Des Moines, IA, U.S., 50266

[2]Comprehensive Cancer Center, Wake Forest University Health Sciences, Wake Forest University School of Medicine, Winston-Salem, NC, U.S., 27157

[3]Department of Biochemistry, Wake Forest University School of Medicine, Winston-Salem, NC, U.S., 27157

[4]Division of Endocrinology, Indiana University School of Medicine, Indianapolis, IN, U.S., 46202

[5]Department of Medical and Molecular Genetics, Indiana University School of Medicine, Indianapolis, IN, the U.S., 46202

Hydroxymethylation in the SOCS3 gene-related DNA region mediates the longitudinal positive association of eating speed with the onset of type 2 diabetes in fraternal rather than identical male twins

Background: Eating speed is thought to be a novel risk factor for the development of diabetes. Our previous study reported that the DNA region related to the SOCS3 gene, which encodes Suppressor of Cytokine Signaling 3 (SOCS3), was a primary candidate region differentially hydroxymethylated towards type 2 diabetes. However, it is unknown if hydroxymethylation in the SOCS3 gene-related DNA region is a novel pathophysiological pathway that links eating speed to the onset of type 2 diabetes.

Objectives: We aim to test this pathway using traditional epidemiological mediation analysis.

Method: Thirty-six white, male twin pairs [16 identical (MZ) and 20 fraternal (DZ) twin pairs] developed incident type 2 diabetes discordantly after exam 3 (1986-1987) through 2017 in the U.S. National Heart, Lung, and Blood Institute (NHLBI) Twin Study initiated in 1969-1973 (exam 1). These discordant twins were enrolled in this study if their DNA samples at exam 3 were available, and none of them had diabetes from exams 1 to 3. Subjects rated their response to the question I eat rapidly even when there is plenty of time on a 5-point reverse Likert scale (1=definitely true, 5=definitely false) at exam 2 (1981-1982). Buffy coat DNA samples were collected at exam 3. Incident type 2 diabetes was identified at exams 4, 5, and 6, or from the underlying cause of death through 2017. The SOCS3 gene-related DNA region was selected based on our previously published study. Hydroxymethylation was measured with the hMe-Seal-seq. Normalized reads as counts per million reads in the region were used. Exact conditional logistic regression was conducted to evaluate the association at a statistical significance level of 0.20 due to the limited sample size.

Results: The Hazard Ratio (HR) was 1.76 (80% CI 1.21-2.66, p=0.035) in the combined MZ and DZ sample, 1.38 (80% CI 0.80-2.52, p=0.53) in MZ that naturally controlled for 100% genetic factors and environmental factor shared between twins of a pair (aka common environment), and 2.37 (80% CI 1.24-5.67, p=0.046) in DZ pairs that naturally controlled for 50% genetic factors on average and common environment. Adding hydroxymethylation into the model reduced the regression coefficient by 54% in MZ and 11% in DZ pairs, and contributed 11% and 7% additional information, respectively.

Conclusion: Genetic factors modify and enhance the longitudinal positive association of eating speed with incident type 2 diabetes developed over 3 decades. Hydroxymethylation in the SOCS3 gene-related DNA region mediates the association in a temporal order.

Funding Support: This study was funded by the U.S. National Institutes of Health (grant number R15HL152330 to Dr. Dai and grant number HL51429 to the NHLBI Twin Study).

IRB Approval: The study was approved by the Institutional Review Board (IRB) of Des Moines University (IRB-2020-39, 25 November 2020).

Biography

Dr. Jun Dai is a tenured professor at the Department of Public Health, Des Moines University College of Health Sciences, USA. She received her M.D. and M.Sc. at Sun Yat-sen University of Medical Sciences in People's Republic of China, and Ph.D. at Emory University in the U.S. She received the Sandra Daugherty Award for Excellence in Cardiovascular Disease or Hypertension Epidemiology and the Jeremiah and Rose Stamler Research Award for New Investigators from the American Heart Association. Her research has been supported by the American Heart Association and the U.S. National Institutes of Health (NIH) grants.

Dr. Jyoti Manekar, MD FAAFP, DABOM

Board Certified in Family and Obesity Medicine Physician, Author, Speaker, Coach and Trainer from Atlanta, GA, USA

Why is obesity chronic and relapsing?

Obesity, often misunderstood as a simple lifestyle issue, is a complex, chronic, and relapsing condition influenced by a combination of physiological, psychological, and environmental factors. Despite advancements in diets, pharmacological treatments, and surgical interventions, the failure to address the underlying causes often results in a persistent cycle of weight loss and regain. This presentation will shed light on the intricate mechanisms that contribute to the chronic nature of obesity and its high relapse rates.

A central focus of the discussion will be on metabolic adaptation—the body's inherent mechanism to resist weight loss and maintain energy balance—making sustained weight management challenging. Additionally, the presentation will delve into insulin resistance, a common yet underrecognized factor, which creates a metabolic environment that hinders weight loss efforts and exacerbates weight regain.

Behavioral factors also play a crucial role. The presentation will explore how coping mechanisms such as binge eating disorder, emotional eating, and night eating syndrome contribute to the perpetuation of obesity. These behaviors are often rooted in unresolved psychological stressors, anxiety, or adjustment disorders and can undermine even the most robust weight loss interventions.

Dr. Manekar will argue that understanding an individual's unique relationship with food is essential to developing effective, sustainable weight management strategies. By moving beyond temporary fixes—such as restrictive diets, medications, or surgeries—and addressing the root causes, healthcare providers can improve long-term success rates and minimize relapses.

This session aims to equip clinicians with insights into the multifaceted nature of obesity, emphasizing a comprehensive, individualized approach to care. By understanding the interplay of metabolic, behavioral, and psychological factors, providers can redefine strategies to treat this global health challenge, ultimately improving patient outcomes and fostering lasting change.

Through evidence-based discussions and real-world insights, this presentation will empower attendees to approach obesity management with a deeper understanding and a renewed commitment to holistic patient care.

Biography

Dr. Jyoti Manekar, MD, is a Board-Certified Family and Obesity Medicine specialist with nearly two decades of clinical experience. A graduate of Emory University's Family Medicine residency program (2005), she completed her fellowship in weight management with the Obesity Medicine Association (OMA). Based in Atlanta for over 20 years, Dr. Manekar is a full-time clinician, speaker, trainer, coach, and teaching physician, mentoring medical students, residents, physician assistants, and nurse practitioner students. She is the author of the self-help book Weight Wise, designed to empower individuals on their weight-loss journey, and its complementary Journal-Fuel and Fitness Tracker. Dr. Manekar is dedicated to treating patients holistically, addressing obesity and its associated chronic conditions with evidence-based strategies while advocating for prevention and compassionate care.

Karim Awad
Manchester University Foundation Trust, United Kingdom

Audit of bariatric surgery follow-up care in primary practice: Compliance with BOMSS guidelines

Introduction: A recent clinical debrief at the GP practice identified that several patients with a history of bariatric surgery were not receiving follow-up care in accordance with BOMSS guidelines, with adverse effects on health outcomes. A review of patient records was undertaken to identify gaps in care, areas for improvement, and potential trends.

Aim: The purpose of this audit is to identify all registered patients with a history of bariatric surgery and to assess whether they are receiving appropriate monitoring in line with BOMSS guideline recommendations.

Method: A search of the practice's clinical system (System One) was conducted using a filter to identify patients with bariatric surgery documented in their medical records. Forty-six patients were identified. Four were pre-operative and two were no longer registered with the practice, resulting in a final sample size of 40 patients. A data collection table was developed in Microsoft Word, incorporating headings based on BOMSS guidelines as well as additional fields relevant to bariatric follow-up care. The table headings are shown below.

Name/NHS of patient	Date of surgery	Type of surgery	Vitamin supplements ?	Annual blood tests?	Contraception advice?	Nutrition advice and DEXA	Weight

Results: Review of vitamin supplementation records showed that some patients were prescribed part, but not all, of the supplements recommended for their specific surgical procedure. This was further analysed and is presented below. For gastric bypass patients, a multivitamin is the only supplement required under current guidance. Similarly, the analysis of post-operative blood test monitoring indicated that annual testing was not being performed consistently. Data from the past year were reviewed and are summarised below.

Blood tests in the last year	Gastric Bypass	Gastric Sleeve	Gastric Banding
FBC	8/18	6/14	1/3
Corrected Calcium (bone profile if not available)	8/18	6/14	
Liver Function Test	8/18	6/14	
Urea and Electrolytes	7/18	6/14	
Haematinics	7/18	6/14	1/3
HBA1C,lipid profile		6/14	
Vitamin D	6/18	6/14	
Zinc		3/14	
Copper		3/14	
Selenium	3/18		
Vitamins E/A/K1	3/18		

Katharina Ruettger[1*], Verena Fluegel[1], Anna Hagemeier[2], Kerstin D. Rosenberger[2], Martin Hellmich[2,3], Christine Joisten[4], Laura Mause[5], Nadine Scholten[5,6], Julia Glaubach[7], Miriam Hehn[7], Ida Bernhard[7], Marcus Redaélli[7], Dusan Simic[7], Adrienne Alayli[7,8], Stephanie Stock[7], Kevin Dadaczynski[1,9]

[1]Department of Sports and Health Science, Faculty of Human Science, University of Potsdam, Germany

[2]Institute of Medical Statistics and Computational Biology, Medical Faculty, University of Cologne, University Hospital Cologne, Germany

[3]University Medical Centre Göttingen, Department of Medical Statistics, Göttingen, Germany

[4]Department for Physical Activity in Public Health, Institute of Movement and Neurosciences, German Sport University Cologne, Cologne, Germany

[5]Institute of Medical Sociology, Health Services Research and Rehabilitation Science, Chair of Health Services Research, Faculty of Medicine and University Hospital Cologne, University of Cologne, Germany

[6]Centre for Health Communication and Health Services Research, Department for Psychosomatic Medicine and Psychotherapy, University Hospital Bonn, Bonn, Germany

[7]Institute of Health Economics and Clinical Epidemiology, University Hospital, Cologne, Cologne, Germany

[8]Department of General Pediatrics, Neonatology and Pediatric Cardiology, Medical Faculty and University Hospital Düsseldorf, Heinrich Heine University Düsseldorf, Germany

[9]Centre for Applied Health Science, Leuphana University Lueneburg, Lueneburg, Germany

Formative evaluation of an early, cross-sector, outreach, and family-centred prevention of overweight and obesity programme (FruehstArt) – A study protocol

Introduction: In Germany, 14% of girls and 8% of boys from 3-6 years are overweight or obese. These rates have become worse due to the COVID 19 pandemic. Being overweight in early childhood often continues into adolescence and adulthood, and can result in a physical and psychological health conditions. Obesity prevention efforts of German healthcare providers through lifestyle changes have generally not been satisfactory.

Methods: Therefore, an interdisciplinary network of researchers and practitioners has developed a structured, early, cross-sector, outreach, and family-centered intervention that aims for the prevention of overweight. The intervention will be tested within a 12-month multi-arm randomised controlled design to identify the impact of the intervention compared to the current usual care. Children with overweight or obesity (N=812) aged 3-6 years and their families will be included in the study. Families allocated into the intervention group will receive home-based coaching sessions, supported by an e-health platform. The control group will receive a one-time healthy lifestyle counseling from a pediatrician.

Employing a mixed-methods approach, quantitative and qualitative implementation data will be collected. Parents, coaches, and service providers will be invited for a semi-structured interview two and ten months after the baseline to identify barriers and facilitators of the intervention as well as the feasibility of implementation strategies. In addition, quantitative indicators will be collected throughout the study and used to score implementation quality in four dimensions (dosage, fidelity, quality of delivery, and participants' responsiveness), matched with the results of the summative evaluation data.

Results/Conclusion: The expected findings from this formative evaluation will help to optimise implementation quality in the future and inform health practitioners by reducing the evidence practice/policy gap in that field, as well as highlighting implementation challenges. The factors which contributed to implementation quality, as well as the relation between implementation quality and programme outcomes, will be discovered. This study will help to improve our understanding of key determinants of intervention implementation and its association with intervention effectiveness. If proven effective, this programme might be applied more broadly within the country resulting in effective change in the health status of children.

Biography

Dr. Katharina Ruettger studied Sport and Performance at the German Sport University Cologne and obtained her Bachelor of Science degree in 2018. Dr. Katharina subsequently joined the research group of Professor Clemes at Loughborough University in the United Kingdom, where she earned her PhD from the School of Sport, Exercise and Health Sciences in 2024. Between 2023 and 2025, she worked as a research associate at Fulda University of Applied Sciences alongside her doctoral studies. Dr. Katharina is currently a postdoctoral research associate in the Department of Health Education at the University of Potsdam, where she works with Professor Dadaczynski.

Kelly Springer
Kelly's Choice, United States

Unlock the power of nutrition: Weight loss in the era of medications

With the rapid rise in GLP-1 medications like like Ozempic® and Wegovy®, the landscape of weight loss is changing. While these medications offer powerful short-term results, nutrition remains the cornerstone of long-term success. In this session, Registered Dietitian Kelly Springer, MS, RD, CDN, explores the critical role of food in supporting and enhancing the effects of GLP-1s—and in helping individuals achieve sustainable weight loss even without pharmaceutical intervention.

Drawing from decades of experience and evidence-based strategies featured in her upcoming book, The New Weight Loss Era, Springer outlines practical nutrition solutions to reduce inflammation, regulate blood sugar, improve metabolic health, and reverse chronic disease. Attendees will leave with actionable insights to empower patients, employees, or themselves in navigating weight loss with or without medication in today's evolving health landscape.

Biography

Kelly Springer, RD, MS, CDN founded Kelly's Choice in 2012. Kelly's Choice is a nutritional consulting company with dietitians nationwide who deliver exceptional precision nutrition services. A voice of authority and advocacy, Kelly is elevating the conversation around what it means to be truly healthy. Kelly has been a keynote speaker and panelist at numerous conferences and workplaces across the globe, captivating audiences and inspiring them with her expertise and enthusiasm.

Kimia Moiniafshari
PhD-Researcher, Italy

Horticultural activity as an intervention to improve health indicators in children with Autism Spectrum Disorder (ASD)

Autism Spectrum Disorder (ASD) is a neurodevelopmental condition characterized by challenges in social communication, restricted interests, and repetitive behaviors. Children with ASD are at increased risk for various health-related challenges, including gastrointestinal issues, sleep disturbances, obesity, and limited physical activity. Among these, poor dietary habits and physical inactivity are particularly concerning due to their long-term implications on overall health and quality of life. Research indicates that children with ASD often exhibit selective eating behaviors, leading to nutritional deficiencies and imbalanced dietary patterns. These challenges are compounded by low levels of physical activity, often due to sensory sensitivities, lack of motivation, or limited access to inclusive activity programs. The combination of poor nutrition and physical inactivity contributes significantly to the development of weight-related issues and increases the risk of chronic diseases later in life.

Horticultural activities have emerged as a promising intervention to address these dual challenges. Involving children in planting, harvesting, and preparing food not only enhances their familiarity and cooperation with various food sources but also encourages them to try new, healthy foods. Furthermore, these activities inherently promote physical movement and engagement in an enjoyable, sensory-rich environment tailored to the needs of children with ASD. Our study implemented a structured horticultural intervention program combined with targeted educational components for children with ASD. The program aimed to improve nutrition knowledge, increase acceptance of diverse foods, and promote regular physical activity. The results demonstrated significant improvements in dietary patterns, food acceptance, and nutrition-related knowledge. Additionally, participants showed moderate but promising increases in physical activity levels. These findings suggest that integrating horticultural activities with appropriate educational strategies can be an effective, holistic approach to managing the health of children with ASD. By addressing both nutritional behaviors and physical activity, such interventions may contribute to better weight management and reduced risk of chronic diseases in this vulnerable population.

Keywords: Autism Spectrum Disorder, Horticultural activity, Education, Weight management, Health.

Biography

Dr. Kimia Moiniafshari holds a PhD in Exercise Physiology and two master's degrees in Human Nutrition and Sports Nutrition. Her research focuses on the interaction of nutrition, physical activity, and neurodevelopmental disorders, particularly Autism Spectrum Disorder. Currently, she is investigating the health impact of environmental pollutants on neurodegenerative and neurodevelopmental disorders. Dr. Moiniafshari is also an active lecturer and science communicator in both academic and clinical settings.

Kurtis J. Swanson MD

Division of Nephrology, Department of Medicine, University of Wisconsin-Madison School of Medicine and Public Health, Madison, Wisconsin, USA

Post transplant diabetes mellitus: Advances and innovations

Solid organ transplantation, via multiple mechanisms, accentuates pre-existing diabetes mellitus and promotes de novo diabetes post-transplant. Sodium-glucose cotransporter 2 inhibitors (SGLT2i) and glucagon-like peptide-1 receptor agonists (GLP-1 RA) are novel, emerging diabetes treatments. There is a growing body of evidence supporting safe and effective use, particularly in kidney transplantation. The aim of this talk is to describe significance of post-transplant diabetes, highlight evidence supporting use of SGLT2i and GLP-1 RA, and provide guidance for clinical application.

Biography

Dr. Swanson studied Biology at St. Olaf College, USA and graduated as BA in 2011. He received his MD degree in 2015 from the University of Iowa. He completed residency at the Medical College of Wisconsin in 2018. He went on to complete his nephrology and transplant nephrology fellowships at the University of Wisconsin-Madison in 2021. He then joined the University of Minnesota as assistant professor until 2022. He returned to UW-Madison as an assistant professor, his current position. He has an H-index of 10. He enjoys spending time with his wife Kimberley and daughters Junie and Viola.

Clemence Germaine Metonnou[1*], Colette Sylvie Azandjeme[1], Charles Jerome Sossa[1], Bio Nigan Issiako[2], Moussiliou Noël Paraïso[1], Victoire Agueh[1]

[1]Health Promotion Department, Regional Institute of Public Health, University of Abomey- Calavi, Abomey-Calavi, Benin

[2]Laboratory Sports Performance, Health and Evaluation, National Institute of Youth, Physical Education and Sport (Injeps), University of Abomey-Calavi (Uac), Porto-Novo, Benin

Physical activity combined with cooking demonstrations and nutritional education in adults at risk of type 2 diabetes

Introduction: Type 2 Diabetes Mellitus (T2D) results from genetic and environmental factors. While genetics have some influence on the onset of diabetes, it is mainly environmental factors, particularly lifestyle habits, that will determine its early onset. Indeed, lifestyle habits characterized by an unbalanced diet (too rich in fat, sugar, and salt, and poor in micronutrients) coupled with low levels of physical activity are responsible for excess weight and obesity, which in turn will promote the onset of the disease. The present study aimed to evaluate the practice of physical activity combined with cooking demonstrations and nutritional education sessions among adults at risk of type 2 diabetes in the community.

Setting and Methods: The study took place in the municipality of Tchaourou located in the north-east of Benin. The study participants were residents of the municipality of Tchaourou, aged 15 to 60 years, of both sexes and at risk of T2D. This was a quasi-experimental before-after study with a control and a treatment group. A baseline survey was conducted before the intervention to collect socio-demographic data; anthropometric measurements; eating habits; lifestyle habits; knowledge, attitudes and practices regarding diabetes; fasting blood glucose and lipid concentrations. The same data were collected one year later after the nutrition education, cooking demonstrations and physical activity sessions. These data were collected in both the treatment and the control group. After the implementation of the activities, we determined the effect of the intervention using the paired samples t-test. The data were analyzed using the software IBM SPSS Statistics 20.

Results: 91% of the beneficiaries used the new culinary practices learned during the cooking demonstration sessions; there was an 88% reduction in high-calorie meals in favor of vegetables; 81% of the beneficiaries practiced at least 150 minutes of physical activity per week; 80% of the beneficiaries participated in all the planned activities; 65% reduced their alcohol consumption; there was no significant change in the proportion of participants who used tobacco (62%). The program beneficiaries' level of knowledge of diabetes (symptoms, complications and prevention) was assessed through a questionnaire. It increased from 32% at the start to 92%. The means of body mass index, waist circumference, fat percentage, systolic and diastolic blood pressure, blood sugar and triglycerides were significantly elevated after 12 months of theoretical health promotion intervention in people at risk of Type 2 diabetes in the control group.

Conclusion: This study is one of the first in Africa to combine nutrition education sessions and physical activity with sustained support of beneficiaries at risk of T2D. We suggest larger studies to better assess the effect of interventions on the lifestyle of people at risk of T2D in Africa.

Keywords: Physical Activity, Cooking Demonstrations, Nutritional Education Adult at Risk of Type 2 Diabetes, Benin.

Biography

Dr. Metonnou Clémence Germaine Nutritionist at Régional institute of Public Health, University on Abomey-Calavi Republic of Benin, Beninese and graduated as MS in 2011. She then joined the research group of Prof Agueh Victoire at the Institute of Régional institute of Public Health. She received her PhD degree in 2021 at the same Institute. She has published more than 17 research articles in the Nutrition and health field.

Michelle Petties

Leaving Large: The Stories of a Food Addict, Annapolis, Maryland, United States

The obesity trap: How neuromarketing fuels food addiction and obesity

The obesity epidemic is not just a public health crisis—it is a battle between medicine and marketing, where billion-dollar industries exploit neuroscience to override biology. While doctors work to treat obesity with medical interventions, food marketers weaponize neuromarketing to keep consumers addicted to ultra-processed foods. By strategically manipulating brain chemistry through branding, packaging, and advertising, they create cravings and compulsions that medical interventions alone cannot fully address.

My lived experience spans both sides of this battle. For 40 years, I struggled with food addiction and obesity, unknowingly trapped in a cycle fueled by psychological triggers I couldn't see. At the same time, I spent four decades working for some of the most powerful names in advertising and media, learning firsthand how brands use neuroscience to influence human behavior and consumer choices. This unique perspective allows me to expose the hidden strategies that keep people hooked and explain why conventional weight loss solutions often fail.

Doctors and healthcare professionals must recognize that they are not just treating obesity—they are fighting an industry that actively undermines their efforts. This talk will reveal the sophisticated marketing tactics that override willpower, challenge conventional thinking about obesity treatment, and offer strategies to help patients break free. Understanding the power of neuromarketing is essential to developing more effective, sustainable interventions for lasting weight loss and true recovery from food addiction and obesity.

Biography

Michelle Petties is a TEDx speaker, Food Story coach, and author of the award-winning memoir, Leaving Large–The Stories of a Food Addict. After gaining and losing over 700 pounds, she finally discovered the secret to quieting the battle between her mind, body, and hunger–her story. Michelle's memoir, a category winner in The 2022 Memoir Prize for Books, explores the deep emotional and psychological connections to food and how these food stories shape our eating behaviors and weight management struggles. She speaks to organizations, large and small, sharing her insights and stories of hope, healing, triumph, and transformation. Her latest ebook, Mind Over Meals: 7 Secrets to Rewire Your Brain for Healthy Eating and High Performance, reveals her core principles for losing weight and keeping it off for good.

Mohaddeseh Hasanzadeh
Dr. Mahdis, Iran (Islamic Republic of)

The impact of psychological therapy methods on improving weight loss

Weight loss is not just about physical changes in the body; it also requires psychological and behavioral transformations. Psychological factors play a crucial role in initiating, maintaining, and improving the process of weight loss. This article explores the impact of psychological therapy methods on enhancing weight loss.

1. **The Role of Psychology in Weight Loss:**
   Many individuals struggle with psychological challenges such as stress, anxiety, depression, or low self-esteem, all of which can negatively affect their weight and overall well-being. Emotional eating, lack of appetite control, and repeated failures in weight loss often stem from psychological issues. Psychological therapy methods can help identify and address these underlying factors, guiding individuals toward a healthier lifestyle.

2. **The Psychological Benefits of Therapy in Weight Loss:**
   In addition to facilitating weight loss, psychological therapy methods offer several other benefits:

- Improved Self-Esteem: Individuals develop a positive body image and greater confidence.
- Stress Reduction: Techniques like mindfulness and CBT help manage stress, which is often linked to overeating.
- Sustainable Habits: Therapy encourages lasting behavioral changes rather than short-term fixes.
- Better Emotional Regulation: Individuals learn healthier ways to cope with emotions without turning to food.
- Encourages individuals to accept setbacks and focus on long-term goals.
- Helps reduce feelings of guilt or shame associated with overeating.
- Builds resilience and a positive mindset for overcoming weight-related challenges.

3. Conclusion: Weight loss is not just a physical journey but also a psychological one. Methods such as CBT, mindfulness, and ACT provide individuals with the tools to address emotional and behavioral barriers to weight loss. By integrating psychological therapy into their weight loss journey, individuals can achieve more sustainable and fulfilling results, leading to overall well-being and a healthier lifestyle.

Biography

Dr. Mahdis (Mohaddeseh) Hasanzadeh is one of Iran's top dietitians and nutritionists, known as the Queen of Fitness for inventing the revolutionary IQFitness weight loss method, which has helped over 12,000 people achieve their fitness goals. She was awarded Best Researcher and Lecturer of the Year by Islamic Azad University in 2023. With over 14 publications, including articles and conference presentations at international congresses, Dr. Mahdis is a leader in her field. She is also the author of a bestselling fitness book with over 1,000 copies sold, inspiring healthier lifestyles. Her work redefines health, fitness, and empowerment for all.

Nawal H. Alsubaie[1*], Manar A. Alahmari[2], Hadeel S. Alzahrani[2], Razan A. Alyahya[2], Noura Almosa[3], Najat Alghamdi[4], Salem Alsuwaidan[5]

[1]Department of Pharmacy practice, Collage of Pharmacy, Princess Nourah bint Abdulrahman University, Riyadh, Saudi Arabia

[2]PharmD Candidates, Collage of Pharmacy, Princess Nourah bint Abdulrahman University, Riyadh, Saudi Arabia

[3]Family and Community Medicine Department, Chronic Illness diseases clinic, Prince Sultan Military Medical City, Riyadh, Saudi Arabia

[4]Endocrine department, King Saud Medical City, Ministry of Health, Riyadh, Saudi Arabia

[5]Research and Innovation Center, King Saud Medical City, Ministry of Health, Riyadh, Saudi Arabia

Evaluation of pancreatic function by comparing insulin sensitivity in Type 2 Diabetes Mellitus (T2DM) patients: Two-centers prospective study

Background: Diabetes is a major global health concern, with T2DM accounting for 90% of cases. T2DM is marked by declining insulin secretion and resistance. Recent studies suggest insulin plus metformin may be more effective than oral agents plus metformin in preserving beta-cell function and improving insulin sensitivity in T2DM.

Objectives: To evaluate the impact of combined insulin and metformin vs. metformin combined OHAs on pancreatic function of T2DM patients by comparing insulin sensitivity between two groups. Additionally, to compare glycemic control by measuring Hemoglobin A1c (HbA1c) levels, changes in Body Mass Index (BMI), and incidence of hypoglycemic episodes in both treatment groups.

Methods: An Observational, prospective, two-centered setting. Allocating T2DM patients on combined insulin and metformin vs. metformin combined OHAs. The C-peptide, fasting insulin level, Fasting Blood Glucose (FBG), HbA1c, weight and height and number of hypoglycemic attacks during the 3 months are parameters collated at baseline and after 3 months. The Homeostatic Model Assessment for Insulin Resistance (HOMA-IR) was calculated for all patients.

Results: The first group was with 31 individuals (35%) treated with insulin and metformin, while 57 patients (65%) were on OHA and metformin. The insulin and metformin group exhibited higher insulin fasting values and lower C-peptide levels at baseline and after 3 months ($p<0.05$). Whereas the OHA and metformin group exhibited a higher reading for HOMA-IR after 3 months ($p=0.359$). Furthermore, a minor reduction in BMI, HbA1c and FBG values were observed in both groups after 3 months ($p>0.05$).

Conclusion: Our study concludes that patients on metformin and OHA have superiority effect on pancreatic function demonstrated in C-peptide levels compared to metformin and OHA, however, this difference is no significant in insulin sensitivity as calculated by HOMA-IR between groups.

Biography

Dr. Nawal Alsubaie, currently assistant professor at the Department of Pharmacy practice, Collage of Pharmacy, Princess Nourah bint Abdulrahman University, Riyadh, Saudi Arabia. She is a clinical pharmacist with endocrine team and leads an ambulatory care (Diabetes clinic) at KAAUH. She was the clinical pharmacist in charge at PSMMC ambulatory care clinics. She had her MSc. in clinical pharmacy from UCL, London in 2012. Furthermore, she finished her PhD in clinical pharmacy (diabetes management) from DMU, Leicester, United Kingdom in 2020 and had also diabetes management certificate from ASHP in 2023.

Nawinda Vanichakulthada[1*], Sunaree Pitchaiprasert[3], Suwanna Pitchaiprasert[4], Uraiwan Akanit[2], Kullanan Saiboot[1], Patcharin Trijaksang[5], Rasintra Jaroenying[5], Sumalee Hantragool[5], Chutima Samhugkanee[5]

[1]College of Medicine and Public Health, Ubon Ratchathani University, Ubon Ratchathani, Thailand

[2]Faculty of Pharmacy, Ubon Ratchathani University, Ubon Ratchathani, Thailand

[3]Department of Obstetrics and Gynecology, Surin Hospital, Surin, Thailand

[4]Department of Internal Medicine, Surin Hospital, Surin, Thailand

[5]Independent Researcher

Efficacy of intensive lifestyle modification using meal replacements for sustainable weight loss and body composition improvement in obese adults: A retrospective cohort study

Objective: Obesity is a rising global health concern. Research on the long-term effectiveness of integrating Intensive Lifestyle Modification (ILM) and Meal Replacement (MR) interventions for obesity management, particularly over extended periods is limited. This study evaluated the effectiveness of ILM alone and combined with MR on weight loss and body composition among obese individuals. The sustainability of these interventions over 52 weeks was also investigated.

Methods: A retrospective cohort study was conducted including 702 participants divided into three groups: ILM + MR, ILM only, and a non-ILM control group. Anthropometric and metabolic data were collected at baseline and 52 weeks. Outcomes were analyzed using ANOVA and paired t-tests to assess changes in weight, waist circumference, Body Mass Index (BMI), visceral fat, body fat percentages, and body muscle percentages.

Results: The ILM + MR group demonstrated the most significant improvements in weight (-14.43 kg), BMI (-5.54), and waist circumference (-7.41 inches) at 52 weeks ($p<0.001$), alongside increased muscle mass (+2.33%) and reduced fat mass (-7.54%). The ILM-only group achieved moderate improvements, whereas the control group exhibited negligible or adverse changes. These results underscore the enhanced effectiveness of combining ILM with MR compared to ILM alone.

Conclusions: This study provides robust evidence supporting the integration of ILM with or without MRs during the first 8 weeks' programs for sustained weight loss and improved body composition. The findings contribute to the development of practical, scalable strategies for addressing obesity in public health settings, particularly in resource-limited environments.

Keywords: Obesity, Intensive Lifestyle Modification, Meal Replacement, Weight Loss, Body Composition.

Biography

Dr. Nawinda Vanichakulthada graduated with a Doctor of Medicine degree from the Faculty of Medicine, Chulalongkorn University in 2005. She later completed her residency training in Pediatrics at Chulalongkorn University in 2010. Since 2022, Dr. Vanichakulthada has extensive experience in clinical research, having contributed to four Phase I clinical trials and one Phase III clinical trial. Her expertise lies in the field of clinical immunology. Currently, Dr. Vanichakulthada serves as a faculty member at the College of Medicine and Public Health, where she combines her academic and clinical expertise. She also holds an administrative position as the Director of Ubon Ratchathani University Hospital, where she leads efforts to advance healthcare services and education in the region.

Neha Bhanusali MD

Department: University of Central Florida, College of Medicine, United States

Where autoimmunity meets metabolism: Lifestyle strategies to slow accelerated aging

Autoimmune diseases such as Rheumatoid Arthritis (RA), Systemic Lupus Erythematosus (SLE), and Sjögren's syndrome are increasingly recognized as conditions that accelerate biological aging. Chronic systemic inflammation, mitochondrial dysfunction, and telomere shortening contribute not only to joint and tissue damage but also to sarcopenia, insulin resistance, and cardiovascular risk—all of which overlap significantly with metabolic disease pathways traditionally managed in endocrinology.

Patients with autoimmune disease often experience muscle loss, reduced metabolic flexibility, and increased visceral adiposity, even at normal body weight. Steroid use, chronic fatigue, and physical inactivity further exacerbate these changes. These phenomena—sometimes referred to collectively as inflammaging— increase the burden of diabetes, osteoporosis, and cardiovascular disease in rheumatic populations.

This session will review the biological mechanisms linking chronic inflammation to accelerated aging and metabolic dysfunction, with a special focus on the role of muscle health as a critical, yet under-recognized, mediator of metabolic outcomes. We will discuss how early lifestyle interventions, particularly anti- inflammatory dietary patterns, resistance-based physical activity, stress management, and sleep optimization, can significantly alter the clinical trajectory for patients living with both autoimmune and metabolic conditions.

Through case examples, we will highlight how targeted lifestyle strategies have been successfully integrated alongside standard therapies to improve fatigue, glycemic control, muscle strength, and inflammatory burden in autoimmune populations. Practical clinical pearls will be provided to help endocrinologists and diabetes specialists recognize when autoimmune processes may be contributing to metabolic challenges and how to implement interdisciplinary, lifestyle-focused approaches.

Learning Objectives: Describe how autoimmune diseases accelerate biological aging and promote metabolic dysfunction. Recognize the role of sarcopenia and mitochondrial dysfunction in autoimmune-related metabolic disease. Apply practical lifestyle interventions to improve musculoskeletal, metabolic, and immune health in patients with autoimmune disease.

Biography

Dr. Neha Bhanusali is a board-certified rheumatologist with expertise in autoimmune disease, lifestyle medicine, and clinical research. She completed her residency in internal medicine at Mount Sinai West and her rheumatology fellowship at Columbia Presbyterian Medical Center. Dr. Bhanusali currently serves as faculty at the University of Central Florida College of Medicine, where she practices and teaches rheumatology along with her role as culinary medicine faculty. She has authored multiple peer-reviewed articles on the role of diet, inflammation, and chronic disease, and has presented nationally on lifestyle interventions in autoimmune and rheumatic conditions. Her work focuses on bridging rheumatology, nutrition, and chronic disease management.

Nicolaus Dahlmann
Institute for Biometry and Nutrition, Hamburg, Germany

Dahlmann-body-analysis: A tool in the weight management to identify patients at risk for metabolic syndrome

Background: The plasticity of human body in terms of surface area and composition is a challenge for health care units to address obesity. What they need is a cost-effective, easy to use tool to manage the daily clinical settings. For that reason, Dahlmann created a model that refers to a reference population. Based on several regression equations including the parameters height, weight and hand circumference, the model offered for the first time the possibility to develop weight-height-frame tables and to calculate a Reference Weight (RefWt) for each individual regardless of age. The Waist Circumference (WC) was integrated into the model as a proxy for central obesity. Processed by a network of algorithms, it was now possible to distinguish the difference between the Actual Weight (ActWt) and the Reference Weight (RefWt) into Fat Mass (FM, kg) and Muscle Mass (SMM, kg). Fat mass derived by the DBA revealed a strong agreement with BIA measurements.

Methods: A data set of 61 severely obese women were analysed. All subjects had a BMI>30 kg/m^2. Anthropometric data are statistically compared with Systolic Blood Pressure (SBP) and the MetS risk factors Triglyceride (TG), HDL Cholesterol (HDL-C), Fasting Plasma Glucose (FPG) and the parameters C-Reactive Protein (CRP) and Low-Density Lipoprotein (LDL-C) using Receiver Operating Curves (ROC) based on sensitivity and specificity, Area Under Curve (AUC), correlation coefficients and regression analysis.

Results: The average %FM was about 50%, meaning that 44% of subjects suffered from MetS. Associations between body fat mass and the systolic blood pressure and seven metabolic risk factors showed a significantly rising linear relationship for the parameters Insulin, HOMA-IR, HDL-C and CRP.

Conclusions: To our knowledge, it is the first time that inflammatory parameters are associated in a linear manner with increasing amounts of fat mass supporting the suspicion that obesity is toxic.

Biography

Nicolaus Dahlmann earned his Master of Medicine, his PhD and his Priv. Doz. Dr. med. habil. at the Univ. Hosp., Hamburg-Eppendorf, Germany. During the first two years at the I. Medical Dep. he was engaged in questions of infant development and obesity. He then worked ten years in the Dep. of Molecular Biology, University Hamburg, and described a new enzymatic activity (dTTPase). His work was honored by two awards (Dr. Martini Price, G.E. Konjetzny Price). He was conferred Univ.-Prof. for Laboratory Medicine by the Dep. of Clinical Biochemistry, Univ. Hospital Bonn, and then became head of the Dep. of Laboratory Med., General Hosp. Hamburg-Harburg. Some years later, he founded the start-up stringID and the Institute for Biometry and Nutrition, Hamburg. Up to now, he is engaged in questions of public health, nutrition, and body shape. He published more than 50 articles in peer-reviewed international journals.

Pradeep Singh Chahar[1*], Robert C. Hickner[2], Jagdeep Singh[1], Anshul Meena[1]

[1]Department of Physical Education, Banaras Hindu University, Varanasi, Uttar Pradesh, India

[2]Department of Health, Nutrition and Food Sciences, Florida State University, Tallahassee, Florida, United States

Immunological response to acute graded exercise

Exercise provides significant health benefits by enhancing immune system function, supporting balanced immune responses, and contributing to overall health and quality of life. This study aimed to investigate the differences in immune response to the acute effects of High-Intensity Exercise (HIE), Moderate-Intensity Exercise (MIE), and Low-Intensity Exercise (LIE) in healthy adults. A randomized repeated-measures study was conducted at the department of Physical Education, Banaras Hindu University, Varanasi (U.P.), involving 20 healthy male participants aged 22–26 years. Each participant underwent 5-minute sessions of HIE, MIE, and LIE, with a one-week washout period between sessions. Blood samples were collected at four timepoints: Pre-Exercise, immediately post-exercise, 10 minutes' post-exercise, and 20 minutes' post- exercise. The samples were analyzed for selected immunological markers: White Blood Cells (WBC), lymphocytes, neutrophils, monocytes, eosinophils, and basophils. Repeated measures ANOVA with Greenhouse-Geisser correction revealed significant differences in WBC, lymphocytes, and basophils across exercise intensities ($p<0.05$), while changes in neutrophils, monocytes, and eosinophils were not statistically significant ($p>0.05$). Additionally, responses over time were significant for WBC, lymphocytes, neutrophils, monocytes, and eosinophils ($p<0.05$), but not for basophils ($p>0.05$). Post-hoc analysis using Bonferroni correction indicated that immunological markers significantly increased immediately and 10 minutes post- HIE, with values approaching baseline by 20 minutes' post-exercise. The study demonstrates that exercise intensity plays a critical role in modulating acute immune responses. High-Intensity Exercise (HIE) elicited the most pronounced and transient increases in immune markers, including WBCs and lymphocytes, suggesting its potential utility for individuals aiming to achieve more robust immune activation through physical activity. In contrast, moderate-and low-intensity exercise resulted in comparatively mild or non- significant immunological changes, indicating a more stable and less physiologically stressful immune modulation. This may be particularly beneficial for individuals with hyper-immune responses.

Keywords: Exercise Therapy, Immunity, Obesity, Quality of Life.

Biography

Dr. Pradeep Singh Chahar is an Assistant Professor in the Department of Physical Education at Banaras Hindu University, Varanasi, India, and currently a Visiting Scholar at the Department of Health, Nutrition, and Food Science, Florida State University, Florida, United States. Dr. Chahar holds a B.P.Ed. and M.P.Ed. (Gold Medal), along with diplomas in Nutrition and Health Education, Yoga and Meditation, and Statistics and Computing. He earned his Ph.D. from LNIPE, Gwalior, as a Government of India Scholar. With a strong focus on Exercise Physiology, Dr. Chahar has actively participated in conferences and published several research papers in internationally reputed journals.

Ramalingam Shanmugam* PhD; Jordan Malone MD; Brook Fowler CCRP; F Buck Willis PhD, MDc, FACSM, FIDF

Christian College of Medicine, Belize

Prediabetes and obesity reduced from non-pharmaceutical treatments. A global review

Aims: The purpose of this review was to examine the global efficacy of non-pharmaceutical methods for treating prediabetes with obesity. The treatments included the food allergen elimination protocol, as well as lifestyle changes of diet and exercise. The review also examined whether there was a significant correlation between food allergies and diabetes.

Methods: A literature search for Food allergies and diabetes was completed on PubMed, Research Gate, Google Scholar, Science Direct, Medline, Cochrane Library, and OpenID, which revealed seven controlled trials and several case reports. The controlled studies fell into two categories: Studies either examined treatments for prediabetes and obesity through food allergen elimination and/or exercise (three) or Studies showing the correlation between food allergens and diabetes (four).

Results: Food allergen elimination treatments showed significant changes in 255 subjects ($P<0.001$), and studies that linked the correlations between pre-existing food allergens and diabetes showed clear evidence in 4171 subjects ($P<0.05$). There were also significant reductions seen from lifestyle change protocols, globally.

Conclusion: In the past 25 years, Latin America and the Caribbean have shown a 455% increase in diabetes. Additionally, eighty percent of obese patients In the USA have prediabetes or type 2. The correlations between subjects with food allergies and diabetes were high, and while lifestyle changes were effective in clinical trials, global diabetes continues to rise. Further research on food allergen elimination needs to be conducted, because the current standard of care is not reversing prediabetes as food allergen elimination has done.

Keywords: ALCAT Leukocyte Reaction Testing, Aerobic-surge Exercises, Diabetes.

Dr. R. Anil Kumar

Professor and HOD Karnataka Institute of Endocrinology and Research, Bengaluru, Karnataka, India

Importance of C-Peptide test in precision diabetology and clinical research. Utility of fasting C-Peptide levels in the classification of young diabetes subjects with the age of onset of diabetes between 15 to 35 years

Background: Diabetes mellitus is a chronic metabolic disorder characterized by chronic hyperglycemia with disturbances of carbohydrate, fat and protein metabolism resulting from defects in insulin secretion, insulin action or both. It is a major cause of mortality and morbidity worldwide. Type 2 diabetes in youth has increased enormously in India and in addition the incidence of even type 1 diabetes is increasing in youth. So there are some patients who have mixed features. The objective of this study is to use fasting C-Peptide levels and classify diabetes in the young individuals from 15 to 35 years.

Methods: The present study was conducted in the outpatient department of Karnataka Institute of Endocrinology and Research Bangalore, in 426 subjects with age of onset of diabetes between 15 to 35 years, over a period of 5 years. Informed consent was taken from all the subjects included in the study and the approval from hospital ethical committee was taken. Pregnant women with diabetes, subjects presenting with acute infections, septicaemia, patients with acute or chronic pancreatitis, and subjects with pancreatic carcinoma were excluded from the study. In this study C-Peptide levels were estimated by electro chemiluminescence immunoassay method.

Results: 426 subjects with the age of onset of diabetes between 15 to 35 years were studied. 71.4% of the subjects are males. 55.4% were in the age of onset between 20 to 30 years. Duration of diabetes varied between new to 15 years. 54% of subjects had BMI from 18.5 to 24.9. Waist circumference was more than 80 cms in 78.2% of subjects. Study results show that 2.8% were type 1 diabetes, 11.5% could be either type 1 or type 2 diabetes and 85.7% were type 2 diabetes. Subgroup analysis showed that 5.5% type 1, 27.8% type 1 or type 2 and 66.7% type 2 diabetes were between 15 to 20 years. Similarly, between 20 to 35 years, 2.5% were type 1 diabetes, 10% could be either type 1 or type 2 diabetes and 87.5% were type 2 diabetes.

Conclusions: C-peptide is secreted in equimolar amounts of insulin, so it can be used for estimation of residual insulin secretion in patients with diabetes. This C-peptide can be of great value in this era of precision medicine in classification of diabetes, with very low secretion in T1DM, high values in T2DM. C-peptide measurement is an inexpensive, widely available test that may assist the clinical management of diabetes, particularly in young and insulin-treated patients where there is uncertainty about diabetes subtype.

Biography

Dr. R. Anil kumar is working as professor and head of department of diabetes and endocrinology at Karnataka institute of endocrinology and research Bangalore. Dr R. Anil kumar has completed MBBS in 1987 and MD in 1999. He has WHO fellowship in diabetology, Fellowship of royal college of physicians, Edinburgh, Fellowship of Indian college of physicians and fellowship of research society of diabetes in India. He has published more than 40 research articles. He was Speaker in national and international conferences. Had delivered orations state and national conferences. Dr R. Anil kumar has treated more than 1 lakh diabetes patients.

Rajat Goyal[1*], Sumeet Gupta[1], Prabodh Chander Sharma[2]

[1]MM College of Pharmacy, Maharishi Markandeshwar (Deemed to be University), Mullana-Ambala, Haryana, India 133207

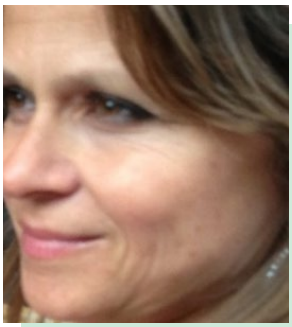
[2]School of Pharmaceutical Sciences, Delhi Pharmaceutical Sciences and Research University (DPSRU), Government of NCT of Delhi, New Delhi, 110017, India

AI and machine learning in obesity: Transforming healthcare approaches

Obesity is a global health crisis, contributing to a rise in non-communicable diseases such as diabetes, cardiovascular disorders, and metabolic syndromes. Traditional approaches to obesity prevention and management often fall short in addressing the complexity of individual risk factors and treatment responses. Artificial Intelligence (AI) and Machine Learning (ML) are emerging as transformative tools in healthcare, offering innovative solutions for early detection, personalized treatment, and long-term weight management. This presentation explores the role of AI and ML in obesity research, from predictive analytics and risk assessment models to AI-driven nutritional guidance and behavioral interventions. Advanced algorithms can analyze vast datasets, identifying patterns in genetic, metabolic, and lifestyle factors that contribute to obesity. AI-powered applications, such as wearable devices, chatbots, and virtual coaching, are revolutionizing patient engagement and self-monitoring. Furthermore, machine learning is enhancing clinical decision-making by providing tailored treatment plans based on an individual's health profile. By leveraging AI and ML, the future of obesity management can shift towards a more proactive, personalized, and efficient healthcare model.

Biography

Mr. Rajat Goyal is an Assistant Professor of Pharmaceutical Chemistry at MM College of Pharmacy, Maharishi Markandeshwar (Deemed to be University), Mullana-Ambala, Haryana, India. Mr. Rajat has an extensive publication record, with more than 70 review and research articles and around 28 book chapters in esteemed international journals. He has actively participated in various national and international conferences, faculty development programs, seminars and workshops, and has given numerous oral and poster presentations. Additionally, he serves as a review member for distinguished international journals published by Elsevier, Springer, Wiley, Hindawi, and others.



Raquel B. Leitão

[1]College of Education at Polytechnic Institute of Viana do Castelo, Viana do Castelo, Portugal

[2]Centre for Research and Innovation in Education (inED), Porto, Portugal

Healthy eating: Back to basics in light of scientific evidence

Everyone generally admits that nutrition is a key health factor. However, there are many obstacles to translating this recognition into healthy eating habits. Proof of this is the high prevalence of chronic non-communicable diseases, such as cardiovascular diseases, diabetes, or obesity, for which diet represents one of the main modifiable risk factors. As proposed by Dr. Emílio Peres, considered by many to be the father of nutrition science in Portugal, Healthy Eating is ...a rational way of eating that ensures variety, balance and fair quantity of foods chosen for their nutritional and hygienic quality, subjected to beneficial culinary manipulations (p. 11). But how to make compatible food tastes and preferences, acquiring good quality foods, cooking skills and satisfying nutritional needs throughout life, without deficiencies or excesses? Can we eat well in a simple way? How can we reach this much desired adjective, healthy, to qualify our diet? It is in the family that the foundations for education and eating behavior are built, and it is the school that must act as the driving force behind food literacy. However, the relationship between these contexts and diet is strongly dependent on national governments and the global food industry, as they are the parts of the system with the greatest capacity to influence the food environment. These dynamics are marked by great complexity, involving physical, biological, historical, cultural, social, economic, financial and political dimensions. It is therefore up to each individual person and society as a whole to mobilize around the preservation and rehabilitation of food and gastronomic culture, the valorization of education and food literacy, and the construction of good eating habits from an early age. The health, longevity and quality of life of populations depend on these achievements. Based on the crossing of current scientific evidence from various disciplinary fields, this presentation aims to analyze the aspects described above, fostering a reflection guided and structured by the following axes: (1) Healthy eating: The roots; (2) Old and new eating patterns; and (3) Food Literacy: From potential to action.

Biography

Raquel B. Leitão has a Degree in Nutrition Sciences from the Faculty of Nutrition and Food Sciences of the University of Porto, a Master's degree in Quality Control, specialization in Water and Food, from the Faculty of Pharmacy of the University of Porto, and a Ph.D. in Child Studies, in the specialty of Child Health, from the University of Minho. She carries out her professional activity as Adjunct Professor at the Polytechnic Institute of Viana do Castelo, where she has also developed research projects such as Obesity from childhood to adolescence: a longitudinal study in school environment.

R. Denis*, H. Atlas, A. Deffain, M. Sureshkumar, R. Pescarus, A.D. Palma, P. Y. Garneau, AS Studer

Sacred Heart Hospital of Montréal, Canada

Same day discharge metabolic and bariatric surgery: Experience of a bariatric tertiary center

Since the event of minimally invasive surgery, bariatric surgery has taken such a lead that, in Canada, lack of hospital beds, budgets and manpower has made us look at other issues in order to be able to operate our patients in a reasonable time.

This study examines the feasibility of Same-Day Discharge (SDD) in metabolic and bariatric surgery within a bariatric tertiary center, addressing challenges related to hospital resources.

Early experiences starting in 2009 with sleeve gastrectomies showed that 42% of patients were released within 12 hours. A series of 69 consecutive patients presented at the third International Summit on Sleeve Gastrectomy in New-York in 2010, revealed a retention rate of 2.9% and a readmission rate of 1.4%, with minor and major complication rates of 4.3% vs 5.1% and 4.3% vs 8.5% respectively.

In a larger series of 980 patients undergoing Laparoscopic Sleeve Gastrectomy (LSG), 328 (33.5%) were operated on an SDD basis, with 322 patients (98.2%) discharged on the day of surgery. This group showed a retention rate of 1.8% and a readmission rate of 8.5%, primarily for minor issue. Our results were published in 2016 and were comparable to other published series.

Applying SDD protocols to SADI procedures and gastric bypass in 208 patients resulted in a retention rate of 4.8% and a readmission rate of 5.8%, with minor and major complications rates of 11.9% and 3.9% respectively.

The findings suggest that SDD is a viable option for various bariatric procedures, with acceptable retention and readmission rates.

Biography

Dr. Ronald Denis is a renowned Canadian general surgeon and trauma specialist, with nearly 40 years of clinical and leadership experience. A graduate of the Université de Montréal, he completed his trauma surgery specialization in Detroit in 1983 and played a pivotal role in establishing Quebec's first trauma unit at the Hôpital du Sacré-Cœur de Montréal. He has held numerous leadership positions, including Chief of Surgery at both Hôpital du Sacré-Cœur and CIUSSS du Nord-de-l'Île-de-Montréal, and currently serves as Director of the Trauma Program and Head of Robotic Surgery. He was the first in Canada to perform robotic surgery using the Da Vinci system. Dr. Denis has also made significant contributions to motorsport safety, leading medical teams at the Canadian Grand Prix and NASCAR events, and was inducted into the Canadian Motorsport Hall of Fame in 2019. He is a member of the FIA Medical Commission. In academia, he is a Clinical Associate Professor at Université de Montréal and has mentored over 150 surgeons. He has presented at over 100 conferences and co-authored nearly 70 scientific publications.

Rajat Goyal[1], Rupesh K. Gautam[2*]
Amity University Uttar Pradesh, Noida, India

Obesity and the microbiome: A hidden key to weight management

The human gut microbiome plays a pivotal role in metabolism, energy regulation, and overall health. Emerging research suggests that microbial composition may influence obesity by affecting nutrient absorption, fat storage, inflammation, and appetite regulation. This presentation explores the intricate relationship between the gut microbiota and obesity, highlighting key bacterial species linked to weight gain and metabolic dysfunction. It also examines the impact of diet, probiotics, prebiotics, and Fecal Microbiota Transplantation (FMT) as potential strategies for modulating the microbiome to support weight management. Additionally, the role of personalized microbiome-based interventions and their future applications in obesity treatment will be discussed. By understanding the microbiome's role in obesity, we can unlock new, targeted approaches to managing weight and metabolic health.

Biography

Dr. Rupesh K. Gautam is currently working as Professor, Centre for Pharmacology, at Amity Institute of Pharmacy, Amity University Uttar Pradesh, Noida. He has more then 16.5 years of teaching and research experience. He featured in the list of World's top 2% scientist -2025 released by Elsevier-Stanford University. He is having more then 10,000 citation both in Scopus and Google scholar. He has more than 90 research and review articles to his credit in various journals of repute. He has also published twelve books and more than fifty book chapters with Elsevier, Springer, Wiley, Scivener, Bentham, NOVA etc. He has published four patents and registered fourty two copyrights. He has supervised 21 M. Pharm scholars. Dr. Gautam has also received grants from various government agencies/associations for conducting FDP/seminars/conferences/workshops. He has attended and organized several International and National seminar, conferences and workshops as a team member and organizing secretary/coordinator. He has been Guest Editor of Phytomedicine, Current Pharmaceutical Design, Neuroscience and Biobehavioral Reviews, Evidence-Based Complementary and Alternative Medicine and Biomed Research International

Sara Ahmed*, Nguyen
Metamed, Canada

The missing piece in obesity pharmacotherapy: How behavioral science completes the treatment picture

While GLP-1 agonists demonstrate efficacy in trials, real-world discontinuation exceeds 50% at 6 months-a statistic reflecting the limitations of medication-only approaches. Our Great Toronto Area (GTA)-based clinics' multidisciplinary model (integrating CBT, body composition monitoring, and precision pharmacotherapy) has achieved 96% retention and unprecedented body recomposition in 129 patients (108F/21M). The results reveal not just superior outcomes, but critical age-and sex-specific patterns that redefine best practices. Postmenopausal women (>50yo) achieved ΔBF% -4.20 (95% CI [-4.5, -3.9]), doubling Look AHEAD trial benchmarks (p=0.002), while men>50yo matched this metabolic performance (-4.11 percentage points [pp], CI [-4.8,-3.4]), defying expectations of age-related decline. Most strikingly, all groups maintained or gained lean mass (ΔSMM% +1.6-2.4pp), with women<30yo showing+2.68pp skeletal muscle mass (CI [+2.1, +3.3]).

These achievements stem from three innovations: First, our proactive side-effect management protocol reduced GLP-1 discontinuation to 9% versus 31% in real-world cohorts through slow titration and anticipatory guidance. Second, 1:1 CBT sessions addressed emotional eating barriers. Third, biweekly body composition scans and AI-based food tracking created powerful behavioral reinforcement, with body composition feedback sustaining engagement during plateaus (78% continued past 6 months). The data reveal striking correlations between monitoring frequency and outcomes (ΔBF%/SMM% correlation r=0.72, p<0.01), proving that what gets measured gets managed.

These results challenge the prevailing prescribe-and-monitor approach to obesity management. Just as diabetes care evolved from glucose-lowering to comprehensive metabolic management, obesity treatment must integrate behavioral and medical support as standard practice. Policy changes should include mandated coverage for group therapy, training in brief behavioral interventions for primary providers, and quality metrics that track muscle preservation alongside weight loss. Medications provide the tools, but multidisciplinary systems build the foundation for lasting success in obesity care.

These findings fundamentally reshape our understanding of obesity treatment efficacy. The consistent lean mass preservation across all subgroups (ΔSMM%+1.6-2.4pp) challenges the prevailing weight-loss-at-all-costs paradigm, demonstrating that body recomposition-not just scale changes-should be the primary treatment target. The 0.72 correlation between monitoring frequency and outcomes ($p<0.01$) suggests these metrics may serve as early predictors of long-term success. Most importantly, the results provide biological evidence that multidisciplinary care isn't merely additive-it's transformative, creating synergistic effects where medication enhances lifestyle adherence while behavioral support optimizes pharmacotherapy persistence. This model offers clinicians an actionable blueprint to overcome obesity treatment's twin failures: Metabolic adaptation and therapeutic attrition.

Biography

Dr. Sara Ahmed is a dual board-certified physician in Internal Medicine and Obesity Medicine. She practices as a General Internist with Hamilton Health Sciences and serves as Founder & Chief Medical Officer of the Metamed Weight Management Center in Burlington. An Adjunct Associate Professor at McMaster University, she brings over 10 years of experience across U.S. and Canadian healthcare systems. Actively involved with Obesity Canada, she has presented at the ACP Ontario Chapter Meeting, Obesity Canada Conference, and Pri-Med Conference. Beyond patient care, she enjoys travelling, and maintaining an active social media presence.

Sara Aziz Mohamed
Sara Clinic, Egypt

Microbiota & its influence on muscle injury recovery & joint inflammation: A new era in combination of nutrition & physical therapy

Introduction: Practical trial highlights the gut microbiota's role in modulating systemic inflammation, influencing nutrient availability, and immune function, which directly enhances muscle injury recovery and play a critical role in tissues repair and overall rehabilitation outcomes. This study explores how practical dietary strategies which support gut health can accelerating recovery of musculoskeletal injuries and joints inflammation and integrating them into physical therapy protocols without the need for microbiome analysis.

Methods: A cohort of patients undergoing physical therapy for musculoskeletal injuries was provided with evidence-based dietary guidelines to promote gut health. These included the incorporation of probiotic-rich foods (e.g., yogurt, kefir), prebiotic fibers (e.g., oats, bananas), and anti-inflammatory nutrients (e.g., omega-3 fatty acids). Recovery outcomes such as pain reduction, range of motion, and muscle strength were assessed over 4 weeks rehabilitation program.

Results: Patients who adopted the gut-health-focused dietary recommendations experienced faster reductions in muscle soreness and inflammation markers, as well as improved strength and functional recovery compared to the control group following standard rehabilitation alone. The addition of fermented foods and anti-inflammatory nutrients showed a noticeable impact on subjective pain scores and mobility improvements.

Conclusion: Improving gut health through simple dietary modifications can accelerate recovery from muscle injuries, reduce joint inflammation and enhance the efficacy of physical therapy interventions. This approach avoids the delays associated with microbiome testing and provides immediate benefits for patients. Incorporating gut-health strategies into rehabilitation protocols offers a promising avenue for improving physical therapy outcomes.

Biography

Dr. Sara Aziz Mohamed, DPT, MSc is a Consultant Physical Therapist, Clinical Nutritionist, and Obesity Specialist. She is the Founder of Sara Clinic in Egypt, where she provides advanced rehabilitation, body contouring, and therapeutic nutrition programs. She holds a Doctor of Physical Therapy degree and a Master's in Neurosurgical Physical Therapy Rehabilitation, with additional certifications in Dry Needling and SCOPE (UK). Dr. Mohamed is an active member of ADA, APTA, EMASO, and EASHTN. Her areas of expertise include obesity management, chronic disease nutrition, sports rehabilitation, and sports nutrition.

Sarah Exley LPN[1*], Udaya M Kabadi MD[1,2]

[1]Broadlawns Medical Center, Des Moines, Iowa

[2]University of Iowa, Iowa City, Iowa

Serum fructosamine: A more accurate screening test than 3-hour OGTT for diagnosis of gestational diabetes

Background: Presently, ACOG and ADA recommend OGTTs for screening for diagnosis of Gestational Diabetes Mellitus (GDM). However, the validity of OGTTs is being questioned because OGTT results vary daily due to changing total content as well as type of carbohydrate intake during the previous few days, but especially the intake from dinner or bedtime snack the previous day. Their reliability and accuracy of OGTTs are further compromised by lack of recommended preparation. Recent studies documented Continuous Glucose Monitoring (CGM) to be more reliable and accurate than OGTTs. Recently, we documented random serum Fructosamine concentration ≤198 mM/l with normal pregnancy and >198 mM/l in GDM, comparable to age matched non-pregnant women. However, some subjects with GDM based on 3-hour OGTT showed Fructosamine <198 mM/l suggesting false positivity.

Objective: Therefore, we assessed comparisons between Fructosamine and CGM for 2 weeks on one aspect, and 3-hour OGTT on the other.

Subjects and Methods: We performed CGM at 24-30 weeks in 12 women, age 24-40 years. Three women with GDM (positive 3-hour OGTT) and Fructosamine <198 mM/l. Three women without GDM (normal OGTT) and six non-pregnant women. Diagnosis of GDM was established by abnormal 3-hour OGTT as adopted by current guidelines of ACOG and ADA. Cut off Fructosamine between women with and without GDM was 198 mM/l in a recent study.

Results: Mean diurnal glucose levels with CGM were not significantly different amongst the three groups (GDM, 85-91 mg/dL; No GDM, 80-88 mg/dL; Non-pregnant, 75-94 mg/dL). The normal ranges of glucose (60-140mg/dL) on CGM were not significantly different either amongst all groups. Moreover, not a single glucose level was over 140 mg/dL in any group including women with diagnosis of GDM by 3-hour OGTT and Fructosamine <198 mM/l.

Conclusion: 3-hour OGTT may be false positive as confirmed by both CGM and random Fructosamine level in many pregnant women. Thus, CGM and random serum Fructosamine level are probably more accurate diagnostic tests of GDM in comparison to 3-hour OGTT. However, Fructosamine determination is distinctly more convenient, less expensive, and therefore more acceptable to pregnant women.

Biography

Sarah Exley has been a nurse for 15 years and has worked in the Endocrinology and Nursing Department at Broadlawns Medical Center for nearly 10 years. Under the mentorship of Dr. Kabadi, she has been actively involved in ongoing research projects, abstracts, and presentations at endocrine meetings. Through this collaboration, and with the support of others, she has authored, been acknowledged in, and edited over 18 published papers, as well as two journal special issues. She wishes to express her deep gratitude to Dr. Kabadi for his generosity, mentorship, and passion for the field, and also extends heartfelt thanks to her coworker Sandra Robbins for her unwavering support.

Anne-Sophie Studer*, A. Deffain, Mathusan Sureshkumar, R. Pescarus, A.D. Palma, P. Y. Garneau, R. Denis

Department of Bariatric and Metabolic Surgery, Robotic and Minimal Invasive Surgery of CIUSSS du Nord de l'île de Montréal (Sacred-Heart Hospital of Montreal), University of Montréal, Quebec, Canada

Single Anastomosis Sleeve Ileal Bypass (SASI) as a second stage after Sleeve Gastrectomy (SG) – A unicentric experience from a Canadian tertiary bariatric center

Background: Single-Anastomosis Sleeve-Ileal Bypass (SASI) is a 2nd-stage surgical option for initial suboptimal clinical response or recurrence of obesity after Sleeve Gastrectomy (SG). It is an emerging and interesting option, as it combines several mechanisms such as dietary restriction, intestinal hypoabsorption and neuroendocrine effects. As the only bariatric surgery center in Canada to offer this procedure as a 2nd-stage post-SG procedure, we present short-term results from a series of patients.

Methodology: Between January 2023 and November 2024, 40 bariatric patients underwent SASI in 2nd stage post-SG. If patients were eligible, the procedure was performed on an outpatient basis. The antro-ileal anastomosis was made 250cm from the ileo-caecal valve, measuring approximately 3cm with an anti-biliary reflux anchor. Early complications (≤30days) and results at one year postoperatively concerning Excess Weight Lost (EWL) and Total Weight Loss (TWL), evolution of associated comorbidities and late complications are detailed.

Results: Since January 2023, 40 patients (5/35 M/F, mean age: 47y) with a mean preoperative body mass index of 44.4 kg/m2 have undergone SASI. The mean time between SG and SASI was 63 months (14-140). Indications for revision were 60% weight recurrence and 40% suboptimal clinical response after SG. Preoperative comorbidities were as follows: n=15 (37.5%) obstructive sleep apnea, n=12 (30%) hypertension, n=5 (12.5%) type 2 diabetes and n=2 (5%) dyslipidemia. Outpatient management was possible for 31 (77.5%) patients. The rates of emergency department visits and readmission at 30 days' post-op were 10% and 5% respectively. The rate of early complications was 5% (n=2 Dindo-Clavien II and no major complications). At 1 year post-operatively, mean EWL and TWL were 57.5% and 21.9% respectively. Follow-up rates at 6 months and 1 year post-operatively were 55% and 30%. Associated comorbidities were resolved for 100% of dyslipidemias, 25% of hypertensions and 20% of type II diabetes. The majority of patients describing postoperative gastro-oesophageal reflux (45%) were well controlled with the use of proton pump inhibitors. Only one patient required a revision into a gastric transit bipartition with concomitant hiatal hernia repair. Ten patients have completed their post-operative EGDs demonstrating: 4 marginal ulcers (treated conservatively) and 2 anastomotic strictures (treated by endoscopic dilatation). Only 5 (12.5%) patients used loperamide to control accelerated transit. Finally, vitamin-protein profiles from

post-operative follow-up showed n=6 (15%) martial deficiency anemia, n=6 (15%) calcium deficiency, n=4 (10%) vitamin D deficiency and n=3 (7.5%) vitamin B12 deficiency. Only one patient with persistent asthenia at 3 months and marginal ulcers developed hypoalbuminemia.

Conclusion: SASI appears to be an attractive 2nd-stage treatment modality after SG. The complication rate is acceptable and one-year outcomes appear satisfactory. It would be necessary to study the efficacy and morbidity of this method over the longer term, in comparison with SADI-S or OAGB. This would help clarify its place in the therapeutic arsenal of revision procedures for SG non responders.

Biography

Dre Anne-Sophie Studer completed her medical degree in France through the University of Aix-Marseille in 2015. During her surgical training in general and digestive surgery, she also completed a masters' degree in biological anthropology. Upon completion of resident training, Dr Studer undertook multiple fellowships in both France and Canada, in minimally invasive surgery, bariatric surgery and trauma/acute care. Dr Studer is currently a practising attending surgeon at Hospital Du Sacre-Coeur, Montreal, a tertiary teaching hospital affiliated with the University of Montreal. She has a special interest in revisional bariatric surgery and performs complex revisions with both laparoscopic and robotic platforms. Dr Studer also participates in the on call general surgical roster, performing emergency general surgery and trauma procedures.

Suizan Schacherer
Square Peg, United States

Walking off the weight—and the shame

Suizan's story: From accidental healthy mom to empowered advocate

Born 9 pounds 9 ounces, my struggle with weight started on day one—and it didn't get easier. I filled my plate like it was my last meal, inquired about dinner while eating lunch, and grew up hearing, Suizan, you have such a pretty face... should you be eating that? None of these comments ever inspired me to lose weight. Shame never does.

But transformation doesn't begin with guilt—it begins with honesty.

I used to believe willpower was the answer. I now know it's about sustainability, self-awareness, and giving yourself grace. The truth is, if I only ate when I was hungry, I wouldn't have ended up 100 lbs overweight. And if I waited until I felt ready, I might never have started.

Everything changed after my mommy makeover. I had just undergone a major elective surgery, and I wasn't about to take that for granted, being a mommy of two. I went for a walk. Then another. One block turned into many. Walking became weight training. I joined a gym. When I returned to my doctor a year later, I had lost another 60 pounds—and gained something far more powerful: momentum.

Twenty years later, I'm still 100 pounds lighter. I'm stronger. Healthier. Happier. Not because I followed a perfect program, but because I found the habit that stuck. I became the accidental healthy mom—and discovered that the only program that works is the one you'll actually do.

In this talk, I'll share:

- The power of small, consistent changes
- Why knowing your strengths and weaknesses is more effective than willpower
- How to turn guilt into action—and make peace with your story
- Why your health journey should never be a diet, but a lifestyle

This is a raw, real, and inspiring talk for anyone who's ever felt like lasting change was impossible. I'm living proof it's not.

Teji Dhami[1*] MD, FOMA, DABOM, DABLM; Dariush Mozaffarian[2]; Monica Agarwal[3]

[1]Boost your Health and Wellness, United States

[2]Food is Medicine Institute, Friedman School of Nutrition Science and Policy at Tufts University, Boston, MA, USA

[3]Division of Endocrinology, Diabetes and Metabolism, Department of Medicine, University of Alabama at Birmingham, Birmingham, AL, USA

Multidisciplinary interventions to support GLP-1 therapy

With the increasing utilization of glucagon-like peptide-1 receptor agonists (GLP-1 RAs) as a therapeutic strategy for obesity management, there is a critical need for coordinated nutrition guidance to enhance the efficacy and safety of these medications.

GLP-1 RAs are effective in reducing appetite, promoting satiety, and facilitating significant weight loss. However, without proper nutritional support, patients may experience adverse outcomes such as lean mass loss, micronutrient deficiencies, and poor diet quality. Hence pharmacotherapy should be embedded within a broader lifestyle-based approach that includes structured, individualized nutrition care and physical activity.

The central nutritional strategy recommended is a focus on nutrient-dense, minimally processed whole foods, including vegetables, fruits, legumes, whole grains, nuts, seeds, and lean protein sources. These foods support overall health, prevent nutritional deficiencies, and help preserve lean body mass during weight loss. Given that GLP-1 RAs can reduce protein intake due to appetite suppression and early satiety, an intentional focus on adequate protein intake (1.2–1.6 g/kg/day) is critical. Protein consumption should be distributed throughout the day to maximize muscle protein synthesis and minimize sarcopenia.

Furthermore, the advisory highlights the importance of monitoring and addressing micronutrient intake, particularly iron, calcium, vitamin D, B12, folate, and magnesium. These nutrients are essential for metabolic health, and deficiencies may be exacerbated by reduced overall food intake during GLP-1 therapy. Special attention is recommended for older adults, menstruating individuals, those on restricted diets, and individuals with limited food variety.

Managing gastrointestinal side effects—such as nausea, vomiting, constipation, and early satiety—is another key concern. Strategies include consuming smaller, more frequent meals, eating slowly, and emphasizing bland, easily digestible foods during the adjustment period.

However, patients are cautioned against over-relying on highly processed safe foods that may undermine long-term nutritional quality.

Hence a multidisciplinary, patient-centered care model, incorporating the expertise of registered dietitians, obesity medicine specialists, behavioral health professionals, and exercise physiologists. Behavioral strategies, ongoing support, and education are essential for helping patients build sustainable, healthy habits that extend beyond pharmacologic therapy.

In conclusion, GLP-1 therapies offer promising outcomes for obesity treatment, but their benefits can only be fully realized when coupled with comprehensive nutritional and lifestyle interventions. This is evidence-based guidance to help clinicians and patients align dietary practices with pharmacologic therapy, ensuring improved metabolic outcomes, greater long-term weight loss success, and enhanced overall well-being.

Biography

Dr. Dhami specializes in Internal Medicine, Obesity Medicine and Lifestyle Medicine. She graduated from Topiwala National Medical College, India and completed her residency in Internal medicine at Texas Tech University Health Sciences Center, USA. She has been recognized as a fellow of the Obesity Medicine Association. Dr. Dhami is the Chairman of the Membership Committee & Member of the CME committee at the Obesity Medicine Association and member of Physician Advisory Committee at the Medical Fitness Association. She takes a multidisciplinary approach with sustainable lifestyle changes including nutrition therapies and medications for weight management and wellness.

Teji S Dhami[1*], Sarah Kanbour[2] MD, Rwedah A Ageeb[3] MPH, Rwedah A Ageeb[3] MPH, Prof Rayaz A Malik[4] MBChB PhD

[1]Boost your Health and Wellness, United States

[2]AMAN Hospital, Doha, Qatar

[3]Cornell University, Qatar Foundation – Education City, Doha, Qatar

[4]Weill Cornell Medicine–Qatar, Doha, Qatar

Impact of body weight loss on type 2 diabetes remission

A comprehensive systematic review and meta-regression analysis, published in The Lancet Diabetes & Endocrinology, examined the relationship between the extent of bodyweight loss and the likelihood of type 2 diabetes remission. The study analyzed data from 22 randomized controlled trials involving individuals with type 2 diabetes who were overweight or obese, focusing on remission outcomes at least one-year post-intervention. The findings revealed a strong dose-response relationship between weight loss and diabetes remission. Specifically, for every 1% reduction in bodyweight, the probability of achieving complete remission increased by 2.17 percentage points, while the likelihood of partial remission rose by 2.74 percentage points. Participants who lost less than 10% of their bodyweight had a complete remission rate of only 0.7%. In contrast, those who lost 20–29% experienced a 49.6% remission rate, and individuals with a weight loss of 30% or more achieved a 79.1% remission rate. For partial remission, the rates were 5.4% for less than 10% weight loss, 48.4% for 10–19%, 69.3% for 20–29%, and 89.5% for 30% or greater weight loss. Importantly, the study found that factors such as age, sex, race, duration of diabetes, baseline BMI, HbA1c levels, insulin use, or the type of weight loss intervention did not significantly affect remission outcomes. This suggests that the degree of weight loss itself is a primary determinant of remission, regardless of other variables These results underscore the critical role of substantial weight loss in managing type 2 diabetes and achieving remission. They also highlight the potential for remission through various interventions, including lifestyle changes, medications, and surgical options, emphasizing that significant weight reduction can lead to meaningful health improvements for individuals with type 2 diabetes.

Biography

Dr. Teji Dhami is physician specializing in weight loss and wellness. She earned her bachelor's in medicine and surgery from Topiwala National Medical College, India and completed her residency in internal medicine at Texas Tech University Health Sciences Center, USA. She takes a multidisciplinary approach and collaborates with other professionals to improve patient outcomes. Dr. Dhami holds certifications from the American Board of Obesity Medicine, American Board of Lifestyle Medicine and American Board of Internal Medicine. Dr. Dhami creates personalized treatment plans and offers ongoing support to help her patients make sustainable lifestyle changes.

Tianzi Li*, Qi Zhang, Lili Ma, Xiuhua Ma

[1]Department of General Practice, Capital Medical University, Beijing, China

[2]Department of Obstetrics and Gynecology, Capital Medical University Daxing Teaching Hospital, Beijing, China

Pregnancy log records and management of risk factors for gestational diabetes mellitus reduces its incidence

Objective: To explore the preventive effect of pregnancy log records and management and the influence of maternal lifestyles on the incidence of Gestational Diabetes Mellitus (GDM).

Design: This prospective case–control study was conducted at a hospital in Beijing, China.

Population or Sample: A total of 348 pregnant women who underwent normal early screening for GDM were included in this study between April and November 2022.

Methods: All enrolled pregnant women were educated for GDM and were assigned to an observational group and a control group via a random number-generating table. The two group received routine guidance during pregnancy. The observational group conducted individualized management by recording a pregnancy log independently from 14 to 28 weeks of gestation.

Main Outcome Measures: Both groups were subjected to a 75-g Oral Glucose Tolerance Test (OGTT) at 24–28 weeks of gestation, and their incidence rates of GDM were compared.

Results: The incidence rates for GDM in the second trimester was 9.5% in the observational group and 20.5% in the control group, with the differences statistically significant ($P<0.05$).

In terms of lifestyle, exposure to passive smoking, weight gain, the frequency of eating out and physical activity per week, and average sleep duration were independent risk factors for GDM ($P<0.05$).

Conclusions: Log records and management have an effective impact on reducing the incidence of GDM. Dietary habits, physical activity, sleep patterns, exposure to passive smoking, and weight gain during pregnancy were risk factors associated with GDM. Maternal lifestyle was a critical determinant for the occurrence.

Biography

Dr. Tianzi Li has obtained a doctoral degree from Capital Medical university in 2025, who is specializing in general practice, family medicine, women's health, and maternal and child health care. Dr. Li has more than ten years of medical experience with solid medical professional knowledge and comprehensive ability. Dr. Li has a wealth of clinical and scientific research experience, has published a number of English and Chinese articles, and participated in the publication of 3 books. She has had many academic exchanges in China, South Korea, Singapore, Australia and other countries. And has made many contributions in social activities.

Tianzi Li*, Lili Ma, Jun Gang, Xiuhua Ma

[1]Department of General Practice, Capital Medical University, Beijing, China

[2]Department of Obstetrics and Gynecology, Capital Medical University Daxing Teaching Hospital, Beijing, China

Effects of diabetes mellitus during pregnancy on pregnancy outcome and development of 0-6-year-old offspring

Background: Diabetes mellitus during pregnancy has adverse impact on mother and offspring.

Methods: A retrospective cohort study was conducted in Beijing, China. All pregnant women who underwent routine prenatal care and delivered successfully, along with their offspring who had completed the national standard health check-up for children aged 0 to 6, were included in the study cohort. R 4.2.2 software was used for statistical analysis.

Results: A total of 49,912 deliveries occurred in the three years, including 49,765 live births, with an incidence of diabetes mellitus during pregnancy at 8.6%. There were statistically significant differences in delivery mode, perineal conditions, preterm birth, postpartum hemorrhage, placenta previa, very low birth weight infants, macrosomia, neonatal infection, neonatal asphyxia, neonatal pathological jaundice, and neonatal hypoglycemia between the diabetes during pregnancy and the non-diabetes during pregnancy group ($P<0.05$). Multivariate logistic regression analysis showed significant differences in cesarean section (OR=1.170,95%CI 1.096~1.249, neonatal infection (OR=1.479, 95%CI 1.213~1.804, neonatal asphyxia(OR=1.683,95%CI 1.161~2.438, neonatal pathological jaundice(OR=6.720,95%CI 5.461~8.270, and neonatal hypoglycemia(OR=7.160,95%CI 5.684~9.021) ($P<0.05$).

We analyzed 18,590 pairs of mothers and children. Newborns in the diabetes during pregnancy group had significantly higher body length and weight at birth than those in the non-group ($P<0.001$), but between 3 and 72 months of age, the body length and weight distribution of children in both groups tended to be consistent, and the differences gradually disappeared.

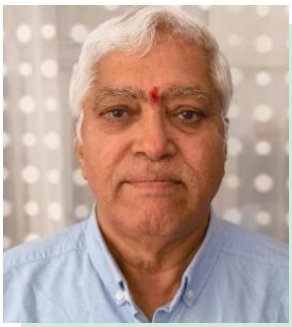
Diabetes mellitus during pregnancy significantly affected the hearing of the offspring ($P<0.05$), but there was no significant difference for anemia in children. The results of the mixed-effects model analysis showed that after controlling for confounding factors such as age, gender, neonatal baseline indicators, parity, mode of delivery, and gestational age at delivery, diabetes during pregnancy had a negative impact on the body length of children aged 3 to 36 months ($P<0.05$), but the impact on weight and head circumference was not significant.

Conclusions:

1. The incidence of diabetes mellitus during pregnancy is high. It affects pregnancy outcomes and significantly increases the risk of adverse maternal and infant outcomes.
2. In the growth and development of offspring, diabetes during pregnancy is a significant influencing factor for birth length and weight, but such difference gradually disappears during subsequent child development, suggesting a certain convergence phenomenon in early growth curves.
3. Diabetes mellitus during pregnancy affects maternal and infant outcomes. It is necessary to strengthen the screening and management of high-risk pregnant women.

Biography

Dr. Tianzi Li has obtained a doctoral degree from Capital Medical university in 2025, who is specializing in general practice, family medicine, women's health, and maternal and child health care. Dr. Li has more than ten years of medical experience with solid medical professional knowledge and comprehensive ability. Dr. Li has a wealth of clinical and scientific research experience, has published a number of English and Chinese articles, and participated in the publication of 3 books. She has had many academic exchanges in China, South Korea, Singapore, Australia and other countries. And has made many contributions in social activities.



Hameeda Banu N. Itagi[1], Y.S. Savitha[1], Rajarajeswari Jayaraman[2,3], Vasudeva Singh[1*]

[1]Department of Grain Science and Technology, CSIR-Central Food Technological Research Institute, Cheluvamba Mansion, KRS Road, Mysuru-570 020, Karnataka, India

[2]Department of Nutrition, Biochemistry and Toxicology, DRDO-Defence Food Research Laboratory, Mysore

[3]Department of Studies in Food Science &Nutrition, University of Mysore, Mysore-570 005, Karnataka, India

Development and evaluation of red rice-based functional foods for diabetes management

Red rice (*Oryza sativa L.*), widely consumed across Asia, is recognized for its rich nutritional profile and bioactive phytochemicals with potential health benefits. This study focused on the development of red rice-based functional foods and their efficacy in managing diabetes, using streptozotocin-induced diabetic rat models.

Three types of products were formulated: Product A: Raw, Parboiled, and Phosphorylated Parboiled Red Rice Flours (PPRRF) were prepared and incorporated into the diet of diabetic Wistar rats at 62% supplementation. PPRRF, with a phosphorus content of ~554 mg% and a degree of substitution of 0.029 (within FSSAI limits), significantly improved body weight, reduced hyperglycemia, and alleviated diabetic complications such as glucosuria, proteinuria, nephropathy, and elevated blood urea. It also lowered plasma cholesterol, LDL, and triglyceride levels. Histopathological analysis showed preserved glomerular structure in PPRRF-fed rats compared to diabetic controls.

Product B: The incidence of diabetes has been increasing in developing countries, and there are only few studies that evaluate glycemic response in noodles prepared by cold extrusion technology. The present study was aimed at evaluating the effect of prepared noodles by utilizing the health and nutritional benefits of brown rice/de-husked rice (pigmented and non-pigmented paddy) and whole chick pea along with selected additives on glycemic response, as well as other biological responses in rats. Diabetes was induced by a single intraperitoneal injection of streptozotocin (40 mg/kg body weight) in male Wistar rats weighing 150-160 g. The rats were divided into six groups: SFC, SFD, PNFC, PNFD, NPNFC and NPNFD. In the case of the experimental diet, noodles (pigmented and non- pigmented dehusked rice with whole chick pea) were incorporated at 10% level, while the control rats were fed with a basal diet for a period of 6 weeks. Both the noodles (pigmented and non-pigmented dehusked rice with chick pea) exerted favorable influences in diabetic rats by significantly improving body weight, consumption of food and water, and control in volume of urine. Fasting blood glucose showed a 40 and 29% improvement with PNFD and NPNFD rats, respectively. The excretion of sugar in the

urine was reduced in both of the PNFD and NPND rats, which was around 4 to 6 g/d compared to SFD, 7 g/d. The glycemic response in rats, observed that the consumption of above noodles for six weeks reduced the blood glucose response in rats when compared with the SFD rats. The present study indicates that the above noodles have an ameliorating influence on diabetic status, as assessed by the above parameters. Thus, the prepared noodles are best suited in the diet management of diabetics and disorders of carbohydrate metabolism.

Product C: Dosa (a traditional fermented pancake) was prepared using raw and parboiled red rice with black gram as well as with green gram dal. These formulations demonstrated hypoglycemic, hypocholesterolemic, and nephroprotective effects in diabetic rats, attributed to the presence of phytochemicals, resistant starch, and slowly digestible starch. The findings suggest that red rice-based products, from raw and processed through parboiling and phosphorylation, hold promise as functional foods for diabetes management.

Biography

Vasudeva Singh retired from CSIR-CFTRI as Chief Scientist in 2013. Following his retirement, he served as an Emeritus Medical Scientist (ICMR) at the University of Mysore and as a Professor under a DBT-sponsored Food Science Project at Gauhati University, Assam. He has published 85 research papers and is the inventor of several technology processes, including one patent that has been commercialized by 30 industries. He has successfully handled numerous national and international projects and guided around 100 B.Tech, M.Sc, and M.Tech students in their dissertations and research investigations, producing 8 Ph.D. candidates, including candidates from INSA and various African countries. He has served as a faculty member and course coordinator for the M.Sc. Food Technology program and HRD courses at CSIR-CFTRI. He is a recipient of the Lifetime Achievement Award, FRSC, and several other honors. He has delivered numerous invited lectures, presented 80–100 posters at national and international conferences, and contributed innumerable oral presentations. He is a regular critical reviewer for journals such as LWT, JCS, and Food Chemistry, among others. He has also served the Food Safety and Standards Authority of India (FSSAI), New Delhi, in various capacities and currently serves as a member of its Scientific Committee. Additionally, he served as a member of the Research Advisory Committee at ICAR-Central Institute of Post-Harvest Engineering and Technology (CIPHET), Ludhiana, Punjab from 2018 to 2021.

Zhao Qingbin

Department of Geriatric Endocrinology, The First Affiliated Hospital of Xi'an Jiaotong University, Xi'an City, Shaanxi Province, China

Progress of clinical research on diabetic cardiovascular diseases in Northwest China

Over the past 40 years, with the development of China's economy and changes in lifestyle, such as reduced physical activity, excessive energy intake, and the prevalence of overweight or obesity, the prevalence of diabetes in China has risen from 0.67% in 1980 to 12.4% in 2018. However, the rate of reaching the blood glucose target among Chinese diabetic patients is only 49.4% (HbA1c<7%), and the burden of diabetes is constantly increasing especially the threat of cardiovascular complications of diabetes. In addition, other risk factors that cause atherosclerotic cardiovascular diseases are also prevalent in China, such as hypertension, dyslipidemia, obesity, etc. In 2019, the Chinese government listed the prevention and control of diabetes as part of the Healthy China special campaign. Metabolic diseases such as diabetes, hypertension, dyslipidemia and obesity have driven the high incidence of metabolic cardiovascular diseases in China, and atherosclerotic cardiovascular diseases have become the leading cause of death among Chinese adults. Facing these challenges, early prevention and control of related risk factors may be an effective means to reduce the burden of metabolic cardiovascular diseases in China. Therefore, in recent years, our research team has carried out a series of clinical studies on diabetic cardiovascular diseases in the northwest region of China. In this speech, I will discuss a series of related clinical studies, I have conducted in recent years, including the influencing factors of the occurrence, progression and prognosis of diabetes mellitus complicated with coronary heart disease, diabetic kidney disease, diabetic foot ulcers, and diabetes complicated with lower extremity arterial occlusive disease. Identifying these risk factors will help formulate precise prevention and control strategies, which may potentially prevent the occurrence and development of diabetic cardiovascular diseases in this region.

Biography

Professor Zhao Qingbin studied clinical medicine at Xi'an Medical University in China and obtained a bachelor's degree in 1996. Subsequently, she studied in the research group of Professor Ma Aiqun at Xi'an Jiaotong University and obtained her master's degree in 2002 and her doctorate in 2008. From 2017 to 2018, she went to the University of Maryland in the United States and conducted a two-year postdoctoral research under the guidance of Professor Da-Wei Gong, engaging in the development of drugs for cardiovascular diseases. Currently, she serves as a professor in the Department of Geriatric Endocrinology at the First Affiliated Hospital of Xi'an Jiaotong University. Professor Zhao has published 20 articles in SCI journals.

BOOK OF ABSTRACTS

magnus Group

5th Edition of

World Obesity and Weight Management Congress

3rd Edition of International Conference on

Diabetes and Endocrinology

OCT

23-25

POSTER PRESENTATIONS

Aniya Barclay
University of Central Florida, United States

Quality of life in older adults with diabetes: A correlational study

Diabetes is a prevalent disease in the United States, especially in elderly populations. It can either be caused by autoimmune complications (Type 1), poor dietary habits (Type 2), or damage to the pancreas (Type 3c). It is usually seen long-term and often comes with subsequent health issues including Coronary Artery Disease (CAD), stroke, heart attack, and, most commonly known, neuropathy. Quality of life is an important factor in overall health and is a prevalent concern amongst older adults. Factors to determine quality of life include physical, emotional, and mental well-being. In this study, 92 adults between 65-85 years of age were assessed for overall health status using the SF-36 and mental status with a Five-Minute Cognitive Test (FCT). The objective of this study is to analyze the relationship between quality of life and adults with diabetes by assessing factors including physical health, emotional health, cognitive health, mental health, general health perceptions, vitality, and bodily pain.

Keywords: Diabetes, Elderly, Quality of Life.

Biography

Aniya Barclay is a coordinator for the Clinical and Aerospace Health team at the University of Central Florida. She has her Bachelor of Science in Biomedical Sciences and is currently pursuing a Master of Science in Nutrition. Aniya is a Certified Clinical Research Professional, Certified EKG technician, and Nationally Certified Phlebotomist. As a coordinator, she has done various research studies related to nutrition and diabetes. She is passionate about healthcare research and hopes to one day have her own practice as an osteopathic family medicine doctor.

Athena Cohen[1*] B.S.; Sidra Siddiqui[1] B.S.; M.S; Madeline Kling[1] B.S.; Queenie Wang[1] B.S.; Joen Lanza[1,2] B.S.; David Hinkle[1] M.D

[1]Department of Ophthalmology, Tulane University School of Medicine, New Orleans, LA, USA

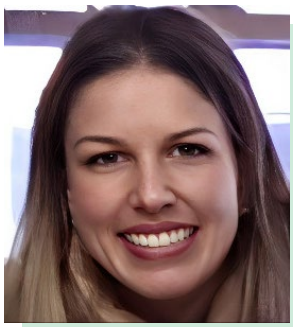
[2]Tulane University School of Public Health and Tropical Medicine, New Orleans, LA, USA

Evaluating the impact of social vulnerability on the development and progression of diabetic retinopathy in New Orleans

This study investigates the association between the Social Vulnerability Index (SVI) and the development and progression of Diabetic Retinopathy (DR) among patients with Type 2 Diabetes Mellitus (T2DM) in New Orleans. DR is a leading cause of vision loss in the United States, particularly among individuals with poorly controlled diabetes. Social determinants of health, including income, education, transportation, housing, and access to care play a critical role in both the development of diabetes and access to ophthalmology services. The Centres for Disease Control and Prevention (CDC) SVI is a composite measure of community resilience based on socioeconomic and demographic factors, publicly available at the ZIP code level. Given the wide variability in social vulnerability across New Orleans' neighbourhoods and the high burden of chronic disease in its medically underserved population, this study aims to assess whether higher SVI is associated with increased rates or severity of DR progression. This is a retrospective chart review of patients with DR secondary to T2DM seen between January 1, 2015 and June 25, 2025 at University Medical Centre New Orleans (UMCNO) and the East Jefferson General Hospital (EJGH) Tulane Eye Care Clinic, both of which serve as safety-net institutions. Clinical and demographic data including patient age, sex, race/ethnicity, comorbidities, DR severity, and ZIP code were extracted from 4,398 eligible charts using ICD-10 coding. Patients' ZIP codes were linked to their corresponding 2020 SVI Overall Percentile scores. The breakdown of patients by SVI percentile is as follows: 43 patients (SVI<24%), 139 patients (SVI 24–<49%), 558 patients (SVI 49–<74%), and 3,593 patients (SVI≥74%). Sixty-five patients had no recorded SVI data. This distribution reflects the expected patient population of a safety-net health system and suggests a potential correlation between high social vulnerability and DR presence. Data extraction has been completed, and detailed chart review is currently underway, with statistical analysis to be performed in the coming weeks using logistic regression modelling. Preliminary findings suggest that higher SVI may be associated with increased prevalence of diabetic retinopathy, underscoring the importance of addressing structural inequities in chronic disease management and vision care. These findings may inform future care models and public health interventions aimed at reducing disparities in diabetic eye disease in New Orleans.

Biography

Athena Cohen studied Chemistry at Emory University, where she earned her Bachelor of Science degree with a minor in South Asian Studies. Athena Cohen then pursued her medical education at Tulane University School of Medicine, where she is currently an MD candidate. During her studies, Athena Cohen joined several research projects and has presented her research at national and international conferences and has published in numerous peer-reviewed journals. Athena Cohen especially enjoys exploring how social determinants of health impact access to care, disease progression, and health equity.



Paula Roberta Martins Rodrigues[1], Paola Alves Claudino[1], Raquel Munhoz da Silveira Campos[3], Solange Cravo Bettini[4], Gisele Farias[4], Ana R. Dâmaso[5], Regina Maria Vilela[2], Bárbara Dal Molin Netto[2*]

[1]Postgraduation Program in Food and Nutrition, Federal University of Paraná, Curitiba, Brazil

[2]Department of Nutrition, Postgraduation Program in Food and Nutrition, Federal University of Paraná, Curitiba, Brazil

[3]Interdisciplinary Postgraduate Program in Health Sciences, Federal University of São Paulo

[4]Bariatric Surgery Service of Hospital de Clínicas, Federal University of Paraná, Curitiba, Brazil

[5]Postgraduation Program in Nutrition, Federal University of São Paulo

Women with normal adiponectin levels prior to Roux-en-Y gastric bypass improved long-term metabolic outcomes

Obesity is a global public health problem, associated with various metabolic comorbidities. Among its pathophysiological characteristics, the accumulation of White Adipose Tissue (WAT) stands out. In addition, it is widely recognized that the WAT plays an important endocrine role, particularly in the production of adipokines. Among the adipokines produced, adiponectin is particularly noteworthy.

Adiponectin has pleiotropic functions, acting as a metabolic mediator and regulator of inflammatory and immune processes. Its effects include increased insulin sensitivity in the liver, muscles, and adipose tissue, along with the regulation of inflammation through reduced production of pro-inflammatory cytokines and increased secretion of anti-inflammatory cytokines. Recent studies show that serum adiponectin levels are significantly lower in individuals with obesity, which is associated with an increased risk of developing obesity-related diseases.

When conventional clinical interventions fail to effectively control obesity, bariatric surgery is often recommended for individuals with severe obesity. However, there is still a lack of studies evaluating the evolution of adiponectin levels in patients undergoing bariatric surgery, especially in medium-to long-term follow-ups.

In this study, we conducted a retrospective analysis of women with obesity who underwent RYGB and were followed for two years. The study aimed to assess changes in anthropometric and metabolic parameters according to preoperative adiponectin levels. Thirty women were classified into two groups: Normoadiponectinemia (≥10.0 µg/mL) and hypoadiponectinemia (<10.0 µg/mL) based on their preoperative serum adiponectin levels. Anthropometric data, lipid profiles, glucose metabolism markers, and inflammatory parameters were evaluated preoperatively, and at 6 and 24 months post-surgery. The research was approved by Ethics

Committee in Research with Humans of the Clinical Hospital of the Federal University of Paraná (CAAE 4.539.851/21).

Our findings demonstrated that women with higher preoperative adiponectin levels (normoadiponectinemia group) exhibited significantly greater improvements in weight loss, BMI reduction, excess weight loss, and insulin sensitivity (HOMA-AD) compared to those with hypoadiponectinemia. Over the two-year period, a substantial proportion of participants initially classified as hypoadiponectinemic transitioned to normoadiponectinemia, suggesting that weight loss induced by bariatric surgery can progressively restore adiponectin levels. Nevertheless, at 24 months, women who remained hypoadiponectinemic continued to present higher BMI and less favorable metabolic profiles.

These results support the growing evidence that preoperative adiponectin levels may serve as a predictive biomarker of metabolic response following bariatric surgery. Patients with normoadiponectinemia prior to surgery may experience more favorable outcomes in terms of weight reduction and metabolic improvements. However, given the small sample size and inclusion of only female participants, further studies involving larger, more diverse populations are warranted to validate these findings and explore potential sex-specific effects.

Biography

Dr. Bárbara Dal Molin Netto holds a PhD in Nutrition from the Federal University of São Paulo (UNIFESP), with a sandwich doctorate at the University of Minnesota (USA). Dr. Bárbara is currently Adjunct Professor in the Department of Nutrition at the Federal University of Paraná (UFPR) and a permanent faculty member of the Graduate Program in Food and Nutrition. Her research interests include Clinical Nutrition, Metabolic Syndrome, Bariatric Surgery, Obesity, Cardiovascular Diseases, and Headache. Dr. Bárbara is a researcher at the Obesity Study Group (GEO-Unifesp/SP).

Christine L. Lopez DSW, MSW, LCSW

School of Behavioral Health Department of Social Work and Social Ecology, Loma Linda University, LomaLinda, California, San Bernardinoo

Bariatric Education and Wellness (B.E. Well): A psycho-behavioral intervention for postoperative care

Bariatric and metabolic surgery has proven to be an effective intervention for achieving rapid weight loss in individuals with severe obesity. While these surgeries can lead to significant health improvements, for some patients, they may experience psycho-behavioral challenges in the postoperative phase. Common issues include maladaptive eating behaviors, difficulties in interpersonal relationships, body dissatisfaction, and poor adherence to recommended treatment protocols. These challenges can negatively affect long-term weight outcomes, emotional well-being, body image, and overall treatment success. Historically, surgical guidelines for postoperative care have focused on medical and nutritional postoperative needs to support surgical success. However, there is a significant gap in the integration of structured psycho-behavioral interventions within standard postoperative care. Depending on where patients reside or seek care, these are often limited or viewed as secondary or voluntary services after surgery instead of a standard integration into the recovery process. This poster presentation introduces Bariatric Education and Wellness (B.E. Well): A psycho-behavioral intervention for postoperative care designed to address the ongoing mental health components of the post-bariatric surgical process. B.E. Well is grounded in literature and utilizes an acceptance and commitment Therapy-based approach, a clinically supported approach that fosters psychological flexibility. Through ACT, the program aims to help patients better manage weight regain, cope with emotional challenges, and maintain adherence to long-term health goals. By supporting both the mental and physical aspects of recovery, B.E. Well aims to enhance the overall effectiveness of bariatric treatment and improve quality of life.

Biography

Dr. Christine Lopez obtained her master's degree in social work from the University of Michigan in 2007 and her doctorate in social work from Loma Linda University this year. She is a licensed clinical social worker in California specializing in mind-body connection and how this connection impacts wellness and wholeness. Dr. Lopez helps clients navigate medical conditions and the emotional aspects of health- related behaviors. Her research focuses on mind body health and social work contributions to holistic wellness. She has contributed to blog posts on holistic wellness in the workplace and facilitates webinars and health education classes regarding integrated health.

Crystal Yu B.S.[1*], Jaesu Han M.D.[2]

[1]School of Medicine, University of California, Irvine, Irvine, CA, United States

[2]University of California, Irvine; Department of Psychiatry, Irvine, CA, United States

Association between GLP-1 receptor agonists and depression in patients with obesity: A retrospective cohort study

Background: Glucagon-like peptide-1 (GLP-1) receptor agonists are seen as a first-line treatment for Type II Diabetes Mellitus (T2DM). However, multiple recent randomized controlled trials have shown that GLP-1 agonists are also effective for weight loss and metabolic control. Consequently, there has been a spike in the prescription of GLP-1 agonists for weight management rather than solely for diabetes. Despite its growing popularity, patients on GLP-1 agonists have voiced concerns of mood changes, anxiety, and depressive symptoms, suggesting possible psychiatric effects that may be underreported in clinical settings. Emerging research suggests a potential association between GLP-1 agonists and adverse psychiatric events. However, data remains mixed and limited. This study investigates the relationship between GLP-1 agonists and incidence of depression diagnosis in patients with obesity and without diabetes prescribed GLP-1 agonists for weight loss. Given the well-established bidirectional link between depression and obesity, it is crucial to further explore whether the use of these medications can manifest psychiatric side effects in this patient population.

Methods: The TriNetX database was queried for adult patients (ages 18-50) with BMI > 30 kg/m2 who were prescribed semaglutide (RxNorm 1991302), tirzepatide (RxNorm 2601723), or liraglutide (RxNorm 475968) for at least 6 months. Patients with a pre-existing diagnosis of depressive disorders, history of diabetes mellitus, or a hemoglobin A1C > 6.5% were excluded. The primary outcome of interest is a new diagnosis of depressive disorder at least one month following the first prescribed GLP-1 agonist dose. A diagnosis was identified via the ICD codes F32 (Major Depressive Disorder, Single) and F33 (Major Depressive Disorder, Recurrent).

Results: 100,386 patients with obesity without diabetes were included. Incidence of a depression diagnosis was significantly higher in patients prescribed with a GLP-1 agonist compared to patients not prescribed a GLP-1 agonist (29.89% vs. 18.9%, $p<0.001$). Elevated risks for a depression diagnosis was consistent across stratified age groups, with the highest risk observed in young adults at ages 18-24 (RR 1.52, 95% CI 1.44-1.59) and ages 25-34 (RR 1.52, 95% CI 1.48-1.56) compared to adults ages 45-50 (RR 1.37, 95% CI 1.34-1.40). When stratified by type of GLP-1 agonist, liraglutide demonstrated a higher risk of depression diagnosis (RR 1.63, 95% CI 1.57-1.69) compared to semaglutide (RR 1.58, 95% CI 1.55-1.61) and tirzepatide (RR 1.57, 95% CI 1.52-1.63).

Conclusion: These findings suggest that GLP-1 agonist usage in patients with obesity without diabetes is associated with a greater risk of depression diagnosis. The risk of depression remains generally consistent across stratified age groups and medication types. However, the strength of the association is particularly notable amongst young adults and liraglutide users. While the cause of increased depression risk remains unclear, these findings may support a need for psychiatric monitoring when introducing GLP-1 agonists to this patient population. Continued investigation on other psychiatric outcomes may provide further insight on potential neuropsychiatric effects of GLP-1 agonists.

Biography

Crystal Yu is a medical student at University of California Irvine School of Medicine. She graduated with a B.S. in Psychobiology from University of California Los Angeles in 2023.

El Hourch Sarah
Mohammed V University, Morocco

Significant association of polymorphisms in the TCF7L2 gene with a higher risk of type 2 diabetes in a Moroccan population

Background and Aims: Several studies have shown that genetic polymorphisms of the Transcription Factor 7-Like 2 (TCF7L2) are highly associated with the development of Type 2 Diabetes Mellitus (T2DM) and its associated complications in several populations. The aim of our study was to investigate the association of the rs7903146 (C/T) and rs12255372 (G/T) polymorphism in the TCF7L2 gene with the risk of developing T2DM in the Moroccan population.

Material and Methods: A total of 150 T2DM patients and 100 healthy controls were recruited for various anthropometric, biochemical and genetic parameters. Genotyping was performed by using Real Time-PCR. The frequency of genotypes, alleles, anthropometric measures, glycemia, glycated hemoglobin (HbA1c) were evaluated in patients and control, while lipid profile was available only for T2DM group.

Results: Glycemia, HbA1c and Body Mass Index (BMI) were significantly higher in T2DM group than control. Analysis of the distribution of the TCF7L2 rs7903146 genotype and allele revealed that the TT genotype was more frequent in T2DM group (24.0%) than in healthy controls (5%) (OR=4.08, 95% confidence interval (CI=1.95–11.80, p<0.0001). The T allele was more frequent in diabetic patients (45.2%) than healthy control (34.5%) and it was associated with high risk of diabetes (OR=2.13, 95% CI=1.12–7.31, p=0.005). The same results were found regarding rs12255372, TT genotype frequencies were 18,7% and 6.0% in T2DM and control group, respectively (OR=3.11, 95% CI=1.33–7.24, p=0.004). The T allele was over-presented in diabetics compared to controls (45.3% and 38.0%, respectively) and increases the risk of T2DM (OR=2.01, 95% CI=1.04–3.10, p=0.01). However, there was no significant difference between the three genotypes of rs7903146 and rs12255372 regarding age, BMI, glycemia, HbA1c and lipid profile.

Conclusion: The present study confirmed a significant association of the TCF7L2 gene (rs7903146 (C/T) and rs12255372 (G/T) polymorphisms with a higher risk to T2DM in the Moroccan population. No significant difference in respect to anthropometric and metabolic parameters between different genotypes.

Keywords: Type 2 diabetes, Genetic Association, Transcription Factor 7-Like 2 (Tcf7l2), Polymorphism, rs7903146(C/T), rs12255372(G/T).

Caroline E. Roberts[1] BS, Meghan R. Mansour[1] BS, Emmanuel M. Nageeb[2*] MD, Kevin R. Krause[2] MD

[1]Oakland University William Beaumont School of Medicine, Rochester, MI, United States

[2]Department of General Surgery, Corewell Health William Beaumont University Hospital, Royal Oak, MI, United States

Gastric remnant volvulus following a gastric-sleeve converted to Roux-en-Y gastric bypass: A case report

Gastric remnant volvulus after Roux-en-Y Gastric Bypass (RYGB) is an exceptionally rare complication, with only a few reported cases in the literature. This presentation will discuss the first documented case of gastric remnant volvulus in a patient who previously underwent sleeve gastrectomy, later converted to RYGB. The talk will cover the patient's clinical course, diagnostic workup, and surgical management, emphasizing the anatomical and pathophysiological factors contributing to volvulus in post-bariatric surgery patients. Given the increasing prevalence of sleeve-to-RYGB conversions, this case highlights the need for greater awareness of this complication and its optimal management strategies. The discussion will include a review of existing literature, proposed surgical approaches such as gastropexy versus remnant resection, and considerations for future research to establish standardized guidelines. This talk will be particularly relevant for bariatric and general surgeons, as well as clinicians involved in post-bariatric surgical care.

Biography

Emmanuel Nageeb is a General Surgery resident at Corewell Health William Beaumont University Hospital. He has a BS from from the University of Akron and an MD from Northeast Ohio Medical University. He is a member of the American College of Surgeons.

Holly Farmer
Wolfson Children's Hospital, United States

Bridging the gap in pediatric inpatient diabetes education: A quality improvement initiative

Background: A multidisciplinary team consisting of pediatric endocrinologists, a clinical nurse specialist and pediatric nurse and dietitian diabetes educators identified gaps in diabetes education among inpatient nurses, including insulin calculation, carbohydrate counting, and understanding insulin use. Knowledge deficits led to errors in patient care. Addressing these knowledge gaps became a patient safety priority.

Local Problem: Nurses were unaware of the education patients and families received from the diabetes education team, leading to inconsistent diabetes management. Additionally, there was no standardized hospital-wide diabetes training. Nurse leaders did not consider diabetes training mandatory, and efforts to address these gaps were hindered by low attendance.

Methods: A Quality Improvement (QI) initiative was launched using a structured quarterly plan. The initiative began with a pre-assessment survey to evaluate nurses' baseline diabetes knowledge. Education was delivered through online learning modules, in-person training, and resource distribution. To encourage participation, nurses were provided with reminders and various flexible scheduling options. A post-training survey was conducted to measure improvements in knowledge and confidence.
Intervention: The intervention included:

- Pre-Assessment – To assess baseline knowledge.
- Online Learning – A learning module launched in December 2024.
- In-Person & Virtual Training – Live classes were held to reinforce key concepts, including insulin calculations and administration, glucose management, and emergency care.
- Resource Development – Nursing Badge Buddies and resource binders.
- Superuser Program – Experienced nurses were trained as "superusers" to provide ongoing peer support and education that came to the in-person sessions.

Results: The initial knowledge assessment was completed by 70 nurses, revealing significant gaps, with >50% of participants providing incorrect responses in several questions. The online module had a completion rate of 57% after two months. Participation in live or virtual training sessions was low, with only 19 nurses participating despite efforts to improve attendance. Post test scores showed improvement (Figure 1). There remain continued challenges in inpatient diabetes management related to nursing care such as mismanaging hypoglycemia cases.

Conclusion: The QI initiative demonstrated the need for structured diabetes education for inpatient nurses. Although improvements were made, participation was low. Future efforts will focus on reinforcing education through superusers, leadership engagement, and continuous competency evaluations. The initiative's long-term goal is to integrate diabetes training as a mandatory hospital-wide requirement.

Jean Carlos Ramos Cardona* MD, Memona Rafiq MD, Suzanne Martinez MD

Department of Internal Medicine, HCA Florida Orange Park Hospital, Orange Park, Fl 32073, USA

A bitter aftertaste: Nesidioblastosis emerging post-Nissen fundoplication

Background: Hypoglycemia in non-diabetic individuals is uncommon and diagnostically challenging, especially in patients with prior upper gastrointestinal surgery. While dumping syndrome is often implicated in postprandial hypoglycemia, the presence of fasting hypoglycemia necessitates evaluation for endogenous hyperinsulinemic conditions such as insulinoma or nesidioblastosis.

Case: We report a 54-year-old man with a history of Nissen fundoplication who developed frequent symptomatic hypoglycemia, occurring both postprandially and during fasting. He experienced up to three episodes daily. Continuous Glucose Monitoring (CGM) confirmed persistent hypoglycemia and initial dietary modifications and pharmacologic interventions (acarbose, diltiazem) failed to control symptoms. A 72-hour fast revealed glucose <55 mg/dL with inappropriately elevated insulin, C-peptide, and proinsulin levels. Imaging ruled out insulinoma. Based on biochemical and clinical findings, a diagnosis of Noninsulinoma Pancreatogenous Hypoglycemia Syndrome (NIPHS), or nesidioblastosis, was made. Treatment with diazoxide significantly reduced hypoglycemic episodes and improved quality of life.

Discussion: This case highlights nesidioblastosis as a rare but important cause of post-surgical hyperinsulinemic hypoglycemia. While most reported are seen after Roux-en-Y gastric bypass, it can also occur following fundoplication procedures. Although postprandial hypoglycemia is often attributed to dumping syndrome, the presence of fasting hypoglycemia should raise concern for endogenous causes such as insulinoma or nesidioblastosis. CGM proved invaluable for diagnosis and safety, particularly in hypoglycemia unawareness. Pharmacologic therapy with diazoxide was effective and well-tolerated.

Conclusion: Clinicians should maintain a high index of suspicion for endogenous hyperinsulinemic disorders in post-gastric surgery patients who present with fasting or mixed-pattern hypoglycemia. Early use of CGM and targeted therapy can improve outcomes, even in the absence of surgical or histologic confirmation.

Biography

Dr. Jean Carlos Ramos-Cardona is an Internal Medicine resident at HCA Florida Orange Park Hospital in Jacksonville, FL. Dr. Ramos-Cardona has a strong interest in endocrinology, with experience in clinical research and case reporting focused on metabolic and endocrine disorders. Dr. Ramos-Cardona is passionate about improving patient outcomes through education, early diagnosis, and innovative treatment strategies.

Kareem Abdelghani, BS
The Woodlands Retina Center, Spring, Texas United States

Risk factors for unmet vision care needs among U.S. Adults with diabetes: Findings from the 2023 National Health Interview Survey

Background: Diabetes is a leading cause of visual impairment in the United States. Clinical guidelines recommend that adults with diabetes receive a comprehensive eye examination annually to detect and treat conditions such as diabetic retinopathy, diabetic macular edema, cataract and glaucoma that are often triggered by diabetes. Despite these recommendations, a substantial proportion of people with diabetes do not receive regular eye care. Identifying sociodemographic and health-related factors associated with unmet vision care needs is essential for reducing preventable vision loss and for informing both healthcare and public health strategies.

Objective: To examine the prevalence of and risk factors for unmet vision care needs among U.S. adults with self-reported diabetes using nationally representative data from the 2023 National Health Interview Survey (NHIS).

Methods: We analysed data from the 2023 NHIS Sample Adult file. Adults aged ≥18 years who reported having been told by a health professional that they have diabetes (excluding gestational diabetes) were included. Unmet vision care need among diabetics was defined as self-reported diabetes combined with not having had a dilated eye examination in the past 12 months. Multivariable logistic regression was used to identify clinical and demographic factors associated with unmet vision care needs.

Results: In this nationally representative sample of adults with diabetes, 32.8% reported not having an eye exam in the past year, and 12.3% cited cost-related barriers to care. The multivariate logistic regression indicated that younger adults with diabetes (<35 years) were significantly more likely to have unmet eye care needs (OR = 2.95, 95% CI [1.91, 4.54], $p < .001$). Lower educational attainment and household income below 200% of the federal poverty level were also significant risk factors ($p < .05$). There were no significant differences between men and women or among racial and ethnic groups. Lack of health insurance was strongly associated with unmet eye care needs (OR = 2.99, 95% CI [1.92, 4.66], $p < .001$). Self-rated general health was not significantly associated with unmet eye care need. While there was no significant difference between type 1 and type 2 diabetes, individuals who used insulin were significantly less likely to have unmet eye care needs (OR = 0.68, 95% CI [0.57, 0.81], $p < .001$). Additionally, those who had less frequent A1C testing were markedly less likely to receive comprehensive annual eye exams $p<0.001$.

Conclusions: Despite national guidelines, a substantial proportion of U.S. adults with diabetes do not receive recommended vision care. Sociodemographic disparities, including younger age, lower income, and lack of insurance, were key predictors of unmet need. Diabetics who were using insulin and those who had routine A1C testing were more likely to get annual comprehensive eye exams. Efforts such as targeted outreach, patient education, expanded insurance coverage for eye care, and community-based screening programs may help reduce preventable vision loss in this high-risk population.

Biography

Kareem Abdelghani is a medical and research assistant at The Woodlands Retina Center, where he contributes to both clinical care and investigative work focused on vitreoretinal diseases. He holds a Bachelor of Science from West Texas A&M University and is currently pursuing a Master's degree in Computer and Information Technology at the University of Pennsylvania. His research interests lie at the intersection of healthcare, epidemiology, and computational science, with a particular focus on diabetic eye disease, and other retinal disorders. He is especially interested in applying data-driven and population-based approaches to advance research and innovation in vision science and patient care.

Madaen Abuhamidah MD, MBA

Internal Medicina Department, North Knoxville Medical Center, Knoxville, TN, USA

Beyond calories: Structural, clinical, and policy perspectives on the obesity epidemics in the United States

This literature review synthesizes five decades of evidence on the U.S. obesity epidemic, tracing its rise from ~13% adult prevalence in the 1960s to >40% today and examining why the burden falls disproportionately on socioeconomically disadvantaged communities. The presentation begins with definitional basics (adult and pediatric BMI cutoffs) and a high-level epidemiology update, then unpacks the multifactorial drivers that sustain obesity across the life course. We will review diet and physical-activity trends (energy-dense, ultra-processed foods; larger portions; sedentary work and transport), neighborhood and commercial determinants (food deserts, targeted marketing, car-centric design), and biologic contributors (genetics, gut microbiota, pregnancy exposures, neurobehavioral factors). Economic and clinical consequences are summarized, including cardiovascular disease, type 2 diabetes, cancer risk, maternal- child health impacts, reduced life expectancy, and the substantial direct and indirect costs to the health system and productivity.

Building on this foundation, the talk critically appraises public-health and clinical responses to date: federal nutrition programs (WIC/SNAP-Ed), FDA labeling reforms, school and community-based initiatives, primary-care counseling, behavioral therapies (CBT/MI), and bariatric surgery, highlighting where these strategies work, why impact has been uneven, and how equity gaps in access, funding, and implementation dilute outcomes. We will also address the recent inflection point in pharmacotherapy, including GLP-1–based agents (e.g., semaglutide), clarifying their promise, limitations, and the risk of mistaking individual-level tools for population-level solutions.

The session closes with actionable, systems-oriented recommendations. These include multisector policy alignment (health, education, transportation, housing, agriculture), place based interventions that improve healthy food access and active-living infrastructure, and equity first approaches that confront structural barriers and cultural context. We will briefly explore emerging enablers, telehealth, wearables, risk stratification, and behavioral-economics factors with attention to ethics, bias, and scalability. Attendees will leave with a clear, evidence-based map of what has driven the epidemic, which interventions have the strongest signal, and a practical framework for integrating clinical care with community and policy levers to bend the curve on obesity sustainably and equitably.

Biography

Dr. Abuhamidah, MD, MBA, is a PGY-2 Internal Medicine resident at North Knoxville Medical Center. She holds advanced degree in Bussiness Administration with healthcare implification, providing a strong foundation for her academic pursuits. Her research focuses on endocrinology, obesity, and critical care, with ongoing projects addressing obesity-related outcomes, stress hormone pathways in the ICU, and protocol-based quality improvement. She has authored many research project and literature reviews and is committed to advancing evidence-based, equity-driven approaches that integrate clinical practice with public health policy to improve patient care and population health outcomes.

Dr. Maysa Durdykulyyeva
Clinical Podiatrist & Endocrinologist, Founder, Maya Podiatry Center, Kyiv, Ukraine

Reducing amputation risk in diabetic foot patients through a clinical risk assessment protocol: A case-based approach

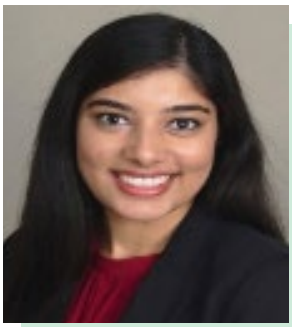
Diabetic foot complications remain one of the leading causes of lower limb amputations globally. In this abstract, we present a structured clinical protocol designed to assess and stratify amputation risk in patients with diabetic foot syndrome. The methodology includes history-taking, visual inspection, palpation of pedal pulses, wound staging, infection risk scoring, and footwear analysis.

The protocol was developed at the Maya Podiatry Center and applied across a cohort of 80 patients between 2022 and 2024. Preliminary results indicate that early stratification and targeted interventions, such as offloading and wound debridement, reduced amputation risk by 46% over 12 months.

This abstract highlights the importance of podiatric expertise in multidisciplinary diabetic foot care and offers an adaptable model for international practice. The author proposes presenting this work in the form of an e-poster and/or a pre-recorded video presentation with English subtitles.

Biography

Dr. Maysa Durdykulyyeva is a clinical podiatrist and medical doctor specializing in endocrinology. She graduated from Bogomolets National Medical University (Kyiv, Ukraine) with a degree in general medicine in 2018 and completed her residency and specialization in endocrinology in 2020. Since 2019, Dr. Durdykulyyeva has been actively working in the field of podiatry, focusing on diabetic foot prevention and limb preservation. In 2022, she founded the Maya Podiatry Center in Kyiv, where she leads clinical work, trains podologists, and develops educational and risk-assessment protocols. Her original clinical method for evaluating amputation risk in diabetic patients is being implemented in medical practice across Europe and Asia. Dr. Durdykulyyeva is a published author and international speaker committed to advancing interdisciplinary care in endocrinology and podiatry.



Radhika Mathur M.D. *, Natalya Ahsan M.D., Abdullah Muhammad M.D., Salman Muddassir, M.D., F.A.C.P.

Department of Internal Medicine, HCA Florida Oak Hill Hospital,

USF Morsani College of Medicine, Brooksville, Florida, USA

Trends in mortality attributable to obesity and non-alcoholic fatty liver disease in the United States, 1999–2020

Background: Non-Alcoholic Fatty Liver Disease (NAFLD) has become one of the most prevalent chronic liver conditions globally, closely associated with obesity and metabolic dysfunction. Although the worldwide prevalence of NAFLD is increasing, national-level studies examining obesity-related NAFLD mortality in the United States remain limited. Characterizing temporal trends and identifying disparities are essential for guiding prevention efforts and informing public health policy.

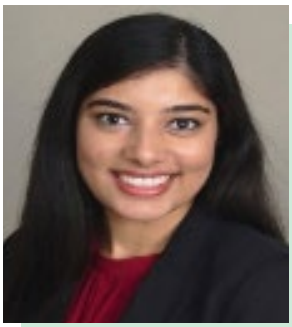
Methods: We analyzed CDC WONDER mortality data from 1999–2020 across all age groups. NAFLD-related deaths were identified using ICD-10 codes K76.0 and K75.81, with obesity (ICD-10 codes E66.0, E66.1, E66.2, E66.8, E66.9) recorded as an underlying or contributing cause. Temporal trends were assessed using crude and age-adjusted mortality rates (CMR, AAMR), annual percent change (APC), and average APC (AAPC) with 95% confidence intervals.

Results: Between 1999 and 2020, a total of 155,737 obesity- and NAFLD–related deaths were recorded in the United States. The crude mortality rate (CMR) increased from 1.1 (95% CI: 1.0–1.1) to 4.3 (95% CI: 4.2–4.3) per 100,000, while the age-adjusted mortality rate (AAMR) rose from 1.1 (95% CI: 1.1–1.1) to 3.6 (95% CI: 3.6–3.7). Joinpoint analysis identified inflection points around 2001–2002: CMR grew 9.1% annually (95% CI: 6.1–12.3) before 2002 and 5.8% (95% CI: 1.5–10.2) thereafter, with an overall AAPC of 6.4% (95% CI: 2.3–10.6). AAMR followed a similar pattern, with an AAPC of 5.6% (95% CI: 1.9–9.6) in men and 5.4% (95% CI: –0.7–11.9) in women. Racial disparities were evident, with American Indian/Alaska Natives experiencing the highest AAMRs and Asian/Pacific Islanders the lowest. Regional differences were also observed: mortality rates were consistently highest in the South and Midwest, intermediate in the Northeast, and lowest in the West, though all regions demonstrated significant upward trends over time.

Conclusions: Obesity-associated NAFLD mortality in the United States has increased markedly over the past two decades, with overall crude and age-adjusted rates rising more than threefold. Mortality trends accelerated in the early 2000s and have continued upward, with higher burdens among men, American Indian/Alaska Native populations, and residents of the South and Midwest. These findings highlight substantial demographic and regional disparities, underscoring the urgent need for targeted obesity prevention and liver health strategies to mitigate the growing impact of NAFLD on public health

Biography

Dr. Radhika Mathur earned her medical degree from Teerthanker Mahaveer University, India, in 2019 and completed her U.S. clinical rotations and board examinations shortly thereafter. While applying for residency, she worked as a research coordinator at the Cystic Fibrosis Foundation in Chicago, where she developed a strong interest in endocrine disorders. She is currently a second-year internal medicine resident at Oak Hill Hospital, Florida, where exposure to complex metabolic disorders has further solidified her interest in endocrinology. Dr. Mathur is particularly focused on diabetes and obesity, driven by their rising prevalence and profound impact on long-term health, and she continues to pursue research aimed at improving prevention and management strategies.



Radhika Mathur M.D. *, Natalya Ahsan M.D., Abdullah Muhammad M.D., Salman Muddassir, M.D., F.A.C.P.

Department of Internal Medicine, HCA Florida Oak Hill Hospital,

USF Morsani College of Medicine, Brooksville, Florida, USA

Obesity in the United States, 2023: Lessons for global weight management strategies

Background: Obesity is a leading driver of chronic disease and premature mortality worldwide. The United States has some of the most robust surveillance systems for monitoring obesity trends, providing timely insights that can inform both domestic and global strategies. In 2023, the Centers for Disease Control and Prevention (CDC) released updated Behavioral Risk Factor Surveillance System (BRFSS) estimates, offering the most current data on adult obesity prevalence across all 50 states and territories. These data present an opportunity to examine geographic, racial/ethnic, and socioeconomic disparities that may inform targeted interventions and global policy discussions.

Methods: We analyzed BRFSS 2023 data to assess state- and regional-level obesity prevalence among U.S. adults aged ≥18 years, defined as body mass index (BMI) ≥30 kg/m^2. Prevalence estimates were stratified by geography, race/ethnicity, and education level to explore disparities. Weighted analyses were used to ensure national representativeness.

Results: In 2023, adult obesity prevalence exceeded 20% in every U.S. state and territory. The Midwest (36.0%) and South (34.7%) reported the highest rates, while the West (29.1%) and Northeast (28.6%) had comparatively lower prevalence. Three states—Arkansas, Mississippi, and West Virginia—exceeded 40%. Disparities were substantial: obesity prevalence was ≥35% among non-Hispanic Black adults in 38 regions, Hispanic adults in 34 regions, and American Indian/Alaska Native adults in 30 regions. By contrast, no states reported prevalence ≥35% among non-Hispanic Asian adults. Education gradients were observed, with prevalence ranging from 36.5% among adults without a high school diploma to 27.1% among college graduates.

Conclusions: The 2023 CDC data confirm that obesity remains highly prevalent in the United States, with striking geographic and demographic disparities. These findings emphasize the need for equity-focused, community-driven interventions and illustrate how surveillance data can guide resource allocation and policy development. Globally, the U.S. experience highlights the importance of monitoring social determinants of health, addressing systemic inequities, and tailoring prevention strategies to diverse populations. As obesity continues to rise worldwide, lessons from U.S. data can help inform international prevention and weight management efforts, particularly in countries facing widening disparities in health outcomes.

Biography

Dr. Radhika Mathur earned her medical degree from Teerthanker Mahaveer University, India, in 2019 and completed her U.S. clinical rotations and board examinations shortly thereafter. While applying for residency, she worked as a research coordinator at the Cystic Fibrosis Foundation in Chicago, where she developed a strong interest in endocrine disorders. She is currently a second-year internal medicine resident at Oak Hill Hospital, Florida, where exposure to complex metabolic disorders has further solidified her interest in endocrinology. Dr. Mathur is particularly focused on diabetes and obesity, driven by their rising prevalence and profound impact on long-term health, and she continues to pursue research aimed at improving prevention and management strategies.

Sara Ahmed*, Ty-Ngyuen Monica
Metamed, Canada

Beyond the prescription pad: How multidisciplinary care unlocks superior, sustainable obesity outcomes

While GLP-1 agonists demonstrate efficacy in trials, real-world discontinuation exceeds 50% at 6 months-a statistic reflecting the limitations of medication-only approaches. Our Great Toronto Area (GTA)-based clinics' multidisciplinary model (integrating CBT, body composition monitoring, and precision pharmacotherapy) has achieved 96% retention and unprecedented body recomposition in 129 patients (108F/21M). The results reveal not just superior outcomes, but critical age-and sex-specific patterns that redefine best practices. Postmenopausal women (>50yo) achieved ΔBF% -4.20 (95% CI [-4.5, -3.9]), doubling Look AHEAD trial benchmarks (p=0.002), while men>50yo matched this metabolic performance (-4.11percentage points (pp), CI [-4.8, -3.4]), defying expectations of age-related decline. Most strikingly, all groups maintained or gained lean mass (ΔSMM% +1.6-2.4pp), with women<30yo showing+2.68pp skeletal muscle mass (CI [+2.1, +3.3]).

These achievements stem from three innovations: First, our proactive side-effect management protocol reduced GLP-1 discontinuation to 9% versus 31% in real-world cohorts through slow titration and anticipatory guidance. Second, 1:1 CBT sessions addressed emotional eating barriers. Third, biweekly body composition scans and AI-based food tracking application created powerful behavioral reinforcement, with body composition feedback sustaining engagement during plateaus (78% continued past 6 months). The data reveal striking correlations between monitoring frequency and outcomes (ΔBF%/SMM% correlation r=0.72, p<0.01), proving that what gets measured gets managed.

These findings fundamentally reshape our understanding of obesity treatment efficacy. The consistent lean mass preservation across all subgroups (ΔSMM%+1.6-2.4pp) challenges the prevailing weight-loss-at-all-costs paradigm, demonstrating that body recomposition-not just scale changes-should be the primary treatment target. The 0.72 correlation between monitoring frequency and outcomes (p<0.01) suggests these metrics may serve as early predictors of long-term success. Most importantly, the results provide biological evidence that multidisciplinary care isn't merely additive-it's transformative, creating synergistic effects where medication enhances lifestyle adherence while behavioral support optimizes pharmacotherapy persistence. This model offers clinicians an actionable blueprint to overcome obesity treatment's twin failures: metabolic adaptation and therapeutic attrition.

Biography

Dr. Sara Ahmed is a dual board-certified physician in Internal Medicine and Obesity Medicine. She practices as a General Internist with Hamilton Health Sciences and serves as Founder & Chief Medical Officer of the Metamed Weight Management Center in Burlington. An Adjunct Associate Professor at McMaster University, she brings over 10 years of experience across U.S. and Canadian healthcare systems. Actively involved with Obesity Canada, she has presented at the ACP Ontario Chapter Meeting, Obesity Canada Conference, and Pri-Med Conference. Beyond patient care, she enjoys travelling, and maintaining an active social media presence.

Shannon Crehan* MS, Nicholas Morin DO
Department of Bariatric Surgery, Kings County Medical Center, Brooklyn, NY

Understanding factors that prevent patients from choosing bariatric surgery: A qualitative analysis

Objective: The study aims to help identify barriers that cause patients to cancel their bariatric surgery in the patient population of Kings County Medical Center in East Flatbush, New York.

Methods: 72 patients that canceled their bariatric surgery procedure, were called to participate in this research study. Patients were excluded from the study if their BMI was lower than 35 kg/m2, had success with a prior bariatric surgery procedure, or opted out of the study.

Questions Utilized:

- Why did you choose not to have your bariatric surgery procedure?
- Are you using a GLP-1 agonist, an exercise or diet program?
- If so, are you currently successful in losing weight?
- Are you not receiving bariatric surgery due to current health issues?
- Are you concerned about the procedure or its side effects?
- Do you have insurance issues regarding your surgery?
- Are there any other burdens or obstacles that prevented you from undergoing bariatric surgery?

Results: 45 patients did not participate. 7 patients do want bariatric surgery but had a delay for various reasons such as pregnancy, conflicts with time off from work for recovery, health issues, inability to quit smoking, and insurance issues. 20 patients who canceled their surgery and do not intend to have bariatric surgery done, 7 were successful with weight loss with GLP-1 agonists (Wegovy, Ozempic.) 5 stated they were frightened of possible side effects (uncontrolled vomiting, vitamin deficiencies, hearing loss, loose skin surgery with plastic surgery to possibly follow), 3 due to health issues, 1 had family issues and unable at this time, 1 had weight loss success with a dietician and 1 had success with changing their diet by reducing fried foods and increasing their daily intake of fiber and water.

Conclusions: Understanding the barriers patients face when deciding to undergo bariatric surgery is essential to provide the highest standard of care. This study demonstrates the factors patients consider when opting out of having bariatric surgery: Success with GLP-1 agonists, fear of side effects, and not wanting to have another procedure to remove loose skin after bariatric surgery.

Biography

Shannon Crehan received her bachelors of science in biology with a concentration in pre-medical sciences at State University of New York College at Oneonta. She then went on to the Doctor of Medicine program at Saint George's University and worked with Dr. Morin, Director of Bariatric surgery at Kings County Medical Center during her third-year core rotation in surgery. She will be completing her studies in May 2025 as a medical doctor and has applied this year to attain a general surgery residency position.

Sohail Abdelghani[1*], Heba Tawfik[2] MD, DrPH

[1]University of Houston, Houston, Texas, USA

[2]Public Health and Public Policy, Walden University, Minneapolis, Minnesota, USA

Exploring the complexity of obesity and sleep quality in U.S. adults: Moderation by demographic and behavioral factors in NHANES

Purpose: Obesity and poor sleep quality are interconnected health concerns with complex, multifactorial origins. While physiological pathways contribute to this two-way relationship, growing evidence highlights the role of social and behavioral factors in shaping this association. This study examines the relationship between obesity and sleep quality among U.S. adults using data from the 2017–2020 National Health and Nutrition Examination Survey (NHANES), with particular attention to the extent that this relationship is moderated by gender, age, race/ethnicity, food insecurity, physical activity, smoking, and alcohol consumption. Understanding how these variables influence the obesity–sleep link may inform more targeted and equitable health interventions.

Methods: A cross-sectional analysis was conducted using NHANES data from 2017 to 2020, including adults aged 18 years and older with complete data on Body Mass Index (BMI), sleep quality, and relevant covariates. Obesity was defined as BMI ≥30 kg/m^2. Sleep quality was assessed using self-reported measures of perceived sleep problems. Moderating variables included gender, age group, race/ethnicity, food insecurity, physical activity, smoking, and alcohol use. Multivariable logistic regression models were used to examine the association between obesity and poor sleep quality, adjusting for demographic and socioeconomic factors. Stratified models explored moderation effects.

Results: In the overall sample, obesity was significantly associated with increased odds of reporting poor sleep quality with an Adjusted Odds Ratio (aOR)=1.97, 95% CI [1.75, 2.22], $p<0.001$). This relationship varied across population subgroups. Men showed a slightly stronger association than women (aOR=2.13 vs. 1.86, respectively; $p<0.001$). Age moderated the association, with the strongest relationship observed among younger adults under 35 years compared to adults older than 65. Racial/ethnic differences were also evident: the association was statistically significant among non-Hispanic White, Black, and Asian adults (e.g., non-Hispanic Asian aOR=2.35, 95% CI [1.48, 3.74], $p<0.001$), but it was not observed among Mexican Americans (aOR=1.01, 95% CI [0.66, 1.55], $p>0.05$). Food insecurity moderated the association, although unexpectedly, the relationship between obesity and poor sleep was weakest among those with very low food security. Physical activity and smoking did not appear to influence the obesity–sleep relationship. However, excessive alcohol consumption (more than six drinks per day) significantly amplified the association (aOR=2.70, $p<0.001$), compared to those consuming 1–2 drinks daily (aOR=1.88, $p<0.001$).

Conclusion: The association between obesity and poor sleep quality is not uniform and is moderated by several demographic and behavioral factors. Gender, age, race/ethnicity, food insecurity, and alcohol use significantly influence the strength of this relationship, while physical activity and smoking showed no modifying effects in this sample. These findings underscore the importance of adopting nuanced, subgroup-sensitive approaches when designing strategies to address sleep disturbances among individuals with obesity. Tailored interventions that account for social context and behavioral risks may be more effective in reducing disparities and improving sleep- related outcomes in obese individuals.

Biography

Sohail Abdelghani is a student at the University of Houston pursuing a dual academic path in Computer Science and Pre-Medicine. With a strong interest in interdisciplinary approaches to healthcare and technology, he is particularly focused on data-driven public health research and medical innovation. In addition to his academic pursuits and research interests, Sohail serves as the Chair of Volunteers for UHHOS- the University of Houston Health Outreach Society where he leads initiatives to support student engagement and community health outreach.

Virgie Roy MSN, BSN, RN
Veterans Affairs Northern California, Travis Air Force Base, Fairfield, California, USA

Implementing team-based strategies for diabetes control in skilled nursing settings

This presentation, titled Implementing Team-Based Strategies for Diabetes Control in Skilled Nursing Settings, addresses the critical need for enhanced diabetes care within skilled nursing facilities through the integration of Complex Adaptive Systems (CAS) theory. Diabetes management for older adults presents unique challenges due to the complexities of physiological changes, comorbidities, cognitive impairments, and psychosocial factors. Effective management requires a responsive, multidisciplinary approach grounded in interprofessional collaboration.

The presentation begins by establishing the foundational importance of collaborative care models, highlighting the need for integrated efforts among nurses, physicians, pharmacists, dietitians, and information technology specialists. The application of CAS theory is explored as a means of fostering decentralized communication and promoting adaptive teamwork structures capable of responding swiftly to evolving patient needs.

An overview of the Integrated Diabetes Care Program (IDCP) is presented, emphasizing the synchronization of discipline-specific expertise and the use of evidence-based practices. Digital innovations such as Continuous Glucose Monitoring (CGM) and teleconsultation platforms will be discussed, with data demonstrating their effectiveness in improving glycemic outcomes and patient satisfaction, as evidenced by recent studies including Tourkmani et al. (2024).

The presentation further delves into the specific mechanisms of CAS theory application within diabetes management, emphasizing dynamic partnerships, shared goals, and feedback loops that support real-time adaptive care. The CAS model is outlined with practical examples of how it enables healthcare teams to collaboratively address the complex and fluctuating care needs of diabetic residents in skilled nursing environments.

A significant segment is dedicated to data terminologies and management practices, highlighting the critical role of standardized clinical vocabularies such as SNOMED CT and LOINC for precise documentation and communication. The role of big data analytics and data mining techniques in predicting care patterns, facilitating proactive interventions, and enhancing decision-making accuracy is also discussed.

The importance of efficient data management through Electronic Health Record (EHR) systems is highlighted, emphasizing their capabilities for medication management, dietary tracking, and integration with continuous glucose monitoring systems. Secure, cloud-based platforms for remote interdisciplinary team collaboration and real-time data exchange will be explored as integral components of modern diabetes management strategies.

Lastly, compelling evidence from recent clinical trials is presented, demonstrating the superiority of integrated care approaches guided by CAS principles. Data indicates substantial improvements in detecting hypoglycemia and hyperglycemia episodes, significantly reducing adverse events compared to traditional point-of-care testing. These results underscore the value of adopting a coordinated, dynamic care model that prioritizes patient-centered outcomes and safety.

In conclusion, the presentation synthesizes the discussed elements, reinforcing the significance of interdisciplinary collaboration, innovative technology utilization, and strategic data management in achieving optimal diabetes outcomes within skilled nursing facilities. Attendees will be equipped with actionable insights into implementing and sustaining effective diabetes management strategies grounded in the robust principles of complex adaptive systems theory.

Biography

Virgie E. Roy, MSN, BSN, RN, is an accomplished Clinical Nurse III at David Grant USAF Medical Center, a joint Department of Defense and Veterans Affairs facility, specializing in critical care, perioperative, and post-anesthesia nursing. With 34 years of experience, Roy provides evidence-based, veteran-centered care. She holds an MSN in Nursing Leadership from Capella University and is inducted into Sigma Theta Tau International. Her accolades include the U.S. Congressional Award, DAISY Award, VA North Star Award, significant contributions through the American Red Cross, and impactful healthcare advocacy.

BOOK OF ABSTRACTS

magnus Group

5th Edition of

World Obesity and Weight Management Congress

3rd Edition of International Conference on

Diabetes and Endocrinology

OCT

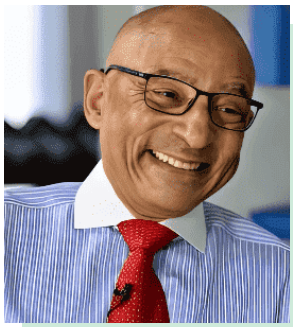
23-25

WORKSHOPS

Ann Gilbert[1], Bob Esquerre[2]

[1]BS Purdue University, United States

[2]Esquerre Fitness Group International, United States



A case study: Redefining obesity intervention: The health and fitness sector as a catalyst for global change

This inspiring case study celebrates the powerful stories of women who have transformed their lives by embracing a holistic approach to obesity management. Through a supportive, women-centered community, these individuals combined consistent movement, activity and exercise, realistic lifestyle changes, mindful nutrition, with anti-obesity medications to reclaim their health and confidence.

More than just physical change, these stories reflect emotional breakthroughs, personal growth, and the unshakable strength that comes from being part of a community that understands and uplifts one another.

Designed to motivate and empower, this case study shows that lasting transformation is not only possible—it's within reach when women support women, and wellness becomes a shared journey.

Biography

Ann Gilbert: Ann Gilbert is an owner of Fit-Her Health & Fitness for Women. Ann oversees the operations of as many as 10 certified Personal Trainers, 15 Group Fitness professionals, and coordinates small and large group training programs for all ages. Ann was awarded ACE / IHRSA Personal Trainer of the Year and has been a popular speaker at conferences internationally since 2002. Ann advises club/studio owners, fit pros, and corporate wellness coaches on creating operational strategies to enhance retention and referral. Ann is known as an expert in relationship building and creating customer success.

Bob Esquerre: Bob Esquerre spent over 13 years in Corporate America specializing in Business Planning, Project and Operations Management before joining the Health & Fitness Sector. With 38 years in the Sector, he has become a Trainer of Trainers, Instructor of Instructors, and Manager of Managers. His expertise covers Group Exercise, Personal Training, and Operations Management. As a global lecturer, Bob offers Business Growth Strategies and Operations Analysis to Club/Studio Owners, Managers, and Fitness Professionals. His focus: (1) developing strategies to create safe, customer-centric communities that effectively engage the 80%+ inactive population and (2) incorporates Emotional Intelligence skills in developing Fitness Professionals.

Auston Cherbonneaux
United States

Practicing advanced applications in modern nutrition and exercise science

With the knowledge that there is no combustion in the cell for energy production, and that all nutrients supply the body with energy, participants will now be ready to analyse applications, models, and methods for weight loss and weight management with a modern understanding of nutrition and exercise physiology. The aim for members of this workshop is to make them capable of using these modern concepts of nutrition and exercise (circa 2025) for conditions and situations that they uniquely and collectively can identify as obstacles, or may face later on their career. By including a central focus on program design and implementation strategies for both nutrition and exercise, participants will understand a viable approach to applications of this material. With this understanding, members will leave the workshop ready to better test and improve upon these models for themselves and their communities, as well as prepare for the unique situations that we (or I) may not have been able to understand or predict.

Biography

Auston Cherbonneaux began studying Kinesiology in 2011 at San Diego State University under Pete McCall, the creator of the American Council on Exercise's IFT model. He quickly became certified as an ACE Certified Personal Trainer, and expanded his studies to include more chemistry, management, nutrition, and psychology classes. Unable to finish his undergrad, he continues to pursue his research independently. Auston was previously certified as a NSCA CPT, NSCA Tactical Strength and Conditioning Facilitator, NASM Corrective Exercise Specialist, USA Olympic Weightlifting Coach, a USA Olympic Rugby Coach, and specialty certificates in athletic performance, weight loss, mental toughness, and nutrition.

Michelle Petties

Leaving Large: The Stories of a Food Addict, Annapolis, Maryland, USA

Breaking the trap: How to outsmart neuromarketing and reclaim control over food choices

The obesity epidemic is not solely a matter of biology or behavior—it is a high-stakes psychological battleground where food companies use neuromarketing to hijack the brain's reward system. In this provocative and interactive 90-minute workshop, Michelle Petties—an award-winning media professional who spent over four decades working in advertising, marketing, and broadcasting—pulls back the curtain on how branding, packaging, advertising, and sensory manipulation are used to create cravings, override willpower, and perpetuate food addiction.

Drawing on her unique lived experience as both a food addict who gained and lost over 700 pounds and an industry insider who once helped sell the very products that contributed to her addiction, Michelle offers a compelling perspective on how neuroscience is exploited to drive consumer behavior. Participants will explore how these tactics manifest in patient habits, how traditional weight loss interventions often fail to account for these psychological traps, and what healthcare providers and advocates can do to help their clients fight back.

Through case studies, group activities, ad analysis, guided reflection, and practical strategy-building, attendees will leave with a deeper understanding of how neuromarketing undermines obesity treatment—and a toolkit of countermeasures to empower their patients and communities. This workshop is ideal for clinicians, researchers, health educators, public health advocates, and anyone who wants to understand how the battle against obesity is being fought not just in the body—but in the brain and the marketplace.

Biography

Michelle Petties is a TEDx speaker, Food Story coach, and author of the award-winning memoir, Leaving Large–The Stories of a Food Addict. After gaining and losing over 700 pounds, she finally discovered the secret to quieting the battle between her mind, body, and hunger–her story. Michelle's memoir, a category winner in The 2022 Memoir Prize for Books, explores the deep emotional and psychological connections to food and how these food stories shape our eating behaviors and weight management struggles. She speaks to organizations, large and small, sharing her insights and stories of hope, healing, triumph, and transformation. Her latest ebook, Mind Over Meals: 7 Secrets to Rewire Your Brain for Healthy Eating and High Performance, reveals her core principles for losing weight and keeping it off for good.

BOOK OF ABSTRACTS

We wish to meet you again at our upcoming event

4th Edition of International Conference on

Diabetes, Metabolism and Endocrinology

October 19-21, 2026 | Boston, Massachusetts, USA | Hybrid Event

https://diabetes.magnusconferences.com/

Questions? Contact

Phone: +1 (702) 988-2320 | Whatsapp: +1 (779) 429-2143

e-mail: secretary@magnusconference.com