

Symposium 12

Childhood Obesity is a Chronic Disease
Demanding Specific Health Care

Chairpersons

Il Tae Hwang

Hallym University, Korea

Kye Sik Shim

Kyung Hee University, Korea

Speakers

Sochung Chung

Konkuk University, Korea

Mary Easaw

Cardiac Vascular Sentral Kuala Lumpur, Malaysia

Silva Arslanian

University of Pittsburgh, USA

Panel Discussion

Yeo-Jin Hong

Korea University, Korea

Hwal Rim Jeong

Soonchunhyang University, Korea



Sochung Chung

Konkuk University, Korea

• Education

Period	Affiliation	Position
- 2001	Yonsei University	
- 1996	Yonsei University	
- 1985-1991	Yonsei University	

• Affiliations / Experience

Period	Affiliation	Position
- 2010-Present	Konkuk University School of Medicine	Professor
- 1999-2009	Konkuk University School of Medicine	Assistant Professor Associate Professor
- 2004	Obesity Research Center, Columbia University, New York, NY, USA	Visiting
- 1999	Yonsei University Medical center	Clinical & Research Fellowship
- 1991-1996	Yonsei University Medical center	Internship, Residency

• Committee Memberships

- Korean Society for the Study of Obesity
- The Adolescent Medicine Board, The Korean Pediatric Society

• Publications

- Chung S. Body composition analysis and references in children: clinical usefulness and limitations. *Eur J Clin Nutr.* F73(2):236-242
- Hong YH, Chung S. Small for gestational age and obesity related comorbidities. *Ann Pediatr Endocrinol Metab.* 23(1):4-8
- Park HW, Chung S. Reference Values of Body Composition Indices: The Korean National Health and Nutrition Examination Surveys. *Yonsei Med J.* 56(1):95-102
- Hong YH, Chung IH, Han K, Chung S; Taskforce Team of the Obesity Fact Sheet of the Korean Society for the Study of Obesity. Prevalence of Type 2 Diabetes Mellitus among Korean Children, Adolescents, and Adults Younger than 30 Years: *Diabetes Metab J.* 46(2):297-306
- Han JA, Chung YE, Chung IH, Hong YH, Chung S. Impact of the COVID-19 Pandemic on Seasonal Variations in Childhood and Adolescent Growth: Experience of Pediatric Endocrine Clinics. *Children.* 8(5):404

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Pediatric Obesity Prevention and Management in Korea: How to Do in the Real World?

Sochung Chung (Konkuk University, Korea)

Obesity is a major public problem worldwide and receiving social attention in Korea. However, it is not actually treated as a disease nor covered as a medical illness in National Health Insurance Service in Korea, except surgery. The increase in obesity prevalence expects the increase of the social burden, including medical expenses, especially in the counties with rapid rising of the aging index in regional demographic characteristics of population. As society develops, it has been differentiated into each field and specialization is emphasized and many specialists should be involved in discussion to solve this issue, obesity. Although the concern in pediatric obesity has increased in Korea, the realistic measures or social structure of preventive approach and care system for this problem is still very limited. In Korea, there is a very nice National General Health Screening Program across life course, however, more targeted measures are needed to increase the efficiency of prevention in children and adolescents. Pediatricians dealing obesity needs fundamental social support system to integrate the interest of each field specialists. Cooperation of experts of each field would be a key factor of success in running an obesity intervention program at school or in town level. Personalized and culture specific intervention program and health care system in town specific cooperative approach would be helpful.

In this lecture, the status of pediatric obesity in Korea and its associated factors will be presented and possible suggestions to do will be discussed.



Mary Easaw

Cardiac Vascular Sentral Kuala Lumpur, Malaysia

• Education

Period	Affiliation	Position
- 2012-2014	Liverpool John Moores University – United Kingdom in collaboration with MAHSA College	M.Sc.
- 2007-2009	Liverpool John Moores University – United Kingdom in collaboration with IJN College	Professional Diploma Cardiovascular Thoracic Sciences (International)
- 1978-1982	JBAS (formerly known as SIET College) University of Madras, Chennai, India	B.Sc.

• Affiliations / Experience

Period	Affiliation	Position
- 2024-Present	Monash University, Kuala Lumpur	Adjunct Senior Lecturer
- 2019-2024	CVSKL Hospital, and PICASO Hospital, Kuala Lumpur	Consultant Dietitian
- 2019-2023	International Medical University, Kuala Lumpur	Senior Lecturer
- 1993-2019	National Heart Institute, Kuala Lumpur	Chief Dietitian & Senior Manager
- 1990-1993	Selesa Health Farm	Wellness Dietitian & Operations Manager

• Committee Memberships

- American Overseas Dietetics Association (AODA) for Malaysia

• Publications

- Vatana V Sundar, Shu Hwa Ong, Mary Easaw P M Easaw, Winnie Siew Swee Chee. Sarcopenia with co-existent type 2 diabetes mellitus is associated with worse clinical outcomes among hospitalized cardiac patients Clinical Nutrition ESPEN (Journal)
- Vatana V Sundar, Siti Farhath Sehu Allavudin, Mary Easaw P M Easaw. Factors influencing adequate protein and energy delivery among critically ill children with heart disease in pediatric intensive care unit Clinical Nutrition ESPEN (Journal)
- Easaw M, Ramli J, Mustafa MN, Wan Norzahrin WM, Salmah K, Pang WL and Ho SF. Patient Food Safety Goals: From the farm to the patient's Table. Malaysian Journal Of Public Health Medicine Vol 9 (Supplementary 2)
- Easaw M. The challenges of Optimizing Diet Among People with Diabetes-The Malaysian Experience, Journal of the Medical Association of Thailand Volume 88 Suppl. 6

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Nutritional Intervention Strategies for Childhood Obesity: The Role of the Dietitian

Mary Easaw (Cardiac Vascular Sentral Kuala Lumpur, Malaysia)

The prevalence of childhood obesity has risen more than 10-fold over the 40 years (WHO 2018) Childhood obesity is one of the most serious global public health challenges of the 21st century, affecting every country in the world. The need to change is a multi-effort by the government and healthcare staff and the community.

What needs to change?

1. Early nutrition that includes maternal nutrition, breastfeeding and complementary feeding.
2. Food environments that are supported by healthy choices which is easy and affordable and protected from exposure to powerful marketing of food and beverages. Taxes on sugar sweetened beverages and proper front of pack labelling
3. Monitoring childhood obesity at schools and colleges to help evaluate the countries childhood obesity strategy both for prevention and treatment.
4. School environments to provide healthy choices of meal and beverages, banning vending machines, promoting physical activity and health education
5. Physical activities such as cycling to school, swimming facilities and a gymnasium.

There are **five steps** on guidelines to discuss weight with children and their families. According to the reference rethinkobesity. global by Novo Nordisk as healthcare practitioners we can flow these steps to initiate the counselling process:

1. Initiate
 - a. Ask permission.
 - b. Start the conversation
2. Diagnose
 - a. Weigh the patient.
 - b. Calculate the Body Mass Index (BMI)
3. Discuss
 - a. Start the conversation.
 - b. Take weight history.
 - c. Set realistic and attainable goals
4. Treat
 - a. Lifestyle modification (Diet, mindful eating, physical activity & sleep)
 - b. Pharmacotherapy (appropriate for pediatrics) and Bariatric surgery
5. Follow up
 - a. Assess progress.
 - b. Modify treatment.
 - c. Make new appointment

As a dietitian we would look into

Nutrition Assessment The dietitian collects & documents information such as food or nutrition-related history; biochemical data, medical tests & procedures; anthropometric measurements, nutrition-focused physical findings & client history

Nutrition Diagnosis Data collected during the nutrition assessment guides the dietitian in selection of the appropriate nutrition diagnosis (i.e., naming the specific problem)

Nutrition Intervention The dietitian then selects the nutrition intervention that will be directed to the root cause (or etiology) of the nutrition problem & aimed at alleviating the signs & symptoms of the diagnosis.

Nutrition Monitoring & Evaluation. The final step of the process is monitoring & evaluation, which the dietitian uses to determine if the client has achieved, or is making progress toward, the planned goals.

The presentation will highlight the role of the dietitian in managing children with obesity based on lifestyle modifications using the motivating interview techniques and appropriate nutrition assessment, diagnosis, intervention and monitoring.

1. World Health Organisation. Taking action on childhood obesity report 2018. <https://iris.who.int/bitstream/handle/10665/274792/WHO-NMH-PND-ECHO-18.1-eng.pdf> Accessed on 1/7/2024
2. Caterson I, Alfadda A, Auerbach P, et al. Gaps to bridge: Misalignment between perception, reality and actions in obesity. *Diabetes Obes Metab.* 2019;21:1914–1924.
3. Kaplan L, Golden A, Jinnett K, et al. Perceptions of Barriers to Effective Obesity Care: Results from the National ACTION Study. *Obesity.* 2018; 26:61–69.
4. Academy of Nutrition and Dietetics. <https://www.ncpro.org/nutrition-care-process>. Accessed on 3/7/2024
5. Rethink Obesity 2022. <https://iris.who.int/bitstream/handle/10665/274792/WHO-NMH-PND-ECHO-18.1-eng.pdf>



Silva Arslanian

University of Pittsburgh, USA

• Education

Period	Affiliation	Position
– 1980-1984	Children’s Hospital of Pittsburgh Pittsburgh, Pennsylvania	Fellowship
– 1978-1980	American University Hospital of Beirut, Beirut, Lebanon	Residency
– 1973-1978	American University of Beirut School of Medicine, Beirut, Lebanon	M.D.
– 1971-1973	American University of Beirut, Beirut, Lebanon	B.S.

• Affiliations / Experience

Period	Affiliation	Position
– 2008-Present	University of Pittsburgh	Professor
– 2005-Present	University of Pittsburgh, School of Medicine	Richard L. Day Professor of Pediatrics Director, Pediatric Clinical & Translational Research Center
	UPMC Children’s Hospital of Pittsburgh	Scientific Director, Center for Pediatric Research in Obesity and Metabolism (CPROM)
– 1999-Present	University of Pittsburgh School of Medicine UPMC Children’s Hospital of Pittsburgh	Tenured Professor of Pediatrics

• Committee Memberships

- Pediatric Endocrine Society (PES)
- Endocrine Society
- American Diabetes Association (ADA)
- International Society Pediatric and Adolescent Diabetes (ISPAD)

• Publications

- Arslanian SA, Hannon T, Zeitler P, Chao LC, Boucher-Berry C, Barrientos-Pérez M, Bismuth E, Dib S, Cho JI, Cox D for the AWARD-PEDS Investigators: Once-Weekly Dulaglutide for the Treatment of Youths with Type 2 Diabetes. *N Engl J Med.* 387(5):433-443
- Weghuber D, Barrett T, Barrientos-Pérez M, Gies I, Hesse D, Jeppesen OK, Kelly AS, Mastrandrea LD, Sørrig R, Arslanian S the STEP Teens Investigators: Once-Weekly Semaglutide in Adolescents with Obesity. *N Engl J Med.* 15;387(24):2245-2257
- Vajravelu ME, Mani I, Malik S, Hewitt B, Peyyety V, Arslanian S: Race and Neighborhood-Related Disparities Spanning the COVID-19 Pandemic: Trajectories of Combined Glycemic Control and Body Mass Index in Youth with Diabetes. *Diabetes Care* 1;46(3):511-518
- Kelly A, Arslanian S, Hesse D, Iversen AT, Körner A, Schmidt S, Sørrig R, Weghuber D, Jastreboff A: Reducing BMI Below the Obesity Threshold in Adolescents Treated with Once-weekly Subcutaneous Semaglutide 2.4 mg. *Obesity* 31(8):2139-2149
- Hannon TS, Arslanian SA. Obesity in Adolescents. *N Engl J Med.* 389(3):251-261

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Adolescent Obesity: Complexities of Chronic Disease

Silva Arslanian (University of Pittsburgh, USA)

Obesity is a global epidemic that is associated with increased morbidity and mortality. Pediatric obesity is a multifactorial disease requiring consideration of developmental stage, risk of comorbidities, psychological state, and social implications. Prevalence of pediatric obesity increases with age and is highest among adolescents 12 to 19 years old. Pediatric obesity is associated with present and future complications including prediabetes and type 2 diabetes, hypertension, dyslipidemia, obstructive sleep apnea (OSA), metabolic dysfunction-associated steatotic liver disease (MASLD), and polycystic ovary syndrome (PCOS) among others.

The current treatment for pediatric obesity includes lifestyle modification which typically does not result in substantial weight reduction, pharmacotherapy, and bariatric surgery. Presently, there are limited globally approved medications available for long-term weight management in youth with obesity over 12 years of age including orlistat, liraglutide, phentermine/topiramate, and semaglutide.

Per the American Academy of Pediatrics clinical practice guidelines, pediatricians and other pediatric health care providers should offer weight loss pharmacotherapy, according to indications, risks, and benefits as an adjunct to healthy behavior and lifestyle treatment to adolescents 12 years of age and older who have obesity. This lecture will discuss youth obesity as a chronic disease, the complex causes of obesity, its health consequences and complications and finally obesity pharmacotherapy in adolescents.