



Osama Hamdy, M.D., Ph.D

Dr. Hamdy is the Medical Director of the Obesity Clinical Program, Director of Inpatient Diabetes Management, clinical investigator and senior endocrinologist at Joslin Diabetes Center in Boston and Assistant Professor of Medicine at Harvard Medical School. Dr. Hamdy completed his fellowship in Endocrinology, Diabetes and Metabolism at University of Missouri and Harvard University.

Dr. Hamdy and colleagues' research led to the first discovery that obese adults who lost 7% of their initial weight had significant improvement in their vascular endothelial function. This improvement may eventually prevent progression of atherosclerosis and coronary artery disease. Dr.

Hamdy was a co-investigator of several landmark studies; including the NIH-funded "Diabetes Prevention Program" and "the Look AHEAD Study". Dr. Hamdy founded the "Weight Achievement and Intensive Treatment-Why WAIT?" program at the Joslin Diabetes Center in 2005, which is currently implemented Nationally and Internationally. He is the author of the Harvard Health Publication "The Diabetes Breakthrough", which outlines his experience with long-term diabetes weight management. Dr. Hamdy chaired the task force that developed the Joslin Nutrition Guidelines. He is also member of the Nutrition Committee of the American Association of Clinical Endocrinologist (AACE) that developed many of the current guidelines for nutrition and obesity management. Dr. Hamdy co-chairs the global task force that developed the Transcultural Diabetes Nutrition Algorithm (tDNA) and is currently leading the effort to improve the quality of diabetes care across the globe through implementing an effective transcultural lifestyle intervention.

Dr. Hamdy was nominated by the Harvard Medical School for best mentor award of 2013 and was given the Compassionate Caregiver Award of the Kenneth Schwartz Center and the prestigious Michaela Modan award of the American Diabetes Association. Dr. Hamdy has more than 150 peer-reviewed original articles, reviews, chapters, conference abstracts and proceedings. He is on the editorial board of several medical journals including US Endocrinology, Journal of Nutritional Disorders & Therapy and 2-times section editor of the Current Diabetes Report. He is a member of the editorial review board of many scientific medical journals including JAMA, Diabetes Care, Lancet, Obesity Research and the Expert Opinions.

Meal replacements in diabetes

Diabetes specific meal replacements (DSMR) are currently considered an integral part of the medical nutrition therapy for patients with diabetes. They are known to enhance weight reduction and improve glycemic control. Most DSMR have lower glycemic load (GL) and their carbohydrates content is of low glycemic index (GI). Reduction in both GL and GI reduce glucose area under the curve, A1C, visceral fat, serum triglycerides and increase HDL-cholesterol. Look AHEAD study showed that frequent use of DSMR together with lifestyle intervention induced better weight loss. Other studies showed that their use reduces glucose variability and need for higher insulin doses. DSMR also have higher amount of protein. Recently, it was found that many the amino acids content within the DSMR increase insulin and GLP-1 secretions. These changes explain the benefit of DSMR in patients with diabetes. Addition of DSMR to diabetes diet is recommended for obese patients with poor diabetes control.

Learning objectives:

1. Explain the role of diabetes specific meal replacements as an integral part of medical nutrition therapy
2. Review the role of meal replacements in enhancing weight reduction in patients with type 2 diabetes
3. Demonstrate the role meal replacements in improving glucose control, reducing glucose variability and reducing insulin dose
4. Identify the role of meal replacements in stimulating insulin secretion
5. Explain the effect of meal replacement on GLP-1 production