Metabolic Obesity. 2 hrs

Key points of the seminars were weight management, genetic components of the disease, insulin function, basics of hyperglycemia, health consequences of hyperglycemia, and recognizing and preventing hyperinsulinemia.

Speakers of the seminars went through metabolic mechanisms of insulin, and its contribution to metabolic obesity. Additionally, she went through glucose metabolism, its digestion & absorption, and its connection with catabolic and anabolic hormones such as insulin and glucagon.

Obesity is a major public health issue. It affects not only adults but younger children. Obesity is the central risk factor for many chronic diseases such as diabetes type 2, CVD, CKD, NAFLD, and cancer.

Nutrition Strategies to prevent/manage metabolic obesity.

Nutrition is one of the greatest strategies to prevent and manage these diseases.

Knowing the glucose mechanism helps RDNs understand the core problem of obesity

The summary glucose mechanism that the speaker overviewed.

After carbohydrate ingestion, it will start to break down from the mouth by amylase, then in the small intestine. Carbohydrates such as polysaccharides, and disaccharides will be hydrolyzed until glucose, then glucose will be absorbed via the intestines, and finally into blood sugar. Elevated blood sugar levels will stimulate the synthesis of insulin, more carbs in the diet more insulin in the blood will be circulated. The job of insulin is help glucose to enter the cell. However, the uptake will not always occur due to insulin resistance of the cells of adipose tissue and muscle tissues. Insulin resistance blocks the glucose clearance in the blood, and high levels of sugar are extremely toxic. One of the risk factors of insulin resistance is metabolic obesity. Therefore, treating obesity would help to solve many problems.

Additionally, extra glucose will be packed as glycogen in the liver and in the muscle tissues. The rest of the after-glucose oxidation, if they are, will be used for fatty acid synthesis, eventually, it will be stored as triacylglycerol in fat tissue.

Avoiding high refined carbohydrates, and consuming low glycemic index foods such as bananas, dates, dried fruits, mango, papaya, prunes, and slow-digesting whole grains will help to keep blood sugar at the normal range.

This seminar provides a 1600 kcal meal plan, by eating 1800 g of carbs, 22% of protein or 88 g, and 33% fat 59 g. The bottom line of this diet is decreasing carbohydrate intake, and increasing fat and proteins would help to control blood sugar and have positive effects for obesity.

Incorporating into a diet of vitamins, minerals, and nutrients such as omega-3 fatty acids, alpha-lipoic acids, vitamin E, DHEA, L-arginine, and minerals like magnesium, chromium, and vanadium would help for insulin resistance.

Chromium with meals is recommended. Vitamin E and Selenium are the great antioxidants which help to reduce oxidative stress.
Plus physical activity or exercise would help to reduce obesity.
Calculating calorie needs using the Hamwi equation is suggested. Daily calorie management is beneficial for weight management. Monitoring serotonin levels will help no to crave sugar. Low serotonin stimulates sugar consumption. Tryptophan is a precursor of serotonin, which is a mood hormone and satiety. Foods such as salmon, nuts, eggs, and spinach will help to elevate serotonin levels. These 2 hrs of seminar about metabolic Obesity are a great addition to my knowledge

about metabolic obesity. I will all suggest strategies to help my clients to control their weight.