Nutrigenomic test for personalized body weight management program

Obesity is multifactorial disorder in which excessive body fat deposition arises when energy intake is higher than energy expenditure. Many theories have been proposed to explain the origin of this epidemic, such as the genetically based hypothesis, the environmental (unbalanced diet and sedentary lifestyles) hypothesis, all of which underline the complex theory that suggests that there is not a single cause of obesity but it is a consequence of an interaction between genetic and lifestyle influences. Nutrigenomics uses genomic technologies and genetic information to address issues important to nutrition and health. The main goal of nutrigenomics is to optimize health and performance by examining how individual genetic differences modify our response to diet. Genetic variation can result in multiple versions of genes, which can lead to differences in the amount of proteins produced or how efficiently those proteins function. Genetic differences can affect how we respond to foods we eat, giving each of us our own specific nutritional meal. The management of obesity requires understanding of the genetic and environmental contributors to an individual's health status, including the identification of specific polymorphism and interpretation of responses to nutritional intervention that may be affected by genetic determinants. For example, subjects carrying obesity-related SNPs have shown differences in response to caloric restriction programs and may also be differentially affected by the composition of their dietary intake. Recent efforts by international consortia aim to describe genetic variants that contribute to obesity in order to characterize nutrient-gene interactions and to implement dietary counselling for obesity prevention and management in tailored manner. Since genotyping and gene expression appraisal on nutrient-sensitive candidate genes contribute to advancements in obesity diagnosis, prognosis and therapy, additional nutrigenomics studies are needed to support the clinical prescription of personalized nutrition intervention. Key words: nutrigenomic, personalized nutrition, weight loss.

Biography

Cindiawaty Josito Pudjiadi MARS, MS, SpGK received her medical degree from University of Trisakti and then completed her Master degree in Hospital Administration from the University of Indonesia. She completed her Clinical Nutrition Specialist from University of Indonesia in 2003. She works in Medistra Hospital in Jakarta as a Physician that Specialist in Clinical Nutrition, and also become Intensive Care Unit Team. She received SCOPE (Specialist Certification of Obesity Professional Education) certification on July 2013 from World Obesity Federation. Lately she interested in Personalizing Nutrition for her patients base on Nutrigenomic test result.