Individualized genetic and biochemical approach to obesity

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Abstract

Obesity is a complex multifactorial disease, in which the clinical phenotype reflects an individualized interaction between genetic, environmental and lifestyle factors.

There are guidelines when it comes to the treatment of obesity, and many people respond very well, and are able to achieve an adequate body composition.

But for some patients, the standardized guidelines may not be enough, and there is a need to dig deeper into the several genetic, environmental, lifestyle factors and physiological dysfunctions in order to elaborate a more personalized approach.

This approach must take into account all the factors involved, addressing the antecedents that predispose an individual to obesity (not only genetics, but clinical story, etc), the triggers that lead to the weight gain, and all the factors (biochemical, physiological or psychosocial) that contribute to the maintenance of obesity.

We also need to include the evaluation of lifestyle factors that may impact obesity, such as sleep, exercise, nutrition (not only calories or macronutrient percentage, but also the presence of nutritional deficiencies that may impact an adequate physiological function); the presence of stress (especially chronic stress), the relationships (healthy environmental, or toxic /isolated environment, etc). And this approach also needs to address pathological dysfunction associated with obesity, such as the microbiome, inflammation (specially low-grade inflammation), toxicity (such as endocrine disruptors), mitochondrial function, insulin or leptin resistance and the role of other hormones (and neurotransmitters) involved in satiety and hunger, and the mental and emotional state of this individual with obesity. Even if the disturbances found may not be enough by itself to explain the weight gain, when in association may the “the perfect recipe” for obesity and until they are all address It may be difficult for the patient to reach and adequate body composition.



Biography

Daniela Seabra is a nutritionist and an IFM certified practitioner. She worked for several years as a clinical nutritionist in the public hospital but know is only in private practice and is the head of the nutrition department at Nordic Clinic Porto. She has a course in eating disorders and a post-graduation in clinical nutrition. She also has several advance courses in brain and gut function, diabetes and eating disorders.

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