How can a genetic test guide you towards a customised diet?

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It is long clear that every person's physical and biological response to the kind of food they're consuming will not always be similar. The dominant reason for the same is our genetic constitution. Now, you might wonder how our DNA can determine whether one likes Neem juice compared to a New York baked blueberry cheesecake? In your opinion, you might think everyone will prefer the latter, but no, some will choose the beverage over the dessert. Let us help you through that.

The genetic make-up of two individuals is never the same, hence the variations in response. We know that we need a balanced diet with essential macro and micronutrients for proper functioning and development. But when it comes to aspects such as stamina, weight loss, metabolism, tolerance, and preference for different types of food, the response will differ based on our genotype.

Nutrigenetics, an emerging field in science, is the study of how genes influence our nutrition. By the day, it is gaining more prominence to understand how receptive our body is to nutrients.

Taste and food preferences, metabolism rate, are some of the factors our genes control. For example, genetic variants in the TAS2R38 gene impacts whether one finds phenylthiocarbamide (PTC) in cauliflower, wine, and pepper bitter or tasteless.

A genetic test is a perfect guide to understand one's ideal diet and nutritional needs. The test can help provide information on the following:

o Micronutrients (Vitamin and mineral) deficiency - The report tells one about their genetic tendency for various vitamin deficiencies and possible health hazards that might arise from it.

o Response to macronutrients (proteins, fats, carbohydrates, fibres, etc.)- Depending on the genotype, some people with high carbohydrate intake gain more weight than others. In contrast, others may lose weight from high fibre intake. At the same time, some people tend to benefit more in terms of weight maintenance from increased protein ingestion.

o Salt intake and blood pressure sensitivity- Higher consumption of salt and how the blood pressure responds to it is partially determined by genetics. It may lead to increased blood pressure for some people, whereas others might be indifferent to it.

o Bitter and sweet taste preference- Genetics is also the reason behind your taste preferences. High sensitivity to bitterness may make you avoid food such as black coffee. If you have a sweet tooth, you will have a more increased need to eat sugary foods and vice versa.

o Satiety- the feeling of fullness for long hours post a meal. Due to genetic variations, people might eat more without feeling satisfied, while another group may feel full from just a small amount of food which may impact their weight.

o Snacking- Need to eat frequently in between meals. Genes also determine whether you crave to munch on something between meals throughout the day. People who snack extensively have higher chances of gaining weight depending on their genes.

o Bone mineral density (BMD) measures bone minerals present in a particular volume of bone tissues. Along with genetics, factors such as age, gender, ethnicity, medications, intake of bone minerals (Calcium & phosphorous), alcohol consumption determine the BMD of a person.

o Apart from the above-listed factors, a genetic test can also share your response to Green tea intake and if you have the gene marked for weight loss from its consumption, caffeine metabolism, a genetic tendency for food sensitivities like lactose intolerance, amongst many more.

Hence, a DNA-based diet is one of the best ways to understand your body's needs. Thus, all in all, the test will help an individual structure and personalise their diet, weight loss/muscle building regime, or fitness reasonably.

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