

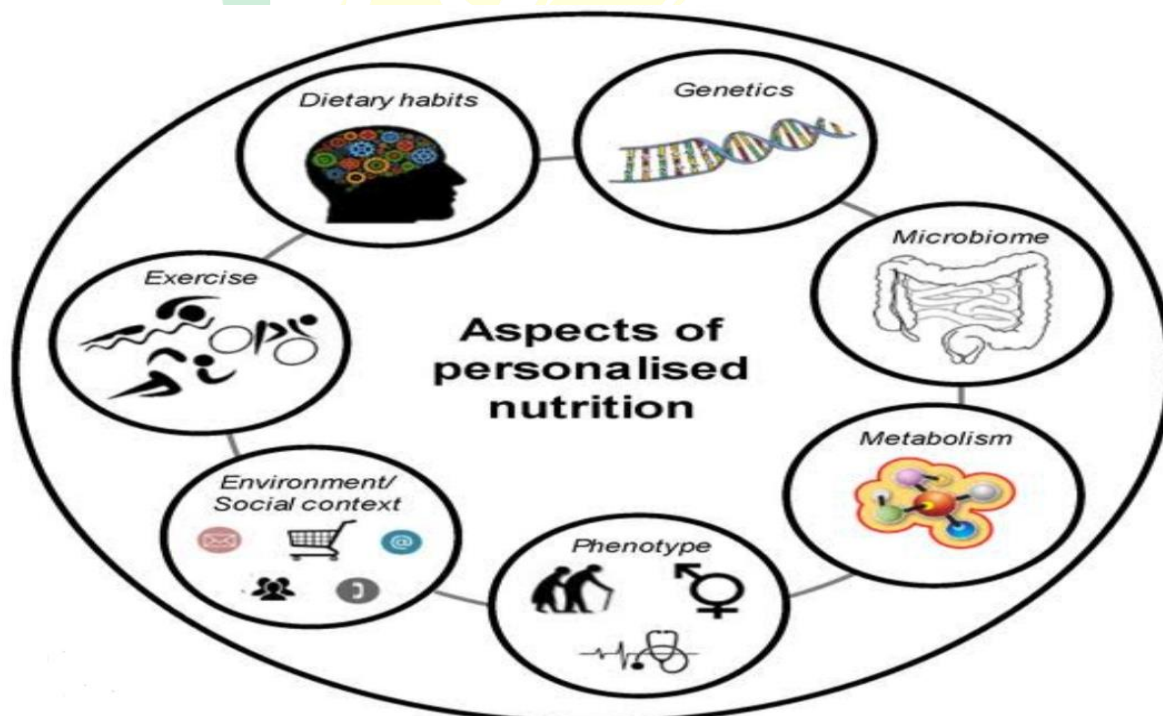
## Personalized Nutrition (Future of Our Foods)

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It is well that dietary factors influence health and disease, and there is now strong evidence that, for susceptible individuals, adopting a healthy lifestyle, including a balanced diet, can prevent disease more effectively than medication. It is standard practice to provide generalized food and lifestyle recommendations to encourage individuals to make healthy decisions. However, the influence of these suggestions is limited; in fact, the prevalence of complicated metabolic disorders that are not communicable is still on the rise. The World Health Organization (WHO) reports that noncommunicable diseases (NCDs), which include diabetes, cancer, heart disease, stroke, and chronic lung disease, account for about 70% of all deaths worldwide and have significant socioeconomic consequences.



This suggests that there is ineffectiveness and an inability to handle interindividual variability in the one-size-fits-all diet approach. Within this paradigm, diet personalization arose as a tactic based on the utilization of personal data to provide highly personalized



nutritional guidance, goods, or services. A method like this could be able to help people make long-lasting dietary changes that are good for their health.

By gathering individual data at the genetic, phenotypic, medical, and nutritional levels and using that data to provide tailored dietary recommendations, personalized nutrition aims to maintain or improve health. This approach may be more effective for disease prevention than for managing existing conditions. While health is traditionally the main focus, additional personal objectives may also be considered including body sculpting or getting ready for contests. Personal preferences may also be taken into consideration. Individuals who are genetically sensitive as well as healthy and sick subjects are the targets of personalized nutrition.

People are not standardized specimens; rather, there are various diverse entities rather than one absolute normal. Furthermore, some dietary recommendations may be necessary for distinct population groups (e.g., youngsters, the elderly, athletes, pregnant women, and patients with inborn errors of metabolism where a special nutrition component can be detected). Therefore, we should embrace the idea of well-being in the sense of improving mood, attention, endurance, managing weight, or controlling particular biochemical markers rather than viewing health solely in terms of preventing or treating disease. These are the reasons why nutrition programs that follow a one-size-fits-all approach frequently result in very slight increases in food intake. Thus, personalization may boost incentives for dietary changes by accounting for unique receiver features.

### **What Are Personalized Nutrition's Main Advantages?**

Personalized nutrition offers several advantages and benefits to an individual in multiple ways due to the extensive data it gathers about them. Following is a list of a few of them:

1. **Aids in Weight Management** Given that obesity is currently the primary cause of several newly diagnosed health issues, personalized nutrition plays a critical role in the battle against obesity by offering the appropriate dietary guidelines. It aids in improving a person's metabolic syndrome. Even if obesity is not a concern for you, this type of nutrition enables you to balance your taste buds with your body's composition and ward off illnesses down the road.



2. **Encourages You to Eat Well:** Most of us know that eating less is necessary to maintain fitness. On the other hand, a personalized nutrition diet forces you to develop lifetime eating habits that will enable you to enjoy your favorite foods.
3. **Enhances Stomach Health:** Because customized nutrition incorporates studies on the human microbiome and stomach, it offers high-quality probiotics that help better nourish your gut, balance your immune system, and reduce inflammation of all kinds.
4. **Improving Lifestyle:** A lot of us are hesitant to prepare healthful meals. Personalized nutrition looks out for your food budget, saves you time and energy by teaching you simple cooking techniques, and provides you with the tools you need to prepare recipes of a certain kind.
5. **Balances Your Health Conditions:** Perhaps most importantly, personalized nutrition optimizes pre-existing health conditions by offering customized meal plans to people with diabetes, osteoporosis, pancreatitis, liver, kidney, and cardiovascular diseases, among many other conditions.

#### **Important takeaways**

- Improving an individual's health through dietary and behavioural modifications is one of our greatest present-day difficulties.
- When the human genome was sequenced, many people began to believe that personalized medicine would soon be available. This led to the creation of the phrase "personalized nutrition. To assist individuals in achieving a lasting dietary behaviour change that is beneficial for health," personalized nutrition is very important.
- "Assisting individuals in achieving a lasting dietary behaviour change that is beneficial for health" is the core idea behind personalized nutrition.
- Personalized nutrition will help people realize who they are, both inside and outside of the health domain. It will also present an opportunity to reach optimal health.
- Most people agree that more regulation and research are needed before individualized nutrition can provide the anticipated advantages.

#### **Which theoretical frameworks underpin customized nutrition?**

The foundation of personalized nutrition is the notion that customized food recommendations, goods, or services will outperform more generalized strategies in terms of effectiveness.



Personalized care can be provided based on biological evidence of different responses to foods and nutrients based on genotypic or phenotypic characteristics. It can also involve an analysis of an individual's current behaviour, preferences, barriers, and goals, followed by the delivery of interventions that encourage and empower them to modify their eating habits.

