



COMMENTARY



An Overview of Nutritional Biochemistry

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Description

Nutritional biochemistry is the study of nutrition as a science that combines physiology, medicine, microbiology, pharmacology, chemistry, and biology to investigate health, food, nutrition, illness, and pharmacological therapy. The fundamental purpose of nutritional biochemistry research is to determine the ideal dietary and nutritional requirements of both healthy people and people who are sick. The discipline is also working on ways to lessen the negative effects of pharmacological medications. Nutritional biochemical treatment saves lives, lowers morbidity, improves health outcomes, and lowers healthcare expenditures. The health advantages of eating organic fruits and vegetables are studied through nutritional biochemistry. It concentrates on the chemical components of foods and how they work metabolically, physiologically, and biochemically. Science such as physics, chemistry, and biology are also used. It is the scientific study of nutrition. Nutritional biochemical therapy refers to particular nutrition techniques, such as evaluation and interventions, used to treat an ailment, injury, or disease.

Nutritionists assist in the creation of tailored food programmes for weight loss, improved mood, and increased energy. Weight loss plans frequently include family meal planning. A nutritionist may recommend basic wellness supplements in addition to meal planning to help a client achieve their health and weight reduction objectives. Organic nutrients are the building blocks of various cell components that certain organisms are unable to synthesis and must consequently get prepared. Carbohydrates, protein, and lipids are examples of these molecules.

The biochemistry of nutrition can provide crucial information regarding the role of diet in the onset, pro-

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gression, and prognosis of physical diseases including cancer, diabetes, heart disease, and stroke, all of which have been connected to diet and nutrition in some manner. However, growing body of data is beginning to find substantial linkages between diet and the development and management of a wide range of diagnosable mental health and neurodevelopmental problems, including autism, ADHD, anxiety, depression, dementia, and schizophrenia. The influence of nutritional biochemistry on reality is considerable. It might have a significant impact on future attempts to prevent and treat mental and physical diseases. Nutritional biochemistry has also aided in the discovery of facts regarding how nutrients affect cell growth, development, and function. Nutrients have been demonstrated to affect cellular homeostasis in studies. Stress reactions interact with this relationship, according to studies, and can promote the illness. This line of inquiry might be particularly useful in establishing novel preventative methods for a variety of medical ailments.

Nutritional biochemistry has also provided a significant amount of evidence about the impact of food in cancer development. So far, they backed up the concept that genetics is important in the development of cancer. Furthermore, research has demonstrated that diet influences genetic characteristics such as DNA instability and gene changes. There is some evidence that diet influences aberrant DNA methylation, which is a crucial contributor to carcinogenesis. Overall, nutritional biochemistry is assisting in the discovery of the link between diet and numerous biological processes, as well as elucidating how what we eat is linked to disease. The field is vast, and there is still much more to learn. We may expect many more significant results from nutritional biochemistry in the next years.