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Mechanism Action of Nutrition Epigenetics

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INTRODUCTION

The field of nutritional psychiatry has generated observational and efficacy data that support the role of healthy eating patterns in the development and symptom management of depression. To guide future clinical trials and targeted nutritional therapies, this review outlines what is currently known about the underlying mechanisms by which nutrition can affect mental and brain health Offers. The mechanism of action that links nutrition and health outcomes is complex, diverse, interacting, and not limited to biological pathways. Many routes have been identified in which diet can affect mental health. These include regulation of signaling pathways involved in inflammation, oxidative stress, epigenetics, mitochondrial dysfunction, intestinal flora, tryptophankinurenine metabolism, HPA axis, neurogenesis and BDNF, epigenetics and obesity.

DESCRIPTION

Dietary salt intake raises Blood Pressure (BP), but BP salt sensitivity varies from person to person. Interactions of environmental factors, including aging, genetics, and malnutrition and stress, contribute to BP salt sensitivity. Children of malnourished women during pregnancy are at increased risk of developing obesity, diabetes and salt-sensitive hypertension as adults. Similarly, offspring of mice fed a low-protein diet during pregnancy develop salt-sensitive hypertension associated with aberrant DNA methylation of the gene encoding the hypothalamic angiotensin II receptor block (AT1AR). It results in up-regulation of hypothalamic AT1AR and renal sympathetic hypertension. Aging is also associated with salt-sensitive hypertension.

These are known as risk factors for cardiovascular metabolism and components of metabolic syndrome. Obvious cardiovascular (CV) disorders such as stroke and myocardial infarction are areas of adulthood, but it is clear that the CV continuum begins very early in life. Identifying risk factors and early stages of cardiovascular injury when these processes are still reversible and developing preventive strategies are key pillars for reducing cardiovascular morbidity and mortality in the general population. Obesity is associated with decreased ghrelin secretion, increased plasma leptin levels, oxidative stress, increased phagocytic activity of macrophages, and induction of pro-inflammatory synthesis of cytokines and interferon gamma. Obesity is associated with a decrease in cytochrome P450 enzymes (CYPs) and impaired detoxification processes. Vitamin and mineral deficiencies can also play an important role in the development of oxidative stress and chronic inflammation in obesity. There is evidence of an association between genetic predispositions to obesity in children with elevated levels of certain miRNAs [1-4].

CONCLUSION

Proper food intake and relatively abundant dietary nutrients have undeniable effects on brain function. Currently, there is substantial evidence that dietary nutrition helps prevent and alleviate neurological symptoms in a variety of pathological conditions. The newly described effects of dietary factors on mitochondrial dysfunction, epigenetic modifications, and changes in neuroinflammation are important mechanisms responsible for the effects of nutrients on brain health. The benefits of breast milk are widely recognized. Breast milk can link breast milk to the health of the baby. The Mother-Breast Milk-Infant Triad is an interconnected system in which a mother's diet and lifestyle can affect her baby's health. The underlying mechanism is not yet fully understood, but this association can be partially explained epigenetically. The purpose of this article is to update the relationship between the mother's diet and breast milk and show how the mother's diet and lifestyle relate to the composition of breast milk and thus the outcome of the health of the offspring.

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CONFLICTS OF INTERESTS

The authors declare that they have no conflict of interest.

REFERENCES

1. Hansen K (2016) Breastfeeding: A smart investment in people and in economies. Lancet. 387:416.
2. Zhu J, Dingess KA (2019) The functional power of the human milk proteome. Nutrients. 11:1834.
3. Mattar R, de Campos Mazo DF, Carrilho FJ (2012) Lactose intolerance: Diagnosis, genetic, and clinical factors. Clin. Exp. Gastroenterol. 5:113–121.
4. Bode L (2015) The functional biology of human milk oligosaccharides. Early Hum Dev. 91:619–622.