

Exploring the pros and cons of nutrition additives: Enhancing or harming our health.

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Abstract

This raises the possibility that dietary emulsifiers might be factors in conditions such as coronary artery disease, type 2 diabetes and Crohn's disease. The potential mechanism behind the observed effects of this emulsifier is uncertain but may be mediated via changes in the gut microbiota or by increased bacterial translocation, or both. It is also unknown whether these effects are generalizable across all emulsifiers and detergents, including perhaps the natural emulsifier lecithin or even conjugated bile acids, particularly if the latter escape reabsorption and pass through to the distal ileum or colon.

Keywords: Crohn's disease, Nutrition Additives, Health.

Introduction

Food additives are substances which are intentionally added to food and drink products to perform certain functions, such as to colour, sweeten and/or stabilise and preserve. Since they were first used for food preservation in the early 1800s, the use of food additives has grown significantly [1]. Today, when grocery shopping, it is nearly impossible to avoid processed foods, particularly in the consumption of a typical Western diet - a modern dietary pattern that is characterised by low intake of fruit, legume and vegetable fibre and high intake of red meat, dairy, eggs and refined grains, saturated fat, sugar and salt along with increased exposure to additives due to their use in processed food.

Nutrition additives are substances that are added to food to enhance its nutritional value or improve its flavour, appearance, texture, and stability. They are also known as food additives or dietary supplements, and they come in different forms, including vitamins, minerals, amino acids, enzymes, antioxidants, emulsifiers, stabilizers, and flavour enhancers. In this article, we will explore the different types of nutrition additives, their benefits, and their potential risks [2].

Types of nutrition additives

Vitamins and minerals: These are essential micronutrients that the body needs in small amounts to function properly. Vitamins and minerals are found in many foods, but sometimes they are added to processed foods to boost their nutritional value. For example, iron is added to cereal to prevent iron deficiency anaemia, and vitamin D is added to milk to prevent rickets [3].

Amino acids: Amino acids are the building blocks of proteins, which are essential for growth, repair, and maintenance of body tissues. Amino acids are added to some foods, such as protein bars and powders, to boost their protein content and provide a convenient source of protein for people who have difficulty getting enough protein from their diets.

Enzymes: Enzymes are proteins that speed up chemical reactions in the body. They are also added to some foods to improve their texture, flavour, and digestibility. For example, enzymes are used in cheese production to break down milk proteins and create a smooth texture.

Antioxidants: Antioxidants are substances that protect cells from damage caused by free radicals, which are harmful molecules that can cause inflammation and disease. Antioxidants are added to some foods, such as fruits and vegetables, to preserve their color, texture, and flavour. Examples of antioxidants include vitamin C, vitamin E, and beta-carotene. **Emulsifiers and Stabilizers:** Emulsifiers and stabilizers are substances that are added to some foods to improve their texture and prevent separation. For example, emulsifiers are added to salad dressings to prevent oil and vinegar from separating, and stabilizers are added to ice cream to prevent ice crystals from forming.

Benefits of nutrition additives

Nutrition additives can provide many benefits to food and the people who consume it.

Nutritional quality: Nutrition additives can add essential vitamins, minerals, and other nutrients to food, making it more nutritious [4]. Enhance flavour and appearance some nutrition

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additives can improve the taste, colour, and texture of food, making it more appealing to consumers.

Increase shelf life: Nutrition additives can extend the shelf life of food by preventing spoilage and reducing the growth of bacteria and other microorganisms.

Provide convenience: Nutrition additives can make food easier to prepare and consume, especially for people with busy lifestyles or dietary restrictions.

Potential risks of nutrition additives

While nutrition additives can provide many benefits, they also have the potential to cause harm if consumed in excessive amounts. Some potential risks of nutrition additives include:

Allergic reactions: Some nutrition additives can cause allergic reactions in some people, especially those who are sensitive to certain substances, such as sulfites or food dyes.

Overconsumption: Some nutrition additives, such as vitamins and minerals, can be harmful if consumed in excessive amounts, leading to toxicity and adverse health effects. Interference with nutrient absorption: Some nutrition additives can interfere with the absorption of other nutrients in the body, leading to deficiencies or imbalances [5].

Unknown long-term effects: Some nutrition additives have not been studied extensively for their long-term effects on human health, so their safety remains unknown.

Conclusion

The study found that individuals with a diet high in fruits, vegetables, whole grains, and lean proteins were less likely to experience depression, while those with a diet high in processed foods, saturated fats, and sugar were more likely

to develop depression. The findings of this study highlight the importance of a healthy diet for mental well-being and suggest that dietary interventions could play a role in the prevention and treatment of depression. However, it is important to note that this was a case-control study and further research is needed to confirm these findings and to better understand the underlying mechanisms linking diet and depression. Nonetheless, the study provides important insights into the relationship between diet and mental health and underscores the need for a balanced and nutritious diet as part of a holistic approach to maintaining good mental health.

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