

In pursuit of safer foods: the evolving landscape of food additives.

Elizabeth Dunford*

Department of Health Studies, American University, USA

Introduction

Food additives have become an integral part of the modern food industry, enhancing the taste, appearance, and shelf life of various products. These substances are intentionally added to foods during processing or production to achieve specific technological, sensory, or preservative purposes. While some additives have been used for centuries, the extensive utilization of additives in today's food supply has raised concerns about their safety and potential impact on our health [1]. In this article, we will explore the world of food additives, their common uses, safety considerations, and how consumers can make informed choices about their food purchases. Food additives come in different forms, including preservatives, flavor enhancers, colorants, emulsifiers, antioxidants, sweeteners, and more. Each category of additive serves a distinct purpose, be it inhibiting spoilage, intensifying taste, stabilizing mixtures, or even reducing calorie content in diet products. Their application is guided not only by the principles of food science but also by stringent regulations and safety standards set by government agencies worldwide [2].

However, as the use of food additives became more prevalent, questions about their safety and potential health impacts arose. Consumers and health experts alike began to scrutinize the presence of these additives in our diets, leading to an ongoing dialogue about their benefits and potential risks.

In this exploration of food additives, we will delve into the various roles they play in our food supply, the safety considerations surrounding their use, and the ways in which consumers can make informed choices. By understanding the intricacies of food additives, we can navigate the world of processed foods with greater awareness, striking a balance between enjoying the conveniences they offer while prioritizing our health and well-being [3].

The role of food additives

Food additives serve a multitude of functions, which can be broadly categorized into the following groups

1. Preservatives: These additives inhibit the growth of bacteria, yeasts, molds, and other microorganisms, thereby extending the shelf life of the food product. Common preservatives include sodium benzoate, potassium sorbate, and sulfur dioxide.

2. Flavor enhancers: Additives such as monosodium glutamate (MSG) are used to intensify the taste and aroma of food, enhancing the overall sensory experience [4].

3. Colorants: Food color additives are used to restore or enhance the color that may be lost during processing or to give an appealing appearance. Examples include tartrazine and erythrosine

4. Texture modifiers: These additives improve the texture and mouthfeel of foods, making them more appealing. Emulsifiers, stabilizers, and thickeners fall under this category.

5. Antioxidants: Antioxidants like ascorbic acid (Vitamin C) and tocopherols are used to prevent or delay food spoilage caused by oxidation.

6. Sweeteners: Artificial sweeteners like aspartame and sucralose provide sweetness to food products without adding extra calories.

7. Bulking agents: These additives add bulk to food products without adding significant calories. They are often used in low-calorie or diet foods.

Safety considerations

The safety of food additives is a subject of ongoing research and regulation by food safety authorities worldwide. Before an additive can be approved for use in food, it must undergo rigorous testing to determine its safety. Regulatory bodies such as the U.S. Food and Drug Administration (FDA), the European Food Safety Authority (EFSA), and others set acceptable daily intake (ADI) levels for each additive based on toxicological studies. The majority of approved food additives are safe for consumption when used within the prescribed limits. However, some individuals may be sensitive to certain additives, leading to adverse reactions like allergies or intolerances. For instance, some people may experience a reaction to sulfites, commonly used as preservatives in foods like wine, dried fruits, and processed meats.

Additionally, there are concerns about the potential cumulative effects of consuming multiple additives simultaneously, especially over the long term. Critics argue that the sheer number of additives in the modern diet may pose health risks that have yet to be fully understood.

Making informed choices

To make informed decisions about the food we consume, it is essential to read and understand food labels. Food manufacturers are required to list all additives present in their

*Correspondence to: Elizabeth Dunford, Department of Nutrition, The University of North Carolina at Chapel Hill, Chapel Hill, North Carolina, E-mail: eduford12@georgeinstitute.org.au

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products on the ingredient label. If you are concerned about specific additives, you can look them up online or consult with a registered dietitian or healthcare professional. Opting for minimally processed or whole foods is another way to reduce exposure to certain additives. Fresh fruits, vegetables, lean meats, and whole grains are generally additive-free and provide essential nutrients and health benefits [5].

Conclusion

Food additives play a crucial role in modern food production, providing benefits such as extended shelf life, enhanced taste, and improved appearance. While the majority of additives are considered safe when used within the prescribed limits, it is crucial to stay informed about potential risks and make conscious choices about the foods we consume. By reading food labels and opting for whole, minimally processed foods, we can strike a balance between enjoying the convenience of processed foods and maintaining a healthy diet. Additionally, ongoing research and regulatory scrutiny will continue to refine our understanding of food additives, ensuring the safety and well-being of consumers in the years to come.

References

1. Chopra AS, Lordan R, Horbańczuk OK, et al. The current use and evolving landscape of nutraceuticals. *Pharmacol Res.* 2022;175:106001.
2. Maqsood S, Benjakul S, Shahidi F. Emerging role of phenolic compounds as natural food additives in fish and fish products. *Crit Rev Food Sci Nutr.* 2013;53(2):162-79.
3. Pray L, Yaktine AL, Pankevich D. Caffeine in food and dietary supplements: examining safety. Workshop summary. In *Caffeine in food and dietary supplements: examining safety. Workshop summary.* 2014. National Academies Press.
4. Yilmaz B, Bangar SP, Echeagaray N, et al. The impacts of *Lactiplantibacillus plantarum* on the functional properties of fermented foods: A review of current knowledge. *Microorganisms.* 2022;10(4):826.
5. Rocha J. The impacts of *Lactiplantibacillus plantarum* on the functional properties of fermented foods: A review of current knowledge.