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# Noxious effect of preservatives

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## ABSTRACT

***Food is an important source of energy like carbohydrates, proteins which are required for the survival and to perform cellular activities by an organism. Due to the urban lifestyle, the demand for processed food has rapidly increased. Since food can't be stored for a longer period of time, natural or synthetic class of food additives called preservatives are added intentionally in limited quantities to increase the shelf life of food by preventing the growth of the micro- organism. Since all organisms are structurally and functionally interconnected these food preservatives have a harmful effect on human after prolonged exposure.***

***Keywords***— *Preservatives, Ill effects*

## 1. INTRODUCTION

Preservatives are substances added to the food items as well as other preparations like cosmetics, medicinal preparations to increase its shelf life and thereby preventing it from the damage by the micro-organisms or any other factors which might lead to deterioration of the product on storage. Synthetic preservatives are also known as processing aids which means:

- They shouldn't be consumed as food alone
- The substances which are added to due to unintentional but unavoidable circumstances to maintain the stability of the final processed product and increase its longevity.
- The substances added to the product intentionally due to a technological process during its treatment and processing but it shouldn't cause any harmful effect on the human body.[1]

For each anti-microbial and anti-oxidant preservatives, the following reasons of inclusion should be mentioned: [2]
(a) Reason for addition
(b) Proof of potency
(c) Method for control of the finished product.

## 2. TYPES OF FOOD PRESERVATIVES

### 2.1 Natural preservatives

Natural preservatives such as neem oil, sugar, salt and vinegar are used to preserve the food for a longer time. They don't have any ill effects on the human body and the general techniques used in the preservation include dehydrating, freezing and pickling. [3]

### 2.2 Synthetic preservatives [4]

(a) Anti-microbial agents
(b) Anti-oxidants agents
(c) Chelating agents

**2.2.1 Nitrates:** Sodium nitrate is an antimicrobial additive commonly found in cured meats, including hot dogs, bacon, ham, corned beef, deli meats and smoked fish. Some experts say that this preservative can cause the formation of "nitrosamines," which are cancer-causing chemicals. Studies have found a link between consuming cured meats and nitrite and cancer in humans. [5]

**2.2.2 Benzoates:** This preservative can be found in some teas, coffees and fruit juices. Banned in Russia, this chemical is believed to prompt skin rashes, asthma, allergies and even brain damage. Benzoic acid is often found in salad dressings, ketchup and some soft drinks. Initially, the FDA deemed sodium benzoate was a safe chemical to add to foods. [6]. This decision is now being questioned because there may be a link between sodium benzoate and the chemical "benzene," a known carcinogen.[7]

 

**2.2.3 Sorbates:** Sorbic acid is used to keep foods such as salad dressing, cakes and cheeses preserved. [8]. Potassium sorbate kills yeast, bacteria and fungus, and is added to dried fruits and meats, baked goods, wines, yoghurt and cheese. This non-toxic preservative, when used in moderation, is often considered safe in foods, although some experts have expressed concern about possible allergic side effects. [9]

**2.2.4 Sulphites:** Found in canned clams, relishes, pie crust, beer, dried citrus fruit beverage mixes, wine and dried fruits. In the past, sulphites were used on vegetables and fruits that people generally ate raw to keep fresh produce crispy and colourful. The FDA put the brakes on this practice in 1986 due to possible side effects that included diarrhoea, nausea, hives, and shortness of breath and, in some cases, death. [10].

**2.2.5 Caramel:** A broadly-used food additive, caramel colouring has been in use for decades. It can be found in many processed foods and drinks, such as potato chips, doughnuts, ice cream, bread, candy, soft drinks, beer, frozen pizza, vinegar, cookies and dark liquors, to name a few. This common additive has been named as a contributor to vitamin B6 deficiencies as well as cancer. [11]

## 3. ILL EFFECTS OF PRESERVATIVES

There are some deleterious impacts of utilizing synthetic substances for protection, for example, Sulphites are regular additives utilized in different fruits, may cause reactions such as migraines, palpitations, hypersensitivities, and considerably malignant growth. [12]

Nitrates and Nitrites: These added substances are utilized as restoring operators in meat products.it gets transformed into nitrous corrosive when is expected to have something to do with stomach cancer. [13]

Benzoates are utilized in nourishments as antimicrobial additives and have been suspected to cause sensitivities, asthma and skin rashes. [14]

Sorbates/sorbic corrosive are added to substances as antimicrobial additives. Responses to sorbates are uncommon, yet have included reports of urticaria and contact dermatitis. [15]

Additionally, anatomic radiation when utilized for conservation does not make substances radioactive, yet may cause changes in the appearance or texture of food. [16]

Subsequent to devouring certain nourishments on the off chance that it causes hypersensitivity that can be seen however a few people build up the indications of sensitivity day or two later, so it is hard to realize what is causing the issue. [17]

Individuals expend assortment of substances so it is hard to discover the precise substance which causes sensitivity. Consequently, individuals need to go on an elimination diet. They quit eating all substances that may be hazardous and acquaint each one in turn with check whether side reaction occurs. A side reaction of these additives can be quick or develop in the body after some time. Only in the recent years that scientists are considering the hazardous effects of preservatives in food. [18]

## 4. CONCLUSION

Though preservatives have an aiding activity in the storage of food and other preparation it is important to know the deleterious effect of them on the human body and the same should be labelled as a caution on the processed food so that general public consuming it should be aware of the diseases it might cause on the long run.

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