

Food Adulteration: An Unhealthy Mentality

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Abstract

People always want to buy that food which are very common or staple food or available in the market. They do not think the natural color on that particular food items. Some dishonest people around the world are doing this illegal act not only selling but also taking as food. Whereas their kids are also taking such unwanted food which is dangerous on health. In order to ensure the adulterants analytical method was done in chemistry lab. Between the materials of open and packet food there was no remarkable adulteration. We can take initiatives for testing adulterated food at home. Report showed that big cities are more vulnerable than small cities of Bangladesh. If people would be more conscious about food, then it is very easy to eradicate. In addition, the law enforcement committee may play a good role on it.

Introduction

History says that from the very beginning food coloring was used both in commercial and in domestic cooking. Carotenoids, chlorophyllin, anthocyanins and betanin are plant pigments used to color food products. Other colorants such as annatto from the seed of the achiote, caramel from sugar, blue dye from spirulina, lycopene, paprika and turmeric are derivatives of these core groups. Unintentional adulteration includes rainfall, drought, poor storage condition, etc. On the other hand, intentional adulteration is done

cheat with the consumers. 60% people of Bangladesh are now suffering with malnutrition for taking adulterated food (www.assignmentpoint.com). Synthetic color is water soluble and can be used in food without further processing [1-3]. The first synthetic dye is mauveine, from which oxidizing aniline developed by Sir William Perkin (1856). In 1860, Hassall passed the first Food Adulteration Act; he analyzed the food samples firstly with a microscope for identifying foreign organic matter for which no chemical tests were available. Arata (1889) developed the use of wool fibers for extraction and cleanup of food samples for colorant analysis [4-8]. Synthetic food color reacts with food and change into poisons in the body, causing mutation, cancer and other toxic effect. These colors produce allergic reactions in several individuals [9,10]. Papaya seeds which are used in black pepper may cause epidemic dropsy and severe glaucoma. Researchers have revealed that consumption of formalin directly through food can cause different types of cancers, especially the lung cancer [11,12]. Heavy metals, such as lead, chromium and arsenic accumulate in the body that might cause kidney and liver damage and develop abnormality among children [13]. In case of very young children, the liver is not matured enough to metabolize and break down the toxins of the adulterated food. Human blood normally contains 2.5 mg formalin and when this amount is about 1 ounce or more may fatal and causes serious illness as well as death. The bright colors used to attract children after contained lead, copper and mercury salts [14]. The objective of this article is to raise awareness in the common people not to buy adulterated food stuffs.

Adulterated foods in Bangladesh

The Institute of Public Health (IPH) in Dhaka and the World Health Organization (WHO) in their joint study on food adulteration in 1994 tested 52 street vendors and found that all of their food samples were contaminated with pathogenic microorganisms [15]. They also conducted another study in 2003 in Dhaka city and found that 96% of sweetmeats, 24% of biscuits, 54% of breads and 59% of ice creams were extensively adulterated [16]. A recent report by the Poribesh Bachao Andolan disclosed that about 79 lakh people in south Asia die every year by non-contagious diseases and food adulteration. The Food and Agriculture Organization (FAO) of the United States tested fruits, vegetables, milk and milk-products in a government laboratory and revealed that all of the food stuffs contained banned pesticides that pose serious health hazards. Fruits are adulterated with calcium carbide, ethephon, formalin, injection of colours and sweeteners. Vegetables are adulterated with formalin and toxic dyes while fish with formalin [17]. Some regular food items like carrot, bean, tomato, banana, mango etc are contaminated with toxic pesticides. Dry fish is our traditional dish and it is true that most pesticides are available within it. Aldrin was also found in milk and milk products [18]. Rice is adulterated by urea for whitening and stone particles. Chili powder is adulterated with brick dust and sudan red color, while turmeric powder with metanil yellow and colored chalk powder. Black pepper is adulterated with dried papaya seeds and tea with exhausted tea leaves and saw dust.

Summary

Food adulteration is a common phenomenon in Bangladesh. People get worried to take those adulterated foods. Only for taking high antibiotic and other medical facilities we are staying fine but it is true that in the long run we will face more serious ailments. Excessive use of insecticides damages our biodiversity especially

birds. In our market, besides formalin lots of other chemicals are available. Some dishonest traders are involved with this illegal act for gaining excess profit. Divisional or mega cities are more vulnerable than small towns or cities. For huge people it is not easy to detect food adulteration easily in big cities. Comparing to all of foods including animal's vegetables are good. Due to fear of the side effect of chemicals people are not taking exotic fruits like orange, apple, grape etc. We should gather knowledge on food and health and exchange the views for testing those chemicals in a particular food. If consumers wash all vegetables and fruits with vinegar or salt water for one hour before cooking, formalin or other chemicals will be totally free.

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