The poisonous affect of chemicals on packaging food.

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Chemicals found in food packaging may pose a health risk. Chemicals found in food packaging made from recycled plastic have been linked to a variety of chronic diseases, including diabetes and cancer. Except for carcinogens, it was widely assumed that low-level chemical exposures, i.e. exposures below the toxicologically established no-effect level, posed negligible risks to consumers. Recent scientific evidence, however, shows that this assumption is not generally valid, with available evidence showing that exposure to low levels of endocrine disrupting chemicals can contribute to adverse health effects.

Chemical contamination is a clear indication of the presence of chemicals where they should not be or are present in greater concentrations than what is considered safe [1]. Chemical hazards are one of the leading causes of food contamination and foodborne disease outbreaks. Chemical contaminants come from a variety of sources, including soil, the environment, disinfection byproducts, personal care products, air, water, and packaging material. Almost all mass-produced everyday products, such as disinfectants, plastics, detergents, deodorants, pesticides, and so on, are inhibited by chemical contaminants. Even the food we eat and the water we drink are vulnerable to the intrusion of chemicals in dangerous concentrations [2]. Food contamination, whether accidental or intentional, is an unfortunate act that has numerous serious consequences for human health.

Food is an important contributor to human health and well-being, as well as a major source of worry, pleasure, and stress, with diseases caused by contaminated food being one of the causes of the stress and worry. Food contamination can occur for a variety of reasons [3]. Food preparation involves a lengthy chain of processing, with each stage potentially introducing chemical contaminants into the food. Transportation of food can also lay the groundwork for food contamination, especially in unsanitary conditions. Similarly, some chemicals are intentionally mixed during the food preparation process to extend the shelf life of a food product. When contaminants are cooked in the kitchen, they may include impurity food; however, the transmission is primarily dependent on the effectiveness of kitchen hygiene [4]. Chemical contaminants enter the food chain naturally, as do pathogens found in the environment, and some key raw foods, such as poultry meat, have high bacterial counts.

Environmental contaminants, food processing contaminants, unapproved adulterants and food additives, and migrants from packaging materials are all examples of food contaminants. Environmental contaminants are impurities in water, air, or soil that are either introduced by humans or occur naturally. Unwanted compounds formed in food during baking, roasting, canning, heating, fermentation, or hydrolysis is examples of food processing contaminants. Direct food contact with packaging materials can result in chemical contamination as some harmful substances migrate into foods [5]. Furthermore, the use of unapproved or incorrect additives may lead to food contamination. Several bacteria, viruses, and parasites naturally inhabit the surfaces of raw food. Contamination of raw food can also occur as a result of sewage, soil, external surfaces, live animals, and meat animal internal organs. Food derived from diseased animals is another source of contaminated food, though medical advancement has nearly eliminated this source of food contamination. Chemical contamination of food includes the accidental mixing of chemical supplies in food, chemicals in animal feed, or antibiotic injections given to poultry animals.

Contaminants may be present in raw foods as a result of contaminant sources in the environment. Common sources of contamination during food transportation include diesel and gasoline vehicle exhausts or cross-contamination in the vehicle being used for food transportation. Long-distance transport ships are frequently contaminated by chemicals used for disinfection or other sources. High barriers used to protect food during long-distance transport are not always tested for barrier properties, making them a source of contamination. Food packing has several advantages, such as physical protection and improved food safety; however, it can still pose a threat. To improve the properties of packaging materials, packaging processes use a variety of additives such as stabilisers, antioxidants, plasticizers, and slipping agents. However, any direct or indirect contact between the food and the packaging material may result in the transfer of these substances from the packaging into the food.

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