

BACTERIAL CROSS CONTAMINATION

Cross contamination is defined as the transfer of bacteria or other microorganisms from one substance to another. It can happen during any stage of food production as: **primary production** - from plants and animals on farms; **during harvest or slaughter**; food processing and manufacturing; transportation or storage or distribution of food; **food preparation and serving** - at home, restaurants, and other foodservice operations.

THERE ARE THREE MAIN TYPES OF CROSS CONTAMINATION:

3 types of Cross contamination: food-to-food, equipment-to-food, and people-to-food. In each type, bacteria are transferred from a contaminated source to uncontaminated food.



FOOD-TO-FOOD

Adding contaminated foods to non-contaminated foods results in food-to-food cross contamination. This allows harmful bacteria to spread and multiply. Raw, undercooked, or improperly washed food can harbor large amounts of bacteria, such as *Salmonella*, *Clostridium perfringens*, *Campylobacter*, *Staphylococcus aureus*, *E. coli*, and *Listeria monocytogenes* - all of which can harm your health if consumed.



EQUIPMENT-TO-FOOD

Equipment-to-food is one of the most common yet unrecognized types of cross contamination. Bacteria can survive for long periods on surfaces like countertops, utensils, cutting boards, storage containers, and food manufacturing equipment.



PEOPLE-TO-FOOD

Humans can easily transfer bacteria from their bodies or clothes to food during many steps of food preparation. A person may cough into their hand or touch raw poultry and continue to prepare a meal without washing their hands in between.

SIDE EFFECTS

The side effects of cross contamination can be mild to severe. They can range from stomach upset to more severe aftereffects, including dehydration, organ failure, and even death.

HOW TO AVOID CROSS CONTAMINATION

Food purchasing and storage - avoid purchasing food close to its expiration date unless you intend to eat it right away. Store raw meat in a sealed container or plastic bag on the bottom shelf of the refrigerator to prevent juices from leaking onto other foods. Use separate grocery bags for raw meat and eggs.

Food preparation - wash your hands with soap and water for at least 20 seconds after touching raw meat, petting an animal, using the washroom, coughing, or sneezing, using your phone, or related instances. Wash your utensils, countertops, cutting boards, and other surfaces with soap and warm water, especially when handling raw meat. Use separate cutting boards for meat and vegetables. Use clean sponges and dishcloths. Cook foods to their proper temperatures by using a food thermometer.



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