

Food Poisoning Facts –By Dr Yunes Teinaz
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The World Health Organization (WHO) reports that each year two billion illnesses are caused by unsafe food; globally this number is growing. In Asia 700,000 people die each year as a result of food poisoning illnesses. Each year in the developing world, diarrhea illness from contaminated food and water causes 2 million deaths in young children. Much of this problem could be prevented with better science, prevention tools and by practicing good food hygiene.

In Britain the incidence of food poisoning has been increasing for many years and it is now a major public health problem. According to the Food Standards Agency (FSA), it is estimated that up to 5.5 million people in the UK are affected from food poisoning each year - that's 1 in 10 people. Only a small number of these visit their GP or get medical advice. Most cases of food poisoning

are not reported because people have mild symptoms and recover quickly. As a result, less than 100,000 cases a year are tested for the exact cause of food poisoning.

Recent changes in human demographics and food preferences, climate change global warming, changes in food production and distribution systems, microbial adaptation, and lack of support for public health control resources and infrastructure have led to the emergence of novel as well as traditional food borne diseases. With increasing travel and trade opportunities, it is not surprising that there is now a greater risk of contracting and spreading a food borne illness locally, regionally, and even globally. Food poisoning problem requires action by food producers and distributors as well as by consumers, from the farm to the folk.

Food contamination may occur as food travels through long industrial chains; production and harvest, initial processing and packing, distribution, and final processing. However, it is estimated that most cases of food poisoning occur as a result of improper food handling and preparation by the consumer.

What is food poisoning?

Food poisoning is a term applied to illnesses acquired by the consuming of contaminated food.

What causes food poisoning?

There are many bugs that can cause food to become contaminated.

Many cases of food poisoning are caused by microbes, such as bacteria,

viruses, moulds, yeasts or parasites, in the food we eat or the water we drink. Food poisoning can also be caused by the toxic substances that these microbes produce, or by natural contaminants that occur in foodstuffs.

Food poisoning bacteria can grow in food quickly, especially in warm and moist conditions. Just a single bacterium on an item of food left out of the fridge overnight could harbor many millions of bacteria by the morning, enough to make you ill if you eat it.

Most bacteria grow best and increase in number in a moist environment between 5°C and 60°C - a range of temperatures known as the 'growth' or 'danger' zone. Colder or hotter than this, means those bacteria cannot grow effectively.

Food poisoning bacteria are found in many foods, including:

- Meat and meat products - such as beef, mutton meat, minced meat and pâtés.
- Fish and fish products such as shellfish and seafood.
- Poultry - such as chicken or turkey.
- Eggs and raw egg products (such as mayonnaise).
- Unpasteurised milk (or milk contaminated after pasteurisation).
- Soft and mould-ripened cheeses.
- Cooked foods - such as fried rice.

How is food poisoning transmitted?

Transmission occurs when you eat contaminated food. Different foods may be contaminated with different bugs, or chemicals. Additional spread may occur from an ill person to others due to inadequate hand washing after using the toilet.

What are the symptoms of food poisoning?

Many people have had food borne illness and not even known it. It's sometimes called food poisoning, and it can feel like the flu. The symptoms of food poisoning vary since different bugs will cause different symptoms to occur, including stomach pains, nausea, vomiting and diarrhoea. Food poisoning is usually harmless to an adult, but may cause quite grave consequences in small children, the elderly or people with some serious illness. Food poisonings can be prevented. All it takes is some knowledge and skills.

How soon do symptoms appear?

This will be specific to the bug making you sick. Food poisoning from bacteria can occur in different ways. Some types of bacteria release poisons called toxins while they are growing in food. These toxins will cause food-poisoning symptoms soon after the contaminated food is eaten. With other types of food poisoning, the bacteria grow in the body first before causing symptoms. This leaves a gap between eating and symptoms called the incubation period. The incubation period varies in length - it can be a few hours or up to a few days or weeks.

How is food poisoning diagnosed?

It is diagnosed when your stool is examined under a microscope. Several specimens may be sent to the laboratory on different days because the bug making you sick may not be found in every sample. A sample of the food that made the sickness may also be tested at the laboratory to see if the bug can be identified. Other tests the doctor may order might include blood tests and a urine sample.

What should I do?

The Food Standards Agency advises three main things to consider when you have food poisoning:

- Dehydration – drink plenty of fluids and perhaps use dehydration powders available from pharmacies
- Medical assistance – if you are concerned about your health or the health of someone else, contact NHS Direct (0845 4647) or your GP for advice (especially in the case of pregnant women, elderly people, children and people who are already ill)
- Reporting – if you think that your illness was caused by food prepared outside the home, report the incident to your local council environmental health service

What is the treatment for food poisoning?

Treatment alternatives vary because food poisoning can be caused by many different bugs. Your doctor will discuss the treatment with you, depending upon which bug has made the sickness.

Why is it important to report food poisoning?

If you think your illness has been caused by food from a restaurant or other food business, the local environmental health department needs to know so it can investigate the business in question. If the environmental health officers find a problem with the business's food hygiene practices, and get the business to improve them, this could help prevent other people suffering from food poisoning.

The Food Safety Act 1990 and regulations made under it make it an offence for anyone to sell or process food for sale, which is harmful to health. They also place an obligation on businesses to ensure that their activities are carried out in a hygienic way. Your local council is responsible for ensuring that local businesses comply with these regulations.

The Food Safety Section deals with a wide variety of disciplines such as food hygiene, food standards, food complaints, food labeling, health and safety in food premises, infectious diseases control, food and water sampling, animal feedstuffs and licensing. The service may also provide low cost specialist Food Hygiene Training

What can be done to prevent food poisoning?

Occasionally, food poisoning can be very serious and even cause death. So it's important to prevent food poisoning with good food hygiene.

Prevention and control of food born diseases, regardless of the specific

cause, are based on the same principles; avoidance of food contamination or destruction or destroying the contaminants. Prevention depends on educating food handlers about proper practices in cooking and storage of food and personal hygiene.

Wash your hands

Good personal hygiene is an important way to stop food bugs from spreading. Washing your hands frequently is especially important:

- Wash your hands and nails before handling food, when you switch between handling cooked and uncooked foods, and after going to the toilet
- Use warm water and soap for washing, cold water is less effective
- Rinse your hands well and dry them on a clean hand towel, not on the dishcloth or your apron
- Cover up cuts and sores with a waterproof plaster

The World Health Organization had developed "Ten Golden Rules for Safe Food Preparation." These are as follows:

1. Choose foods processed for safety.
2. Cook food thoroughly.
3. Eat cooked foods immediately.
4. Store cooked foods carefully.
5. Reheat cooked food thoroughly.
6. Avoid contact between raw food and cooked food.
7. Wash hands repeatedly.
8. Keep all kitchen surfaces meticulously clean.
9. Protect food from insects, rodents and other animals.
10. Use safe water.

In addition the burden of death and disease from food poisoning or food borne disease is huge, and yet, a better organisation and communication between authorities along the entire food chain and with the consumers, could significantly reduce it, making food safer for consumers around the world.

However food safety experts recommend that everyone think about food safety at each step in the food handling process - from shopping to storing leftovers. What this really means is always following these four simple steps:

CLEAN - Wash hands, utensils and surfaces in hot soapy water before and after food preparation, and especially after preparing meat, poultry, eggs or seafood to protect adequately against bacteria. Using a disinfectant cleaner or a mixture of bleach and water on surfaces and antibacterial soap on hands can provide some added protection.

SEPARATE - Keep raw meat, poultry, eggs and seafood and their juices

away from ready-to-eat foods; never place cooked food on a plate that previously held raw meat, poultry, eggs or seafood.

COOK - Cook food to the proper internal temperature (this varies for different cuts and types of meat and poultry) and check if food is done with a food thermometer. Cook eggs until both the yolk and white are firm.

CHILL - Refrigerate promptly. Refrigerate or freeze perishables, prepared food and leftovers within two hours and make sure the refrigerator is set at no higher than 40°F and that the freezer unit is set at 0°F

Special occasions

Even if you are usually careful about food hygiene, extra care required on special occasions such as a barbeque, preparing a picnic or cooking for a party. Here are some tips.

- If you are cooking for a large party, consider fridge space. An over-filled fridge may not cool the food sufficiently, so you might need to buy certain foods at the last minute.
- Party foods that normally need to be refrigerated shouldn't be left out on the sideboard for hours while the party goes on - they can easily become contaminated. Serve individual portions and keep leftovers stored in the fridge.
- When preparing a picnic, take the food out of the fridge at the last minute and use a cool bag to keep it chilled and covered until you eat. If you are handling food, consider taking antiseptic hand wipes.
- For barbeques, only start cooking when the charcoals are glowing red with a layer of grey ash. Move the food around the grill and test the centre with a clean skewer to check it is cooked through. Charred on the outside doesn't mean it's cooked on the inside. Serve food straight away or keep it in a hot oven until you are ready to eat.
- Take care not to cross-contaminate raw and cooked meat by using separate utensils.

Eating out

You usually cannot inspect the kitchens when you eat out, but there are certain warning signs of poor hygiene standards: if you are concerned about what you are served, don't eat it:

- A dirty restaurant, dirty toilets, dirty cutlery or crockery
- Rubbish and overflowing bins outside the restaurant - these could attract vermin
- Staff in dirty uniforms, dirty fingernails, long hair not tied back
- Hair or insects in food
- Raw food and ready-to-eat food displayed together
- Hot food that is not cooked through properly and cold food that is served lukewarm.

Travelling

Furthermore, all people who are travelling are advised to take certain precautions. This may include, but is not limited to the following:

- Do not eat from street vendors,
- Eat only cooked vegetables
- Eat only fruit that you have peeled yourself,
- Drink only water you have boiled or treated with chlorine or iodine
- Or drink other safe beverages include tea and coffee made with boiled water and carbonated, bottled beverages with no ice.
- Eat foods that have been thoroughly cooked and are still hot,
- Do not bring perishable seafood back from your travels.

While food poisoning may be attributable to numerous causative agents, vaccine protection is not available for all agents causing infection. Immunisation is, however, available for Hepatitis A. For further information about this vaccine, please refer to your doctor.

Are there any special concerns about food poisoning?

If you believe that you may have food poisoning, you should seek immediate medical attention. If you have food poisoning and you are pregnant, you should promptly discuss this with your doctor. Individuals with food poisoning, which provide care services to others, particularly elderly or children should not work while symptomatic unless they are cleared by their doctors.

So, don't risk problems when these simple steps will help you reduce food-related illness.

*For more information about food poisoning you may visit the following websites

The World Health Organization: www.who.int

The Food Standards Agency: www.food.gov.uk

The Department of Health: www.dh.gov.uk

NHS Direct Online: www.nhsdirect.nhs.uk