For further information For businesses: Your local Council Environmental Health Officer. For businesses and the public: Food Policy and Programs Branch, SA Health on 8226 7100 or food@health.sa.gov.au.

For goodness sake...read this!

Food Safety Fundamentals

Did you know?

> That most food poisoning is caused by tiny microorganisms called bacteria and viruses?
> That food can look and taste fine but still make you ill?
> That you might get sick within an hour or more than a week after eating contaminated food?

Know your enemy

Bacteria
Bacteria are single-celled organisms so small that millions can fit on the head of a pin.

Some bacteria generally won’t make you ill but do spoil foods. For example, the bacteria that send milk off. These spoilage bacteria can play a useful role in making the food inedible and so stop you eating any bad bacteria that might also be present.

Bad bacteria take many forms. Some only need a few cells to be present in food and if these find a home in your gut it might take days for them to grow to huge numbers and cause illness. Some need to be present in food in the millions to make you ill. Some of these can produce a toxin in food that isn’t destroyed by cooking and can make you ill within an hour. Other bad bacteria form spores that can survive cooking and grow to large enough numbers to cause sickness if the food is improperly cooled and stored.

Viruses
Viruses are even smaller than bacteria! Viruses in food can make people sick can cause vomiting and diarrhoea and even hepatitis A. However you can’t get a cold, the flu, AIDS or hepatitis B or hepatitis C from food.

Some foods provide a better life for bad bacteria and so need special care. These foods are most, not all, and contain enough nutrients for bugs to grow. Such foods include raw and cooked meats, cooked rice, cooked vegetables, prepared salads and milk.

Potentially risky foods

Bacteria need warmth to grow and some bacteria need to grow to large numbers to make you ill. The colder it gets the slower they grow and when the temperature falls to 5ºC or colder, growth of food poisoning bacteria is so slow that it is rarely a problem. Mostly if food is left for too long at temperatures of 5ºC or less, moulds or spoilage bacteria better adapted to low temperatures will spoil the food rather than cause it to become unsafe.

Food poisoning bacteria can grow at refrigeration temperatures but, if the food has been properly handled and stored, they don’t pose much risk to healthy people. Pregnant women, the elderly, young children and people who have their immune systems compromised through illness are at greater risk and need to be more wary of potentially risky foods stored in the refrigerator for any length of time.

At the other end of the scale, once the temperature reaches 60ºC bacteria won’t grow and will start to die off as the temperature climbs further. Between 5ºC and 60ºC is often referred to as the temperature danger zone!

It’s important to realise that food doesn’t become instantly unsafe when it is in the temperature danger zone. The bacteria still need time to grow and as a general rule it is safe for freshly prepared food to be in the danger zone for up to 4 hours. Frozen food can’t become unsafe, but it will last longer at -15ºC or colder.

Cook food thoroughly, and if necessary, cool it quickly

Steaks and whole joints of meat can still be pink in the middle -- any nasties will be on the outside and the middle of a cut of meat, (if a fork hasn’t holed it), should be free of bacteria.

Cooling cooked foods properly is important. Food poisoning incidents have occurred when potentially risky foods have been left on the stove or bench top overnight to cool for a function the next day. Some forming bacteria can be present in these foods and make toxins so tough that even thorough reheating of the food before serving won’t destroy them. Once the food has cooled to reasonably warm, about 45ºC, it can be put into the fridge, it’s not essential to let it cool right down. The food will cool faster in smaller containers and metal containers lose heat faster than thick plastic ones. In a commercial situation there are special rules for the cooling of potentially risky food.

To cross contaminate means to transfer bad bacteria from raw food to prepared food with your hands or a cutting board or a tool such as a knife or tongs.

Meat is the raw food to be most concerned about and raw chicken needs particular care. After preparing raw meat you should:
- Wash and dry your hands thoroughly, and
- Wash the cutting board and allow to dry and also wash any utensils or plates that were used. If you sell food, the law requires such equipment to be sanitised in a dishwasher or by using a chemical sanitizer.

While chickens is the meat most likely to contain bad bacteria, the flesh from free-swimming fish is the most likely to be free of nasties. The bugs naturally present in fish are adapted to life in relatively cold waters and don’t represent much of a risk to warm blooded humans.

So when bacteria or viruses that make people ill get into fish they have usually been introduced by cross contamination or in the case of filter feeders like oysters, through pollution of the growing waters.

Don’t cross contaminate

Equipment such as mincers and mixers needs to be thoroughly cleaned to ensure there is no opportunity for nasties to survive and contaminate food the next time the equipment is used.

Clean up equipment

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How do we defend ourselves against food poisoning?

Following these 5 rules will help keep our food safe

1 Store potentially risky food at the right temperature

2 Cook food thoroughly, and if necessary, cool it quickly

3 Don’t cross contaminate

4 Clean up equipment

5 Use good hygiene practices

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