

Staphylococcus aureus

Food Act 2006

Staphylococci are a group of bacteria that can cause gastroenteritis, through the production of a toxin (staphylococcal enterotoxin). Several species of *Staphylococcus* can produce staphylococcal enterotoxins, however, most staphylococcal food poisoning is attributed to *Staphylococcus aureus*.

Although *S. aureus* can be found in food-producing animals, and in the environment (soil, water and air), humans are considered to be the main reservoir for this pathogen. *S. aureus* is estimated to be present in one in every four healthy individuals, usually on the skin and mucous membranes (nose).

How does *S. aureus* cause foodborne illness?

Good hygiene practices in food handling plays a large role in preventing staphylococcal food poisoning. The presence of *S. aureus* in food can be due to cross contamination of raw food with ready-to-eat foods, or due to contamination from a food handler that is carrying *S. aureus*. Food can be contaminated if the food handler does not wash their hands before handling food, or coughs or sneezes where food is handled.

The growth of *S. aureus* can occur at temperatures between 7-48°C. If food is kept in the temperature danger zone (between 5°C and 60°C) for too long, *S. aureus* can multiply and produce enterotoxin. Cooking temperatures destroy the bacteria, but the enterotoxin remains within food and can cause foodborne illness if consumed.

S. aureus can grow with or without oxygen. Foodborne illness often occurs when large volumes of food are prepared and cooled too slowly. The large volume may cause the internal temperature of the food to be in the temperature danger zone for an extended period, providing ideal conditions for *S. aureus* to multiply. In addition, if food is reheated too slowly, this can also enable the bacteria to multiply to unsafe levels.

Foods that are most frequently implicated in cases of staphylococcal food poisoning are those that are high in protein. Examples include milk products, such as soft serve ice cream, or cooked meat products such as ham, chicken or corned beef, and bakery items such as meat pies and custard tarts.

Who is at risk?

Anyone can be affected by *S. aureus* foodborne illness, but certain people are at greater risk of severe illness, including:

- young children (under five years)
- older adults (over 60 years)
- people with weakened immune systems.

What are the symptoms of *S. aureus* foodborne illness?

Most affected people will experience the following symptoms within one to ten hours after eating contaminated food:

- abdominal (stomach) cramps
- diarrhoea
- nausea
- vomiting
- mild fever
- dizziness
- chills

Symptoms associated with *Staphylococcal* enterotoxin foodborne illness typically subside within one to two days.

Prevention

The most effective way of preventing *Staphylococcal* enterotoxins foodborne illness is to prevent its growth in a food. This can be achieved by:

- cooking food thoroughly and serving it immediately or keeping it hot (60°C or hotter) until serving
- when cooling cooked potentially hazardous food to be stored and used later, cool the food–
 - (a) within two hours - from 60°C to 21°C; and
 - (b) within a further four hours - from 21°C to 5°CHint: divide large amounts of hot food into small shallow containers to allow it to cool faster
- making sure your refrigerator temperature is at 5°C or colder
- reheating cooked food rapidly with a microwave or stovetop (to 60°C or above)
- storing raw meats below ready-to-eat foods in the refrigerator or cold room to prevent cross contamination
- washing your hands with soap and drying them before preparing food and between preparing raw and ready-to-eat foods
- keeping your kitchen clean and ensuring all food contact surfaces are cleaned and sanitised before preparing food and between preparation of raw foods and ready-to-eat foods.

What to do if you suspect a case of foodborne illness

If you suspect you have foodborne illness, seek medical advice.

A faeces (poo) sample may be required to confirm the presence of *Staphylococcal* enterotoxins.

Diarrhoea can cause dehydration, so it is important to drink plenty of fluids.

If you have a concern about a food product or a food business, Queensland Health provides an online form to make a food complaint. This is available at <https://phconnect-foodcomplaints.health.qld.gov.au>

Further information

For health advice, please contact your doctor or nearest health facility, or call 13 HEALTH (13 43 25 84).

For food safety advice and further information relating to *Staphylococcus* contact your local Public Health Unit at www.health.qld.gov.au/system-governance/contact-us/contact/public-health-units.

The Food Pantry has advice related to food safety for food businesses and consumers at www.qld.gov.au/foodpantry.