

# Foodborne Toxins– Toxins Produced by Bacteria

## Frequently Asked Questions



### What are foodborne toxins?

Foodborne toxins are toxins that are found in different foods that can cause illness when they are consumed. Some are naturally occurring toxins that are found in certain foods, and others are produced by bacteria that have contaminated a food item. There are many different types of toxins, but the following highlights a few of the more common toxins produced by bacteria.

### Toxins Produced by Bacteria

**Staphylococcal food poisoning:** The enterotoxins produced by certain strains of *Staphylococcus aureus* can cause a rapid onset (usually in a few hours) of symptoms which can include nausea, vomiting, and abdominal cramping. Symptoms generally last two to three days, but may last longer, depending on severity. Foods typically associated with Staphylococcal food poisoning include meat, poultry, egg products, salads such as egg, potato, tuna, chicken, and macaroni, cream-filled pastries like eclairs, and milk and dairy products. It is also possible for humans to contaminate food with this toxin. For instance, foodhandlers can contaminate food products if they do not follow safe food handling procedures, such as proper hand-washing when preparing food.

**Bacillus cereus food poisoning:** *B. cereus* produces two different endotoxins: one causes diarrheal illness and the other causes vomiting. The diarrheal type of poisoning presents with watery diarrhea, abdominal pain and cramping 6-15 hours after eating contaminated food and lasts for about 24 hours. The other type presents with nausea and vomiting occurring 30 minutes-6 hours after eating contaminated food and lasts usually less than 24 hours. A wide range of foods such as meat, fish, vegetables, and dairy products can be associated with *B. cereus* poisoning, but rice products have been usually associated with the vomiting-type poisoning.

**Clostridium perfringens food poisoning:** *C. perfringens* is another bacterium that is capable of producing toxin. Consuming food that has a large number of such bacteria can lead to severe abdominal cramping and diarrhea in 8-22 hours after eating. Most cases resolve after 24 hours, but symptoms can last in some individuals for 1 to 2 weeks. Meats, gravies, and other meat products are usually associated with *C. perfringens* food poisoning, and usually occurs when bacteria multiplies when these products are not cooled down properly.

### How do people get sick from toxins produced by bacteria?

People get sick from these foodborne toxins by ingesting food contaminated with bacteria that produce endotoxins. Food that has been improperly handled or stored at improper temperatures has a higher likelihood of containing foodborne toxins.

### Who is most likely to get sick from toxins produced by bacteria?

Anyone who consumes food contaminated with toxin can get sick. However, symptom severity and susceptibility will vary from person to person.

### What should I do if I think I am sick from foodborne toxins?

Consult your healthcare provider if you are experiencing symptoms of foodborne toxins.

### How can I prevent getting sick from foodborne toxins?

- Adequately refrigerate meats, fish, vegetables and dairy products.
- Rapidly cool cooked meals if they won't be eaten immediately
- Wash fruits and vegetables with chlorinated water to reduce potential toxins on fresh produce

For more information contact your doctor, refer to <http://www.phila.gov/Health/> or contact the Philadelphia Department of Public Health, Division of Disease Control at 215-685-6740.

