

Bacillus cereus Food Intoxication / Infection



1. What is *Bacillus cereus* food intoxication?

Well recognized as a cause of “food poisoning” or “foodborne disease”, *Bacillus cereus* (bah-CILL-us SEER-ee-us) is a toxin-producing bacterium which can cause illness when ingested.

2. What are the symptoms?

- The toxins produced by this bacteria accumulate in food when it is stored above 4 °C (40 °F). They cause nausea and vomiting very soon after consumption. This is called intoxication.
- Live bacteria which “infect” your intestinal tract cause stomach cramps and diarrhea.

Vomiting symptoms often begin 1 to 6 hours after swallowing the bacteria, while diarrheal illness takes 6 to 24 hours to begin. The illness often lasts less than one day. However, individuals may experience both intoxication and infection simultaneously.

3. How do I know if I have this illness?

If you have the above symptoms you should see your family doctor who can arrange to have your stool sample tested. If you think food may have made you sick, call your local Government Service Centre and speak with an Environmental Health Officer.

4. How does it spread?

The bacteria which causes this illness can be found in soil and in raw, dried processed foods, such as rice, noodles, and cereal. People can become ill by eating food in which bacteria have survived and multiplied, such as cooked foods stored at room temperature for several hours.

5. How is it treated?

Most people who become sick due to *Bacillus cereus* will get better on their own. People with diarrhea and vomiting must drink plenty of fluids to prevent dehydration. Antibiotics cannot be used to treat this illness.

6. How can I keep from getting this illness?

This bacterium can survive boiling, and multiplies quickly at room temperature, therefore you must handle all foods carefully:

- Keep hot foods hot, to at least 60 °C (140 °F).
- Chill foods promptly to 4 °C (40 °F) to prevent the growth of bacteria.
- Reheat foods to at least 74 °C (165 °F) before eating.
- See the reverse side of this sheet for more food safety tips.

7. How soon can I return to work after being sick?

Usually, you can return to work as soon as you feel well but certain jobs are more likely to allow the spread of bacteria from workers to clients. For this reason, food handlers, health care workers, and child care providers must stay off work until they are cleared by the Medical Officer of Health.



Most foodborne illness can be avoided by following these simple food safety tips:

CLEAN:

Wash your hands frequently with soap and water.

- Before handling food or eating.
- After handling raw meats, using the toilet, touching pets/animals and changing diapers.

Wash counters, utensils, cutting boards, and other surfaces after they come into contact with raw meat.

COOK

- Cook all meats, poultry, and eggs to a proper internal temperature, as listed in the table.
- Keep all hot foods at 60°C (140°F) or more, to prevent the growth of bacteria.
- Use a kitchen thermometer to check cooking and storage temperatures.

CHILL

- Chill all leftovers promptly to keep them out of room temperature.
- Refrigerate all perishable foods at 4°C (40°F) or less, to prevent the growth of bacteria.
- Thaw frozen foods in a refrigerator, cold water, or a microwave oven, not at room temperature.

SEPARATE

- Use separate cutting boards for raw meats, and raw fruits and vegetables.
- Store raw meats below ready-to-eat foods, on lower refrigerator shelves, to prevent contamination caused by dripping.

Action	Temperature required
Refrigeration	4°C (40°F) or less
Freezing	Minus 18°C (0°F) or less
Cooking	
Food Mixtures containing Poultry, Eggs, Meat, Fish or other potentially hazardous foods	Internal Temperature of 74°C (165°F) for at least 10 minutes
Pork, Lamb, Veal, Beef (whole cuts)	Internal temperature of 70°C (158°F)
Rare Roast Beef	Internal temperature of 63°C (145°F) for 3 minutes
Poultry	Internal temperature of 85°C (185°F) for 15 seconds
Stuffing in Poultry	74°C (165°F)
Ground Meat	71°C (160°F)
Eggs	63°C (145°F) for 15 seconds
Fish	71°C (160°F)
Reheating	74°C (165°F)
Holding Hot Foods	60°C (140°F)
Cooling	60°C (140°F) to 20°C (68°F) within 2 hours 20°C (68°F) to 4°C (40°F) within 4 hours



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