

Under the microscope: Examining the dangers and prevention of food poisoning bacteria.

Ogawa Wang*

Department of Chemistry, University of Negeri Jakarta, Jakarta, Indonesia

Abstract

Food poisoning is a serious and often preventable illness that affects millions of people every year. The Centers for Disease Control and Prevention (CDC) estimates that roughly one in six Americans will experience some form of foodborne illness each year, with over 128,000 hospitalizations and 3,000 deaths. While food poisoning can be caused by a variety of factors, one of the most common culprits is bacteria. In this article, we will examine the dangers of food poisoning bacteria, the most common types of bacteria that cause food poisoning, and steps you can take to prevent it.

Keywords: Food poisoning, Foodborne illness, Salmonella, Escherichia coli, Campylobacter.

Introduction

The dangers of food poisoning bacteria

Food poisoning bacteria are harmful microorganisms that can cause illness when ingested. They can cause a range of symptoms, including nausea, vomiting, diarrhea, fever, and abdominal pain. In severe cases, food poisoning can lead to dehydration, kidney failure, and even death.

Certain populations are more vulnerable to food poisoning than others. Children, elderly individuals, pregnant women, and people with weakened immune systems are at a higher risk of developing severe illness from food poisoning [1].

Common types of food poisoning bacteria

There are many types of bacteria that can cause food poisoning, but some are more common than others. Here are some of the most frequently encountered types of food poisoning bacteria [2],

Salmonella: This type of bacteria is found in raw or undercooked meat, poultry, eggs, and dairy products. Symptoms usually develop within 12-72 hours of ingestion and can include diarrhea, fever, and abdominal cramps.

Escherichia coli (E. coli): This type of bacteria is found in undercooked ground beef, unpasteurized milk, and contaminated fruits and vegetables. Symptoms can range from mild diarrhea to severe abdominal cramps and kidney failure [3].

Campylobacter: This type of bacteria is commonly found in raw or undercooked poultry and can cause diarrhea, fever, and abdominal pain.

Listeria: This type of bacteria is found in deli meats, hot dogs, soft cheeses, and unpasteurized dairy products. Listeria can cause fever, muscle aches, and in severe cases, meningitis or blood infections [4].

Prevention of food poisoning

Fortunately, there are many steps you can take to prevent food poisoning from bacteria. Here are some guidelines:

Wash your hands: The most effective way to prevent the spread of bacteria is to wash your hands thoroughly and frequently, especially before handling food.

Cook food thoroughly: Cook meats to their appropriate temperature, and use a food thermometer to ensure that they are fully cooked.

Store food properly: Store food at appropriate temperatures, and separate raw meat from other foods to prevent cross-contamination.

Wash fruits and vegetables: Rinse produce thoroughly under running water, and use a scrub brush to clean harder-skinned produce.

Avoid high-risk foods: Avoid consuming raw or undercooked meats, unpasteurized dairy products, and raw or undercooked eggs.

Be mindful of food safety when eating out: Check the restaurant's health rating, and make sure that food is cooked thoroughly before eating [5].

Conclusion

Food poisoning from bacteria is a common and often preventable illness. By following basic food safety guidelines,

*Correspondence to: Ogawa Wang, Department of Chemistry, University of Negeri Jakarta, Jakarta, Indonesia, E-mail: ogawa@unj.ac.id

Received: 01-Mar-2023, Manuscript No. AAFMY-23-90245; Editor assigned: 04-Mar-2023, PreQC No. AAFMY-23-90245(PQ); Reviewed: 18-Mar-2023, QC No AAFMY-23-90245;

Revised: 22-Mar-2023, Manuscript No. AAFMY-23-90245(R); Published: 29-Mar-2023, DOI:10.35841/aafmy-7.2.139

you can greatly reduce your risk of becoming ill from food poisoning. Remember to always wash your hands, cook food thoroughly, and practice safe food handling and storage. By taking these steps, you can keep yourself and your loved ones safe from the dangers of food poisoning bacteria.

References

1. Agata N, Ohta M, Mori M, et al. *A novel dodecadepsipeptide, cereulide, is an emetic toxin of Bacillus cereus*. Microbiol Lett. 1995;129(1):17-9.
2. Aires GS, Walter EH, Junqueira VC, et al. *Bacillus cereus* in refrigerated milk submitted to different heat treatments. J Food Prot. 2009;72(6):1301-5.
3. Andersson A, Ronner U, Granum PE. What problems does the food industry have with the spore forming pathogens *B. cereus* and *Clostridium perfringens*? Int J Food Microbiol. 1995;28:145-155.
4. Asano S, Nukumizu Y, Bando H, ET AL. *Cloning of novel enterotoxin genes from B. cereus and B. thuringiensis*. Appl Environ Microbiol. 1997;63:1054–1057.
5. Ash C, Collins MD. Comparative analysis of 23S ribosomal RNA gene sequences of *Bacillus anthracis* and emetic *B. cereus* determined by PCR-direct sequencing. FEMS Microbiol Lett. 1992;94:75–80.