



What is Food Safety and Why is it Important?

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What is Food Safety?

Food safety is a scientific discipline describing handling, preparation, and storage of **food** in ways that prevent foodborne illness. This includes a number of routines that should be followed to avoid potentially severe health hazards.





What causes people to get sick?

Three Types of On-Farm Contamination

Biological, chemical, physical

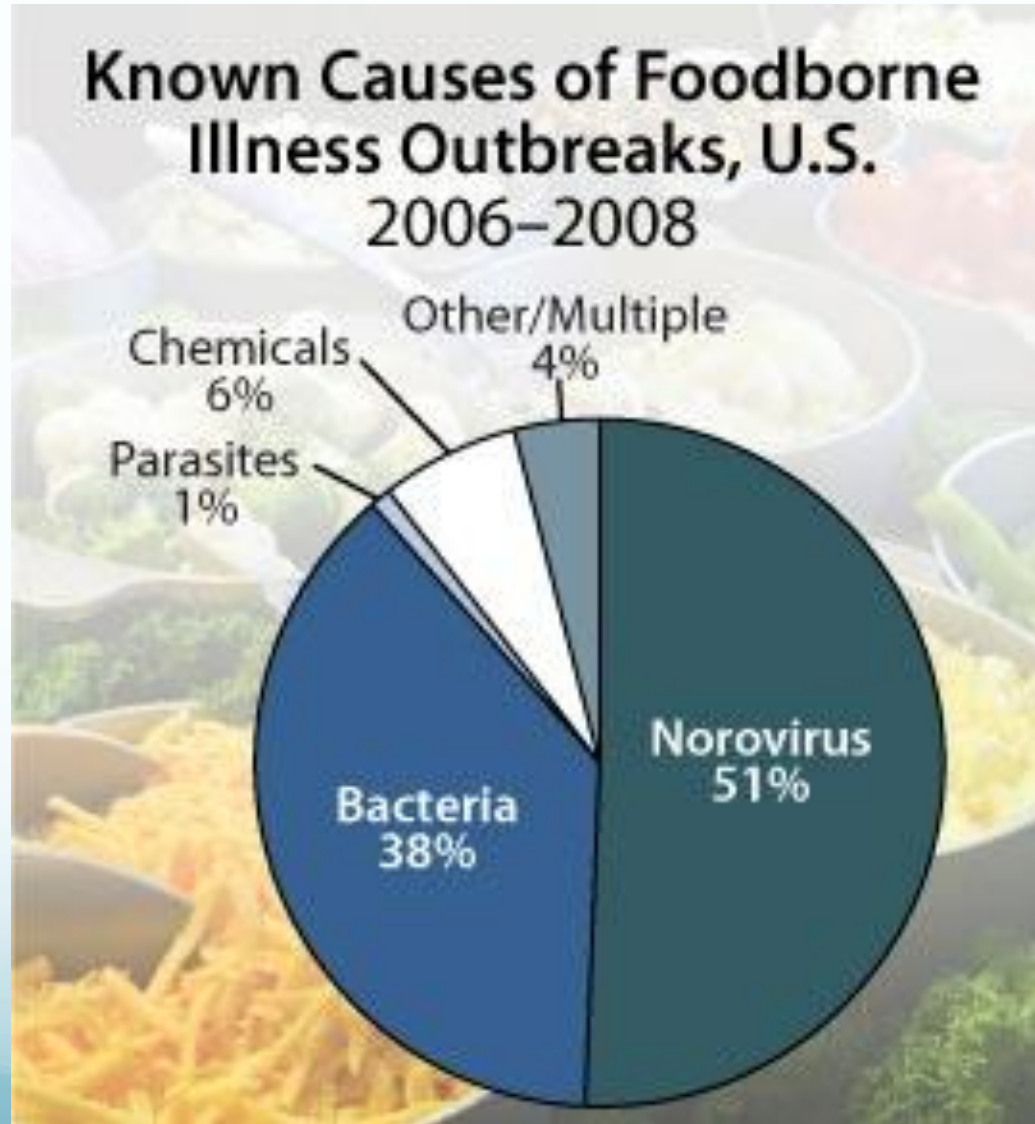


Foodborne Illness Outbreaks

- About 48 million people (1 in 6 Americans) get sick each year, 128,000 are hospitalized, and 3,000 die from foodborne diseases, (CDC).

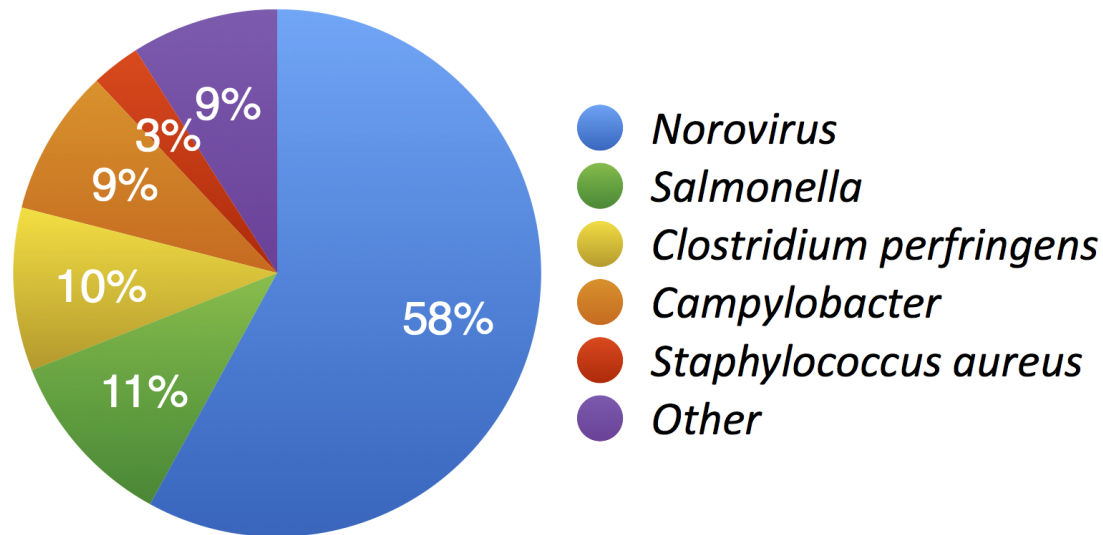


Primary Causes of Illness - CDC



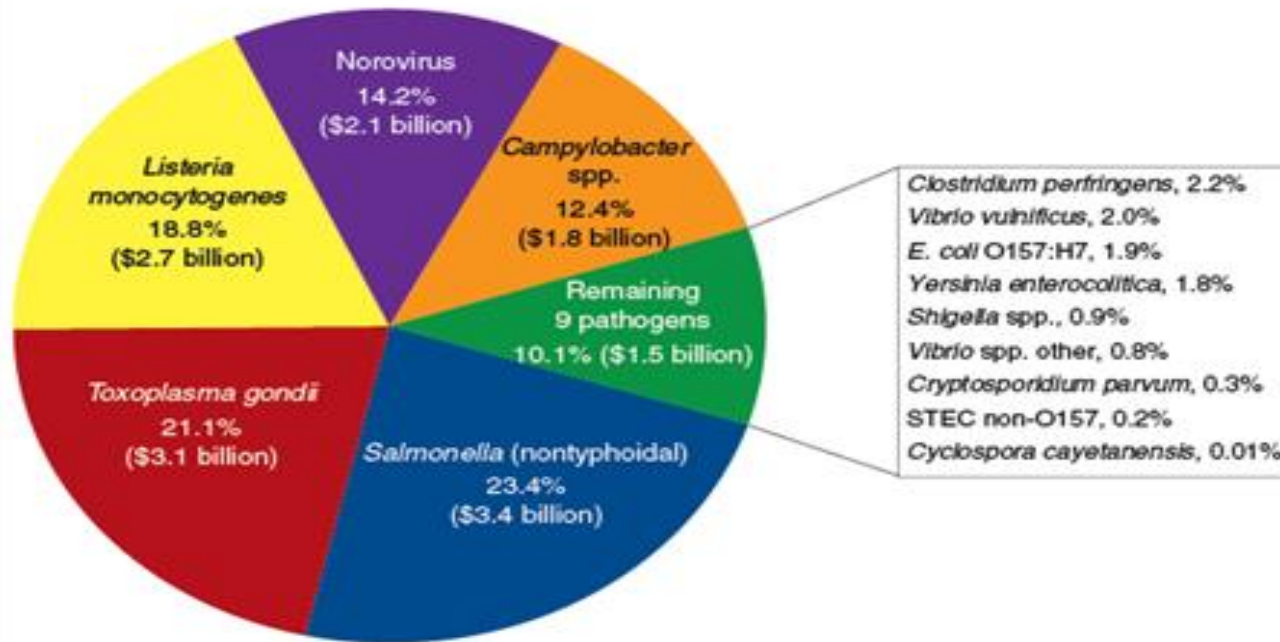
Norovirus sickens the most people

Foodborne Illness in the U.S., by Pathogen



Salmonella poses greatest cost (hospitalization, death)

Salmonella imposes the greatest cost of the 14 major foodborne pathogens



Note: Annual cost estimates are in 2010 dollars based on disease incidence estimates published in 2011.

Source: USDA, Economic Research Service.

Human Salmonella outbreaks linked to contact with live poultry have increased in recent years as more people keep backyard flocks. In 2016, a record number of illnesses were linked to contact with backyard poultry (895 infected, 209 hospitalized, 4 deaths) - CDC

Which is best?



HANDWASHING IS BEST!

- Washing hands well and often is the most important thing you can do to prevent **germs (bacteria, viruses, fungi)** from leading to infections and sickness.
- Hand sanitizers **do not** kill some common germs such as salmonella, e. Coli, MRSA (methicillin-resistant staphylococcus aureus) and [norovirus](#). - CDC



Where do these pathogens
(germs) come from?

Contamination in the Field: Small Strawberry Farm

- Locally grown berries in NW Oregon, 2011
- Strawberries tainted with E. coli O157:H7 Sicken 14, One Dies
- Sold at U-pick, farm stands, farmers markets
- High concentration of deer feces



Some outbreaks associated with infected workers

Date	Produce	Pathogen	# of cases	Produce origin
1987	raspberries	Hepatitis A virus	92	United Kingdom
1990	strawberries	Hepatitis A virus	53	United States
1994	green onions	Shigella	72	CA
1996	leaf lettuce	E. coli 0157:H7	49	United States
1997	strawberries	Hepatitis A virus	250	CA
1997	green onions	Cryptosporidium	55	United States
1997	basil	Cyclospora	341	United States
1998	green onions	Hepatitis A virus	43	United States/CA
1999	parsley	Shigella	486	United States
2003	parsley	enterohemorrhagic E. coli	77	United States

Summary: Why is food safety important?

- We do not want our customers to get sick.
- Fresh fruit and vegetable consumption has grown significantly
- Rise of foodborne illness (*Salmonella*, *E. coli* O157:H7; *Shigella*, *Listeria*)
- Protect reputation of urban farms
- Many buyers (schools, packing houses, grocery stores) are requiring farmers to have food safety programs.
- State legislation requiring food safety assurances

