


SafeBites
from FoodHandler

How to Prevent a Norovirus Outbreak at Your Foodservice Operation During Cold and Flu Season

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HealthyAndSafeFood.com



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Too Tough To Tame?

The leading cause of foodborne illness and endemic diarrhea in the US.

- Highly contagious
- Easily spread
- Long survival
- Hard to kill

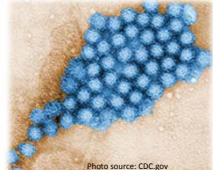


Photo source: CDC.gov


Hall, J Infect Dis. (2012) 205 (11): 1622-1624.

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Goals for Today

- Describe why norovirus is a concern in all types of foodservice operations
- Give examples of how norovirus is transmitted
- Apply key approaches for norovirus prevention and control

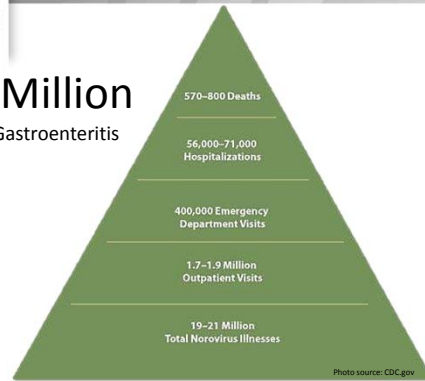


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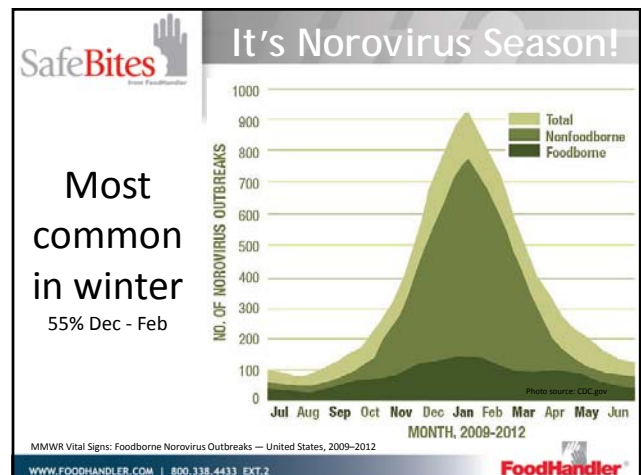
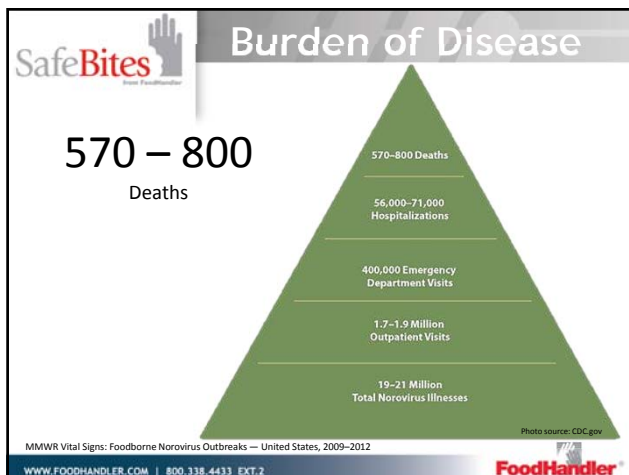
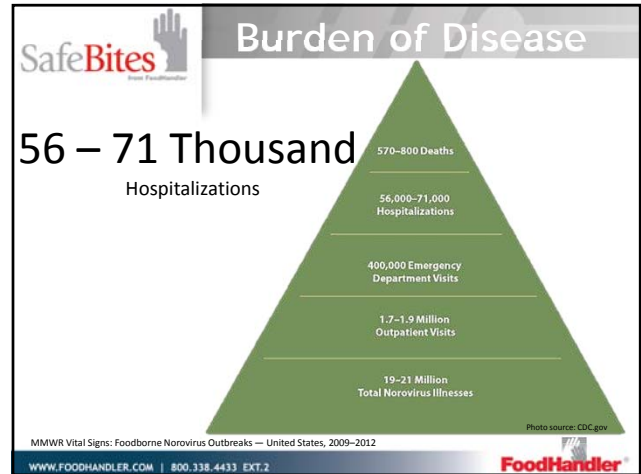
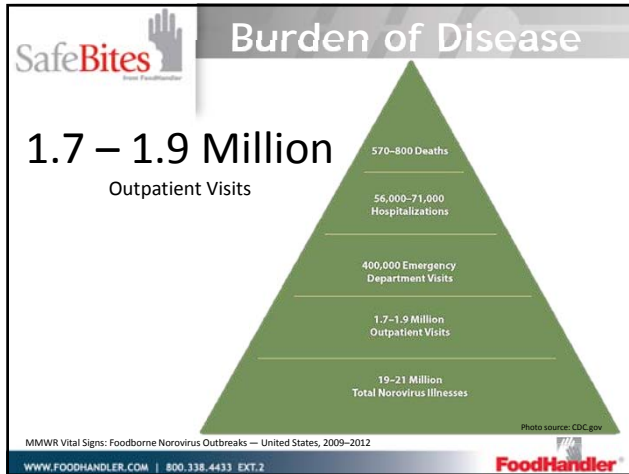
Burden of Disease

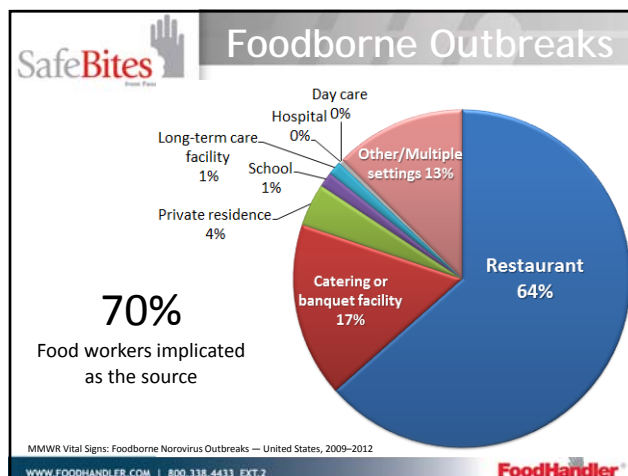
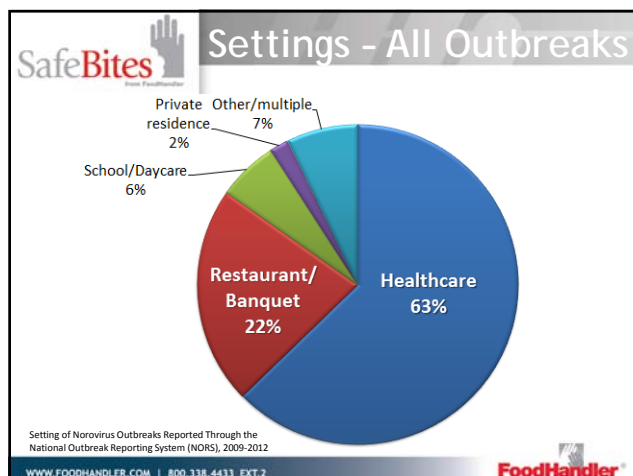
19 – 21 Million
Cases of Acute Gastroenteritis



MMWR Vital Signs: Foodborne Norovirus Outbreaks — United States, 2009–2012

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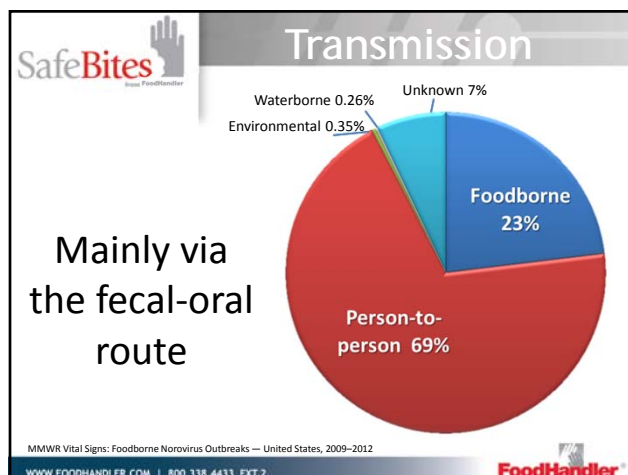


SafeBites Thought Question

Norovirus can spread in many ways.
What is the leading mode of transmission?

- A. Airborne particles
- B. Environmental surfaces
- C. Food
- D. Person-to-person
- E. Water

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Highly Contagious

5 – 100 Billion
Viral copies per gram of feces*

30 Million
Particles in a vomiting episode**

≥18 Viral Particles
Infectious Dose*

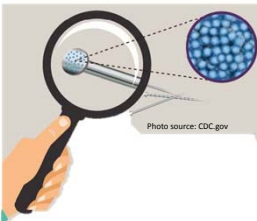


Photo source: CDC.gov

*Hall, J Infect Dis. (2012) 205 (11): 1622-1624. **PLoS One. 2015; 10(8): e0134277.

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Foodborne Outbreaks

92%
Contaminated during preparation

75%
Foods eaten raw

30% - Leafy vegetables
21% - Fruits
19% - Mollusks



MMWR Vital Signs: Foodborne Norovirus Outbreaks — United States, 2009–2012

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Contaminated Surfaces

2 – 4 Weeks
Survival on food contact surfaces



Food Environ Viral. 2014 Sep;5(3):182-8.

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Hard to Kill

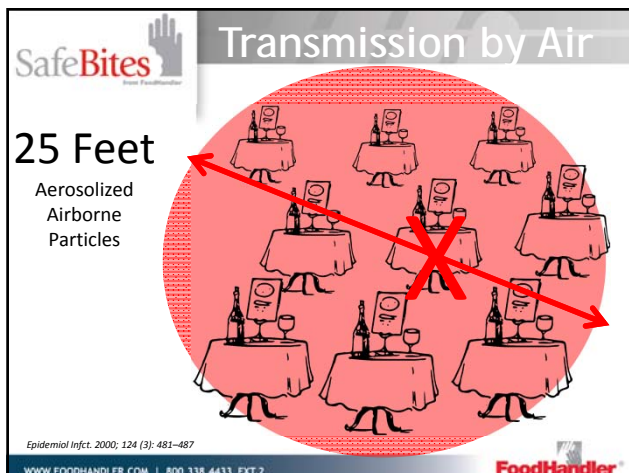
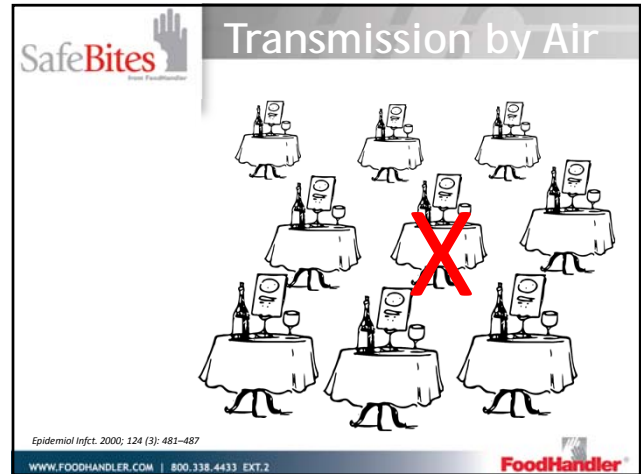
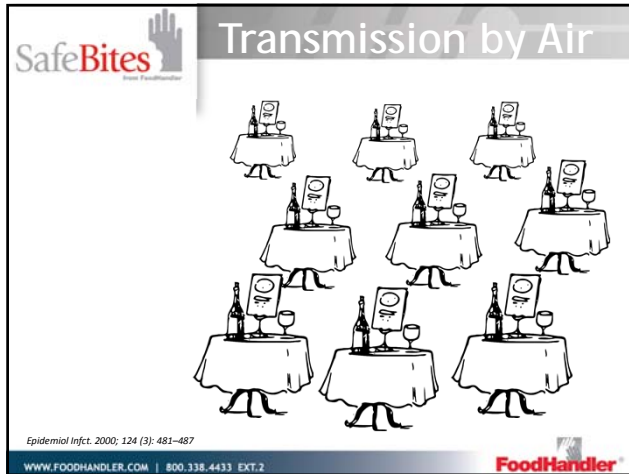
Sanitizers are ineffective.


Disinfectants are required -

- EPA List G: Registered Antimicrobials Effective Against Norovirus
 - http://www2.epa.gov/sites/production/files/2015-10/documents/list_g_norovirus.pdf
- Chlorine bleach (5.25% concentration)
 - 1000 – 5000 parts per million
 - (5-25 tablespoons per gallon)

www.CDC.gov/norovirus/Preventing-Infection.html

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SafeBites  **Too Tough To Tame?**

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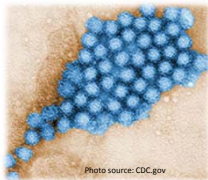


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SafeBites  **Prevention**



Hand Hygiene

Exclusion & Restriction

No Bare Hand Contact

Photo used with permission - TheCN.org

FDA - Employee Health and Personal Hygiene Handbook & 2013 FDA Food Code

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SafeBites  **Handwashing**

“Handwashing reduces the spread of pathogenic microorganisms that are transmitted through food.”

- Training
 - Initial and
 - Ongoing
- Monitoring
- Setting the example



FDA - Employee Health and Personal Hygiene Handbook & 2013 FDA Food Code

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SafeBites  **When to Wash**

- Before starting work & handling food or clean food contact surfaces
- After using the toilet
- Before gloving
- Between tasks
 - Raw to RTE
- When soiled*



FDA - Employee Health and Personal Hygiene Handbook & 2013 FDA Food Code

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SafeBites  **How to Wash**

- Dedicated sink
- Clean, running warm water
- Soap
- Friction
 - 10-15 seconds
- Rinse & dry



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SafeBites  **Is it Enough?**

“Proper handwashing can result in a 2-3 log reduction in transient bacteria and a 2-log reduction in transient viruses and protozoa.”


100,000,000

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SafeBites  **Is it Enough?**

“Proper handwashing can result in a 2-3 log reduction in transient bacteria and a 2-log reduction in transient viruses and protozoa.”

100,000,000 

vs. 18-100
Infective Dose

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Hand Sanitizers

Alcohol-based hand sanitizers –
 “Currently available products appear to be
relatively ineffective against norovirus.”



Liu et al., 2010. Appl Environ Microbiol, 76(2): 394-399
 J Food Prot. 2010 Dec;73(12):2232-8.
 Photo used with permission – healthyandsafe.com

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No Bare Hand Contact

Ready to Eat – Food that is

- eaten without further washing or cooking
- edible without additional preparation



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No Bare Hand Contact




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Employee Health

Report symptoms:



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- Vomiting*
- Diarrhea*
- Jaundice (yellowing)
- Sore throat with fever
- Cuts & infected wounds on the hands, wrists, or exposed portions of the arms
- A current diagnosis or recent exposure to a foodborne illness*

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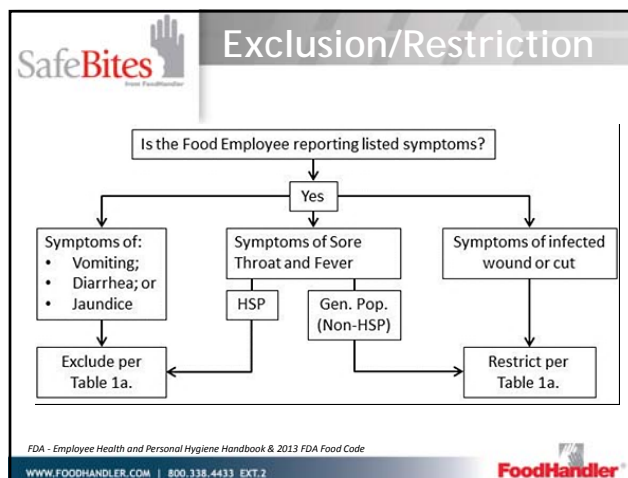
SafeBites Exclusion/Restriction

Restrict
Reassign – activities limited – cannot work with exposed food or clean food-contact surfaces

Exclude
Stay/send home – not permitted to work where food is received, prepared, stored, packaged, served, vended, transported, or purchased.

Food Code
 U.S. Public Health Service
2013

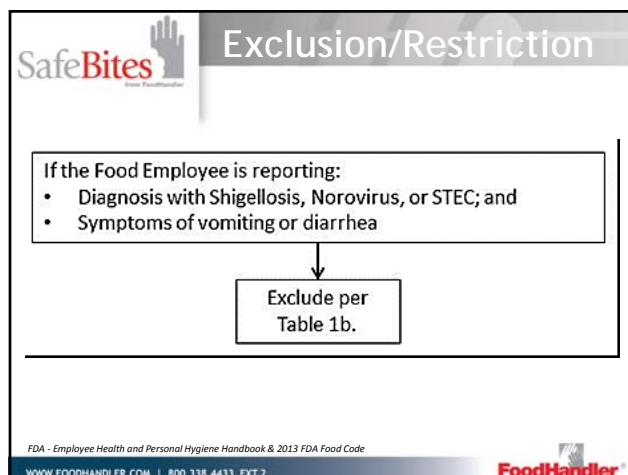
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SafeBites Exclusion/Restriction

Symptom	EXCLUSION OR RESTRICTION (Facilities Serving an HSP)	EXCLUSION OR RESTRICTION (Facilities Not serving an HSP)	Removing Symptomatic Food Employees from Exclusion or Restriction	RA Approval Needed to Return to Work?
Vomiting	EXCLUDE 2-201.12(A)(1)	EXCLUDE 2-201.12(A)(1)	When the excluded food employee has been asymptomatic for at least 24 hours or provides medical documentation 2-201.13(A)(1). Exceptions: If diagnosed with Norovirus, <i>Shigella</i> spp., STEC, HAV, or typhoid fever (<i>S. Typhi</i>) (see Tables 1b & 2).	No if not diagnosed
Diarrhea	EXCLUDE 2-201.12(A)(1)	EXCLUDE 2-201.12(A)(1)	When the excluded food employee has been asymptomatic for at least 24 hours or provides medical documentation 2-201.13(A). Exceptions: If Diagnosed with Norovirus, STEC, HAV, or <i>S. Typhi</i> (see Tables 1b & 2).	No if not diagnosed

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Exclusion/Restriction

Diagnosis	EXCLUSION (Facilities Serving an HSP or Not Serving an HSP)	Removing Diagnosed, Symptomatic Food Employees from Exclusion	RA Approval Needed to Return to Work?
Norovirus	EXCLUDE Based on vomiting or diarrhea symptoms, under 2-201.12(A)(2)	<ol style="list-style-type: none"> 1. Serving a non-HSP facility: 2-201.13 (A)(2)(a): Shall only work on a restricted basis 24 hours after symptoms resolve and remains restricted until meeting the requirements listed in No. 3. 2. Serving an HSP facility: 2-201.13(A)(2)(b): Remains excluded until meeting the requirements listed in No. 3. 3. <u>Restriction or Exclusion remains until:</u> <ul style="list-style-type: none"> • Approval is obtained from the RA 2-201.13(D), and • Medically cleared 2-201.13(D)(1), or • More than 48 hours have passed since the food employee became asymptomatic 2-201.13(D)(2) (also see Table 2). 	Yes to return to an HSP or to return unrestricted; not required to work on a restricted basis in a non-HSP facility (continued)

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Food Safety Basics

- Cook food, including shellfish, thoroughly
- Wash fruits and vegetables
- Clean and sanitize food contact surfaces




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Be Prepared

- Body fluid clean-up
 - Personal protective equipment
 - Cleaning aids
 - Disinfectant effective against norovirus



Photo used with permission - TheiCh.org

2013 FDA Food Code - Annex 3 2-501.11 Clean-up of Vomiting and Diarrheal Events
www.TheiCh.org/norovirus Food Marketing Institute: Norovirus Information Guide

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Resources

Food & Drug Administration

- Employee Health & Hygiene
 - Handbook, Interactive DVD, Satellite Broadcast
- FDA Food Code
 - Annex 3 – 2-201.11 Reporting of Symptoms
 - Annex 3 – 2-201.12 Exclusions & Restrictions
 - Annex 3 – 2-201.13 Removal of Exclusions & Restrictions
 - Annex 3 – 2-3 Hands and Arms (Cleaning)
 - Annex 3 – 3-301.11 Preventing Contamination from Hands
 - Annex 3 – 2-501.11 Clean-up of Vomiting & Diarrheal Events



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ICN Resource Kit

INSTITUTE OF child nutrition
RESOURCES • TRAINING • RESEARCH

- Training video (18 minute)
- Trainer & participant manuals
- Mini posters & fact sheets
- Standard operating procedures
- Online courses



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CDC.gov/norovirus

CDC Centers for Disease Control and Prevention
CDC 24/7: Saving Lives. Protecting People. Saving Money through Prevention.

ABOUT NOROVIRUS
Overview about the virus, how it spreads, symptoms, treatment...

PREVENTING NOROVIRUS INFECTION
You can help protect yourself and others from norovirus infection by following some simple tips...

FOR FOOD WORKERS
Information about how norovirus spreads through contaminated food and water...

FOR HEALTH CARE PROVIDERS
Clinical features, transmission, diagnosis, disease burden, treatment...

FOR PUBLIC HEALTH PROFESSIONALS
Information about burden of norovirus illness and outbreaks, surveillance & reporting, investigations...


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Questions?

How to Prevent a Norovirus Outbreak at Your Foodservice Operation During Cold and Flu Season

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