

### ABBREVIATED COMPENDIUM OF ACUTE FOODBORNE GASTROINTESTINAL DISEASES

ETIOLOGIC AGENT	INCUBATION*	SYMPTOMS	CHARACTERISTIC FOODS
<b>I. Diseases typified by vomiting after a short incubation period with little or no fever</b>			
<i>Bacillus cereus</i> (vomiting)	0.5 - 6 hours	N,V,AC D occasionally	Boiled or fried rice
<i>Staphylococcus aureus</i>	2 - 4 hours (0.5 - 8 hours)	N,AC,V,D F may be present	Ham, beef, and poultry, cream filled pastries, custard, high protein leftover foods
Heavy metals such as arsenic, cadmium, copper, mercury, lead, zinc	<1 - 6 hours	N,V,C,D	High acid food/beverages stored or prepared in containers coated, lined, or contaminated with the offending metal
<b>II. Diseases typified by diarrhea after moderate to long incubation period, often with fever</b>			
<i>Bacillus cereus</i> (diarrhea)	6 - 24 hours	AC,WD V occasionally	Custards, cereal products, meat loaf, sauces, refried beans, dried potatoes
<i>Campylobacter jejuni</i>	2 - 5 days (1 - 10 days)	D,BD,AC,F,N,V	Raw milk, poultry, water, raw clams, beef liver
<i>Clostridium perfringens</i>	8 - 12 hours (6 - 24 hours)	AC,WD (V,F rare)	Inadequately heated or reheated meats, meat pies, stews, gravy, sauces, refried beans
Enterotoxigenic <i>Escherichia coli</i> (ETEC)	10 - 12 hours (LT-only/ST-only) 24 - 72 hours (LT & ST present)	AC,WD	Uncooked vegetables, salads, water
Enterohemorrhagic <i>Escherichia coli</i> (O157:H7, STEC, VTEC)	3 - 4 days (2 - 10 days)	BD,AC,D,H F infrequent	Undercooked beef and ground beef, raw milk, grocery produce, soft cheese, water
Norovirus	24 - 48 hours (10 - 50 hours)	N,V,AC,D,WD,F	Frostings, fecally contaminated ready-to-eat foods, clams, oysters, water
<i>Salmonella</i> spp. (non-typhoid)	12 - 72 hours (6 hrs - 7 days)	D,AC,F,H V occasionally	Poultry, egg products, meat, raw milk, produce, etc.
<i>Shigella</i> spp.	1 - 3 days (1 - 7 days)	AC,F,D,BD,WD,N V occasionally	Fecally contaminated foods, salads, cut fruit, water
<i>Vibrio cholerae</i>	24 - 72 hours (few hours - 5 days)	WD	Raw fish or shellfish, crustacean, water, fecally contaminated foods
<i>Vibrio parahaemolyticus</i>	12 - 24 hours (4 - 96 hours)	AC,WD,N,V,F,H BD occasionally	Marine fish, shellfish, crustacean (raw or contaminated)
<i>Yersinia enterocolitica</i>	4 - 6 days (1 - 14 days)	F,D,AC,V (may mimic appendicitis)	Raw milk, tofu, water, undercooked pork
<b>III. Others</b>			
<i>Clostridium botulinum</i>	12 - 48 hours (6 hours - 8 days)	N,V,D, blurred vision, descending paralysis	Canned low-acid foods, smoked fish, cooked potatoes, marine mammals
<i>Cryptosporidium</i> spp.	7 days (2 - 14 days)	WD,AC,N,V,F	Water, foods fecally contaminated
<i>Giardia intestinalis</i>	7 - 10 days (3 - 25 days)	AC,D,WD, fatty stools, bloating	Water, foods fecally contaminated
Hepatitis virus (HAV)	28 - 30 days (15 - 50 days)	F,N,D, anorexia, jaundice	Raw shellfish, cold foods fecally contaminated, water
Scombroid fish poisoning	Few minutes - 1 hour	H,N,V, flushing, dizziness, burning of mouth and throat	Temperature abused fish (tuna, mahi mahi, bluefish, mackerel, marlin, bonita)

AC = cramps; D = diarrhea; BD = bloody diarrhea; WD = watery diarrhea; F = fever; H = headache; N = nausea; V = vomiting; LT/ST = heat-labile/ heat-stable exotoxin.

\*Incubation times are derived from:

1. Heymann DL. Control of Communicable Diseases Manual (19th Ed.). Washington, D.C.: American Public Health Association, 2008.

2. Red Book: Report on the Committee on Infectious Diseases (28th Ed.). Elk Grove, IL: American Academy of Pediatrics, 2009.

3. Centers for Disease Control and Prevention website: [www.cdc.gov](http://www.cdc.gov)

For a more complete list of disease agents and additional information, see Appendix 2, CIFOR Guidelines for Foodborne Disease Outbreak Response (2nd Ed.), Atlanta: Council of State and Territorial Epidemiologists, 2009.