

## Food Borne Illnesses

(WI DHFS Food and Waterborne Disease Outbreak Investigation Manual 4/98  
form: dfs-3019-0802 August 2002 #18)

### **Bacillus cereus**

A. Vomiting Type; **Foods Usually Involved:** boiled or fried rice; **Onset:** 1-6 hours; **Symptoms:** Vomiting, nausea, occasional diarrhea;

B. Diarrheal Type; **Foods Usually Involved:** Custards; sauces; meatloaf; cereal products, refried beans, dried potatoes; **Onset:** 4-16 hours;

**Symptoms:** Diarrhea, abdominal cramps

**Prevention:** Do not hold prepared foods at room temperatures; refrigerate quickly after preparation; chill rapidly; keep dry food and mixes dry

### **Clostridium botulinum (botulism)**

**Foods Usually Involved:** Inadequately processed, usually home-canned low acid foods, smoked fish, cooked potatoes; **Onset:** 2 hours – 8 days;

**Symptoms:** blurred or double vision, difficulty in swallowing, speaking and breathing, dry mouth, vomiting, constipation

**Prevention:** Toxin destroyed by boiling; cook foods thoroughly; do not hold prepared foods at room temperature; do not use dented cans of food.

### **Clostridium perfringens**

**Foods Usually Involved:** Inadequately heated or reheated meats, meat pies, stews, gravy, sauces, refried beans **Onset:** 6-24 hours **Symptoms:** Diarrhea, colic, nausea, gas

**Prevention:** Thoroughly cook food; reheat food to 165 degrees F; do not hold prepared foods at room temperature; chill rapidly; refrigerate at 41 degrees F or less; hold at 140 degrees F or greater

### **Staphylococcus aureus**

**Foods Usually Involved:** Ham, meat & poultry; cream filled pastries, custard, high protein leftover foods **Onset:** 1-8 hours; **Symptoms:** Abdominal cramps, nausea, vomiting, diarrhea, chills, headache, weakness, dizziness

**Prevention:** Cook foods thoroughly; do not hold prepared foods at room temperatures; chill rapidly; hold hot at 140 degrees F or more; keep hands clean and skin sore free.

### **Campylobacter jejuni**

**Food Usually Involved:** Unpasteurized milk; poultry, water, raw clams;

**Onset:** 1-10 days; **Symptoms:** Abdominal cramps, (bloody) diarrhea, fever, and headache

**Prevention:** Cook foods thoroughly; use boiled or treated water; drink pasteurized milk.

### **Escherichia coli (Shiga-toxin)**

**Foods Usually Involved:** Under-cooked or raw ground beef; unpasteurized milk, soft cheese, water, uncooked vegetables; **Onset:** 10-12 hours;

**Symptoms:** Abdominal cramps, (bloody) diarrhea, fever, vomiting

**Prevention:** Cook foods thoroughly; avoid cross-contamination; clean hands and food equipment after handling raw foods; cook ground beef to 155 degrees F.

### **Shigella**

**Foods Usually Involved:** Salads, cut fruit, water **Onset:** 12-96 hours;

**Symptoms:** Diarrhea, fever, nausea, vomiting, abdominal cramps

**Prevention:** Strict cleanliness when handling food; thorough cooking; proper refrigeration

### **Listeria**

**Foods Usually Involved:** Milk products, unwashed vegetables, raw or improperly processed wild and domestic meats; **Onset:** 1 day to 3 weeks;

**Symptoms:** Nausea, vomiting, headache, fever, chills, backache, can cause miscarriage in pregnant women

**Prevention:** Use only pasteurized dairy products; avoid eating unwashed vegetables or raw meats; cook meats thoroughly; keep facilities clean and dry; will grow at refrigerated temperatures

### **Salmonella (Non-typhoid)**

**Foods Usually Involved:** Inadequately cooked poultry, eggs or food containing them; meat, unpasteurized milk **Onset:** 12-72 hours; **Symptoms:**

Abdominal pain, fever, nausea, headache, vomiting

**Prevention:** Thorough cooking of food to 165 degrees F; clean hands; sanitized utensils and surfaces; prompt refrigeration; avoid cross-contamination

### **Calicivirus (Norwalk virus)**

**Foods Usually Involved:** Cold food fecally contaminated by infected handler, polluted water, oysters, clams, frosting **Onset:** 10-51 hours;  
**Symptoms:** Nausea, vomiting, diarrhea, abdominal cramps, muscle aches, headaches, low-grade fever  
**Prevention:** Wash hands with soap thoroughly cook foods; chill rapidly; refrigerate at 41 degrees F or less; hold at 140 degrees F or greater, good hand washing practices

### **Vibro Cholerae**

**Foods Usually Involved:** Raw oysters and shellfish; **Onset:** Few hours to 5 days; **Symptoms:** sudden onset of profuse watery diarrhea, rapid dehydration, vomiting  
**Prevention:** Purchase seafood from an approved/reputable source

### **Scrombroid Toxin (Histamine)**

**Foods Usually Involved:** Histamine produced by bacteria in some fish when they are time-temperature abused **Onset:** 1 minute to 3 hours;  
**Symptoms:** flushing, headache, dizziness, burning of the mouth and throat, upper & lower gastrointestinal symptoms, rash and itching  
**Prevention:** Cooking does not destroy this histamine as a result of time-temperature abuse during the harvesting process. It is important to purchase fish from an approved/reputable source

### **Hepatitis A**

**Foods Usually Involved:** Raw shellfish, cold food fecally contaminated by infected handler, polluted water; **Onset:** 15-50 days **Symptoms:** Fever, abdominal discomfort, nausea, jaundice  
**Prevention:** Wash hands with soap; good hygiene; use foods from approved sources; cook seafood; use boiled or treated water

### **Giardia lamblia**

**Foods Usually Involved:** Fecally contaminated fruits, produce or water;  
**Onset:** 2-25 days; **Symptoms:** Diarrhea, abdominal cramps, bloating, weight loss, malabsorption; infected persons may be asymptomatic  
**Prevention:** Use sanitary chlorinated water supplies; food employees must practice good hand washing and personnel hygiene; wash raw produce

## **Cryptosporidium parvum**

**Foods Usually Involved:** Fecally contaminated fruits; produce and water;

**Onset:** 2-12 days; **Symptoms:** Profuse watery diarrhea, abdominal cramps, nausea, low grade fever, anorexia, vomiting

**Prevention:** Food employees must practice good hand washing and personnel hygiene; wash raw produce, use a sanitary water supply