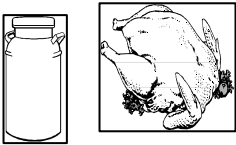
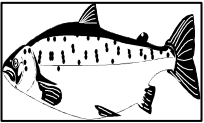

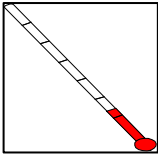


MIDWEST MEMO

INFORMATION TO KEEP YOU "IN THE KNOW"

A Service of Midwest Laboratories - 13611 B Street - Omaha, NE 68144 - (402) 334-7770

Food Poisoning Facts

Organism	Foods Implicated in Outbreaks	Symptoms of Illness Produced	Preventative Measures
Campylobacter Jejuni 	Unpasteurized milk, untreated water, raw or undercooked poultry.	Onset: 2-10 days after ingestion. Symptoms: diarrhea and stomach pains which may be accompanied by vomiting and fever.	Do not drink unpasteurized milk or water from streams or lakes. Thoroughly cook poultry. Clean cutting surfaces that come into contact with raw poultry to avoid contamination.
Ciguatoxin 	Reef fish such as barracuda, grouper, red snapper, seabass, etc. Fish acquire the toxin by feeding on algae.	Onset: 2-8 hours after eating. Symptoms: Stomach discomfort followed by tingling of lips, tongue, or extremities. Cold objects feel hot or painful.	Large reef fish are more likely to be toxic. Never eat barracuda. Cooking does not inactivate this toxin.
Clostridium botulinum 	Home canned foods are the primary culprits.	Onset: 12-48 hours after eating. Symptoms: Dry mouth, double vision, difficulty focusing, breathing, speaking, & swallowing. May experience nausea, vomiting, stomach cramps, and diarrhea. Seek treatment, very deadly illness.	Follow guidelines for home canning food products. Do not eat foods from leaking, bulging, or damaged cans or jars, or from containers that spurt liquid when opened. Heating foods to at least 165°F before serving will inactivate this toxin.
Clostridium perfringens 	Meat products and poultry. Clostridium perfringens often strikes food served in quantity and left for long periods on a steam table or at room temperature.	Onset: 9-15 hours after ingestion. Symptoms: diarrhea and stomach pains which may be accompanied by vomiting and fever.	Keep hot foods hot (above 140°F) and cold foods cold (at or below 40°F). Thorough and even cooking, and thorough reheating of leftovers are necessary to kill this bacteria and prevent its growth.

Escherichia coli 0157:H7 (Hemorrhagic E.coli)

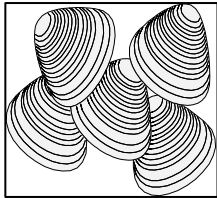


Raw or rare ground beef, unpasteurized milk, raw roast beef.

Onset: 3-8 days after eating.
Symptoms: Severe stomach cramps, diarrhea (often bloody), vomiting, and nausea. Often requires hospitalization.

Thoroughly cook ground beef and hamburgers. Do not drink unpasteurized milk.

Hepatitis A

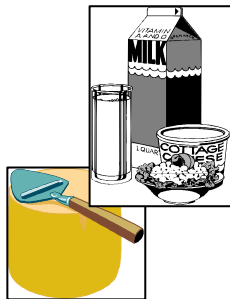


Shellfish (oysters, clams, mussels, and scallops) from waters polluted by sewage. Food may also become contaminated when a food handler has not washed hands after using the restroom.

Onset: 2-6 weeks after eating.
Symptoms: Lethargy, appetite loss, nausea, vomiting, and fever. After 3-10 days patient develops jaundice with darkened urine and light stools. Severe cases can cause liver damage and death.

Thoroughly cook shellfish. If you have hepatitis A, avoid preparing food for others.

Listeria monocytogenes

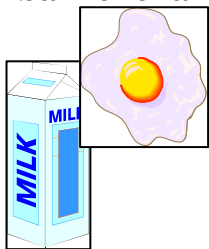


Unpasteurized milk, raw and processed meat, raw seafood, soft cheese, and coleslaw.

Onset: Several days to up to 6 weeks after ingesting.
Symptoms: Fever, shills, headache, backache, vomiting, & diarrhea. In infants, respiratory distress, vomiting, and refusal to drink. Can cause spontaneous abortions/stillbirths.

Do not drink unpasteurized milk or products made from unpasteurized milk. Thoroughly cook all meat and seafood. Thoroughly reheat frozen or refrigerated processed meat and poultry products.

Salmonella

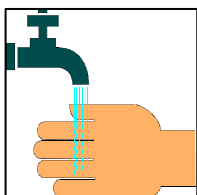


Eggs, raw or undercooked meats and poultry, and unpasteurized milk.

Onset: 6-48 hours after eating.
Symptoms: Diarrhea and stomach pain, often accompanied by nausea, chills, fever, and headache.

Thoroughly cook meat, poultry and eggs. Do not drink unpasteurized milk or eat products with raw eggs. Clean hands, utensils, cutting boards, and other surfaces that touch raw meat, poultry, or eggs.

Shigella

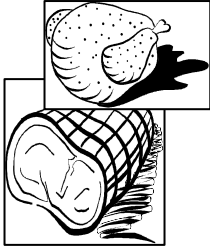


Salads such as potato, macaroni, egg, and meat. Foods become contaminated when a food handler has not washed hands after using the bathroom.

Onset: 1-6 days after ingestion.
Symptoms: Stomach cramps, diarrhea (may be bloody), and fever. May be serious in infants, the elderly, and persons with compromised health.

Always wash hands thoroughly after using the restroom. Refrigerate foods promptly after serving.

Staphylococcus aureus

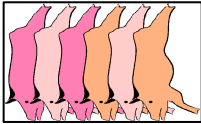


Ham , poultry, and high protein foods. Salads (such as macaroni) and cream-filled pastries.

Onset: 30 minutes to 6 hours after eating.
Symptoms: Stomach pain or nausea, followed by vomiting and possibly diarrhea, occasionally fever, chills, headache, weakness, and dizziness.

Staphylococcus bacteria are commonly found on the skin and in nasal passages of human beings. Wash hands before preparing food. Cook food thoroughly and promptly refrigerate cooked foods in covered containers. Do not leave foods at room temp > 2 hours.

Trichinella spiralis



Raw or undercooked pork or pork products, or game meat.

Onset: 8-15 days after ingestion.
Symptoms: Fever, muscular pain, weakness, and swelling around eyes.

Cook pork and game to 160°F.

Vibrio



Shellfish, especially those harvested from warm water.

Onset: 2-10 days after ingestion.
Symptoms: Most infections cause diarrhea. Some Vibrio strains may cause high fever, chills, and skin blisters and may require the victim to be hospitalized.

Do not eat raw shellfish, especially oysters.

Yersinia enterocolitica



Raw or undercooked pork, unchlorinated water, and unpasteurized milk.

Onset: 1-7 days after eating.
Symptoms: Stomach pain (in lower right side), fever, and diarrhea; sometimes vomiting. Children are at greatest risk.

Thoroughly cook pork. Clean all surfaces that touch raw pork to avoid spreading infection.

Midwest Labs also offers testing for common food pathogens. In addition, our popular food screen package is discounted from individual testing fees and includes several of the organisms outlined in this information capsule.