

FOOD SAFETY IN PREGNANCY

Why do pregnant women have to be concerned about food safety?

- During pregnancy, changes in hormones cause a woman's immune system to become suppressed, so that it is harder to fight off infections.
- Therefore pregnant women are at increased risk for some types of food-borne illness.
- Some food-borne pathogens can cause illnesses that may result in miscarriage, stillbirth or serious health problems for the baby after birth.

Examples of pathogens of special concern to pregnant women are *Listeria monocytogenes*, *Toxoplasma gondii*, *Brucella* species, *Salmonella* species and *Campylobacter jejuni*. Certain organisms including *Listeria monocytogenes*, *Toxoplasma gondii*, *Salmonella typhi* and *Campylobacter jejuni*, can cross the placenta and increase the fetus's risk of becoming infected. Infection can result in miscarriage, stillbirth, premature labor or severe complications for the baby.

1. Listeriosis

Listeriosis is a rare but serious infection that is caused by consuming a type of bacterium called *listeria monocytogenes* (commonly called *listeria*) that is sometimes found in food, water and soil. You can only catch listeriosis if you eat a food contaminated with the bacteria, not by touching it. Foods typically associated with listeriosis have a long shelf life and are eaten without further cooking. Outbreaks have involved foods such as coleslaw, soft cheeses, raw milk, pâté, pork tongue, hot dogs, processed meats and deli salads or any ready-to-eat processed foods that have not been heated to proper temperatures before serving.

Pregnant women are at far greater risk of developing listeriosis than most adults. A woman who develops listeriosis during the first three months of pregnancy may miscarry. If she develops the infection later in the pregnancy, she can pass the infection onto her fetus, resulting in premature delivery, stillbirth or a very sick newborn.

- When a listeriosis infection occurs during pregnancy, antibiotics given promptly to the pregnant woman can often prevent infection of the fetus or newborn.
- Symptoms usually appear within 2 to 30 days and up to 70 days after eating contaminated food.

Testing for listeriosis should only be done on individuals who are displaying symptoms, therefore it is important that if you have a persistent fever with any of the following symptoms that you contact your health care provider immediately:

- nausea;
- vomiting;
- headache;
- constipation;
- diarrhea; and,
- stiff neck.

2. Salmonellosis

Salmonellosis is a common form of food infection that may result when foods containing *Salmonella* bacteria are eaten. The bacteria are spread through direct or indirect contact with the intestinal contents or waste of animals, including humans. *Salmonella* bacteria do not grow at refrigerator or freezer temperatures and are easily destroyed by heating foods to 165 degrees F.

Symptoms of salmonellosis include headache, diarrhea, abdominal pain, nausea, chills, fever and vomiting; these usually appear within 12 to 36 hours after eating the contaminated food. Foods most often involved include raw (unpasteurized) milk and raw milk products, raw or undercooked meat and poultry, raw or undercooked eggs, raw sprouts (alfalfa, clover, radish, broccoli), salads (including chicken, tuna, potato), and cream desserts and fillings.

To avoid infection from *Salmonella* bacteria, pregnant women should follow general safe food handling practices, including washing hands often with hot, soapy water, especially after using the bathroom and before and after handling food. Hands and working surfaces should be thoroughly washed after contact with raw meat, fish, poultry, and foods that will not undergo further cooking. Fresh fruits and vegetables should be rinsed well before eating, and food such as raw milk and raw milk products, raw or undercooked eggs, raw sprouts, raw or undercooked meat and poultry, and unpasteurized fruit juices should be avoided.

3. Toxoplasmosis

Toxoplasmosis, the infection caused by the parasite *Toxoplasma gondii*, can be passed to humans by water, dust, soil, or through eating contaminated foods. Toxoplasmosis can be caught by touching contaminated foods, as the parasites can enter your system through broken skin, such as cuts and grazes.

Cats are the main host for *T. gondii*, and the only host where the parasite can complete its life cycle. *T. gondii* may be carried in the fur or feces of cats and then passed to other animals and people. If an animal becomes infected and its meat is then eaten raw or undercooked, the parasite is passed to the human or animal that consumes the meat. Hundreds of thousands of people become infected with *T. gondii* each year. Most individuals do not experience recognizable symptoms, and will develop a protective resistance to the parasite. However, if a woman not previously exposed to *T. gondii* first acquires the parasite a few months before or

during pregnancy, she may pass the organism to the fetus. This could result in stillbirth, early prenatal death, or serious health problems for the baby after birth such as eye or brain damage. Symptoms in the baby may not be visible at birth, but can appear months or even years later.

If symptoms of infection with *T. gondii* do appear in the pregnant woman, they usually appear about 10 days after exposure to the parasite and include a low grade fever with rash, muscle aches, headache and possibly swelling of the lymph nodes. Infection may be confirmed by a blood test and treated with antibiotics. Prompt treatment of the mother with antibiotics reduces the risk of passing the parasite to the fetus, but cannot change the course of the disease once the fetus has been exposed.

Toxoplasmosis most often results from eating raw or undercooked meat, eating unwashed fruits and vegetables, cleaning a cat litter box or handling contaminated soil. To avoid infection from *T. gondii* it is important that pregnant women practice safe food handling procedures such as washing all surfaces, cutting boards and utensils with hot, soapy water, especially those that come in contact with raw meat. Pregnant women should wash hands often, especially after handling animals or working in the garden, avoid eating raw or undercooked meat (particularly mince meat, mutton and pork), and if they own or take care of a cat, make sure the litter box is changed every day, preferably by a friend or family member.

Safe food handling

These guidelines can help you store, handle and cook foods properly:

Hand-washing and more....

- Always wash your hands thoroughly before and after handling food.
- Carry chilled convenience foods home in an insulated bag or box if you can. If they warm up too much during the journey, bacteria may begin to multiply.
- Always use foods by their "use by" date; this way any bacteria that the foods do contain may not have multiplied to dangerous levels.
- Clean and sanitize the refrigerator produce drawer regularly.
- Thoroughly rinse fresh fruits and vegetables under running water for one minute.
- Or soak fruits and vegetables in a solution of equal parts white vinegar and water for 1-2 minutes and rinse well, before eating. The acetic acid in the vinegar helps to remove the pesticide residues and waxes found on many fruits and vegetables.

- Buy fish and shellfish from reputable sources. Be wary of people selling seafood out of the boot of their car.
- When you're shopping, pick up fish and shellfish last and take it straight home. Fish and shellfish go off very quickly when they're out of the fridge.

Avoid Cross-Contamination

- Wash all surfaces, cutting boards and utensils with hot, soapy water, especially those that come in contact with raw meat, seafood or poultry.
- Keep cooked and ready-to-eat foods separate from raw meat, poultry, seafood and their juices.
- Don't buy cooked or ready-to-eat fish or shellfish that is touching raw fish or shellfish because cooked and raw food should always be kept separate.
- Thaw meats on a separate tray or plate in the refrigerator to prevent meat juices from dripping into produce drawers.
- If possible use separate cutting boards, knives, plates, etc. for preparing raw and cooked ready-to-eat food.
- If you're marinating seafood, put it in the fridge and throw the marinade away after removing the raw fish or shellfish. If you want to use the marinade as a dip or sauce, set some aside before it touches the raw fish.
- Wash hands with soap and warm running water after handling raw foods.

Keep Foods at Safe Temperatures

- Keep the temperature inside your refrigerator at less than 5 degrees C/ 41 degrees F.
- Store eggs and other perishable foods in the refrigerator.
- Use perishable foods that are pre-cooked or ready-to-eat as soon as possible. If the food cannot be eaten within 4 days, it is best to freeze or discard it.

Re-heating Food

- Follow the instructions on reheating foods carefully. Thorough reheating will kill listeria bacteria and toxoplasma parasite. If you are using an oven, allow time for it to warm up. If you are using a microwave, check you are using the cooking times appropriate to your microwave's power level.
- Always follow instructions about standing times or stirring if necessary; this helps to distribute the heat evenly and before eating food, check that the middle is piping hot.