

THE DANGERS OF DRINKING RAW MILK—FOOD SAFETY DURING

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The doctors and staff at Eastview wish you all a Happy and Healthy 2012!

As you may recall, last month we discussed synthetic reproductive hormones and milk safety. Below is Part 2 of our discussion on milk safety in regards to the danger of drinking raw milk during pregnancy.

The following is a nice, comprehensive, explanation of the importance of food safety during pregnancy that also addresses the dangers of drinking raw milk. It has been condensed from a public information handout from the Colorado State University Extension Service (Updated 8/29/2011):

FOOD SAFETY DURING PREGNANCY

BY J. DEAN AND P. KENDALL¹ (DECEMBER 2006)

Quick Facts...

- During pregnancy, changes in hormones cause a woman's immune system to become suppressed, so that it is harder to fight off infections.
- Some food-borne illnesses can cause a woman to have a miscarriage, stillbirth or serious health problems for the baby after birth.
- Pathogens are organisms (bacteria, virus, parasite) that can cause illness in humans.

Examples of pathogens of special concern to pregnant women are *Listeria monocytogenes*, *Toxoplasma gondii*, *Brucella* species, *Salmonella* species and *Campylobacter jejuni*. **Certain organisms 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.** Certain organisms, including *Listeria monocytogenes*, *Toxoplasma gondii*, *Salmonella typhi* and *Campylobacter jejuni*, can have adverse consequences for the fetus if they cross the placenta.

Listeriosis

Listeriosis is a form of infection that may result when foods containing the bacteria *Listeria monocytogenes* are consumed. *L. monocytogenes* is widely distributed in nature and is found in soil, ground water, plants and animals. *L. monocytogenes* is often carried by humans and animals, and has the ability to survive unfavorable conditions, including refrigeration temperatures, food

preservatives (salt), and conditions with little or no oxygen. It is, however, easily destroyed by cooking.

Infection from *L. monocytogenes* typically occurs in individuals with a weakened immune system, including pregnant women. There is an estimated 14-fold increase in the incidence of listeriosis among pregnant women compared to non-pregnant adults. Pregnant women make up 27 percent of all cases of listeriosis. Once in the bloodstream, *Listeria* bacteria can travel to any site, but seem to prefer the central nervous system and the placenta. The fetus is unusually prone to infection from *L. monocytogenes*, which can lead to a miscarriage, stillbirth, or infection of the neonate and health problems following birth.

Gastrointestinal symptoms may appear within 2 to 3 days of exposure. If the body does not clear itself of the pathogen and the infection becomes invasive, symptoms such as fever, chills, headache, muscle aches and backaches may develop in 11 to 70 days after exposure. A blood test can determine if symptoms are caused by *Listeria* infection and if confirmed, the patient can then be treated with antibiotics.

Foods typically associated with listeriosis have a long shelf life and are eaten without further cooking. Outbreaks have involved foods such as coleslaw, Mexican-style soft cheeses, milk, pâté, pork tongue, hot dogs, processed meats and deli salads. **Examples of foods that may harbor this pathogen include unpasteurized milk, raw milk products, raw and smoked seafood, and any ready-to-eat processed foods, such as hot dogs, luncheon meats or deli meats, that have not been heated to proper temperatures before serving.**

Toxoplasmosis

Toxoplasmosis, the infection caused by the parasite *Toxoplasma gondii*, can be passed to humans by water, dust, soil, or through eating contaminated foods. 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.

It is estimated that 1.5 million people in the U.S. 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.

Toxoplasmosis, continued...

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.

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. It is estimated that 2 million cases of salmonellosis occur each year in the United States. *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.

Campylobacteriosis

Consuming food or water that contains the bacteria *Campylobacter jejuni* causes an infection called campylobacteriosis. *C. jejuni* is found in the intestinal tracts of animals (especially chickens) and in untreated water. It's a very common cause of diarrhea accompanied by fever in the United States. This organism thrives in a reduced oxygen environment and is inhibited by acid, salt and drying. *C. jejuni* also is easily destroyed by heat (120 degrees F).

Although pregnant women are not at an increased risk of campylobacteriosis, infection from this bacterium can result in transmission to the placenta. Consequences of fetal infection include abortion, stillbirth or preterm delivery. Symptoms usually appear within 2 to 5 days after eating the contaminated food and include fever, stomach cramps, muscle pain, diarrhea, nausea and vomiting. Infection from *C. jejuni* may be treated with antibiotics.

C. jejuni is most often found in raw (unpasteurized) milk and raw milk products, raw or undercooked meat and poultry, and raw shellfish. To avoid campylobacteriosis, pregnant women are advised to consume only pasteurized milk and milk products and to thoroughly cook meat, poultry and shellfish. Hands, surfaces, cutting boards and utensils that come in contact with raw meat, poultry or fish should be washed well with hot, soapy water.

For further information on Food Safety or Food Safety during Pregnancy you may contact Yates County Public Health at 315.536.5160 or the local district office of the New York State Health Department at 315.789.3030.

Sincerely,

Andy Dunn, DVM
Eastview Vet Clinic

