Eating Raw, Undercooked, or Cold Meats and Seafood

This sheet is about eating raw, undercooked, or cold meats and seafood in pregnancy and while breastfeeding. This information is based on published research studies. It should not take the place of medical care and advice from your healthcare providers.

What are raw, undercooked, or cold meats and seafood?

Raw meat or seafood is any meat or seafood product that has not been cooked at all. Undercooked meat or seafood has been cooked in part but has not been heated to a safe minimum internal temperature. Deli meat (also known as cold cuts) and cold seafood are precooked meats or seafood that have been frozen or chilled for later use.

Raw, undercooked, or deli meats and seafood may contain bacteria and/or parasites that can cause foodborne illnesses. For this reason, it is recommended to cook meat and seafood up to at least the minimum internal temperature, and to reheat pre-cooked cold meats or seafood. See below:

Meat/Seafood	Safe Minimum Internal Temperature
Fish and Shellfish	145 °F (63°C)
Pork	145 °F (63°C)
Reheat Cooked Ham	140 °F (60°C)
Beef (steaks, chops, and roasts)	145 °F (63°C)
Beef and Pork (ground)	160 °F (71°C)
Wild game (meat from undomesticated animals)	165 °F (74°C)
Poultry	165 °F (74°C)
Cold lunchmeat, hot dogs and deli meat or fermented/dry sausages	165 °F (74°C) (Cook until steaming hot)

More information on specific bacteria and parasites that can be found in foods is available in these MotherToBaby fact sheets:

- *E. coli* (https://mothertobaby.org/fact-sheets/e-coli-pregnancy/),
- *Listeria* (https://mothertobaby.org/fact-sheets/listeriosis-pregnancy/),
- *Salmonella* (https://mothertobaby.org/fact-sheets/salmonella-pregnancy/),
- Toxoplasmosis (https://mothertobaby.org/fact-sheets/toxoplasmosis-pregnancy/),
- *Vibrio* (https://mothertobaby.org/fact-sheets/vibrio-pregnancy/).

Methylmercury exposure is another concern with seafood. Please see our fact sheet at https://mothertobaby.org/fact-sheets/methylmercury-pregnancy/ for more information.

I heard that a product I might have eaten has been recalled. Is there a place I can check?

The U.S. Food and Drug Administration (FDA) has a website where you can check for food recalls: https://www.foodsafety.gov/, If you heard about a recall on the news, write down all the information from the news article and call the phone numbers or check the websites that they have provided.

There is also a chance of infection from food prepared at home if it is not handled safely. You can learn about safe handling of meats and poultry on the U.S. Department of Agriculture (USDA) site. Click on the consumer section on their website: https://www.fsis.usda.gov/food-safety/safe-food-handling-and-preparation.

How do I know if I have eaten raw, undercooked, or cold meat and seafood that is infected with bacteria or a parasite?

People can get sick from unsafe food handling practices from eating at a restaurant, on a cruise, on a trip, a home-cooked meal, or other food-related occasions. These situations are unlikely to be reported. Although most people get *Salmonella* or *E. coli* from eating contaminated foods or animals, these infections can also be passed from person to person. Washing hands often helps reduce the chance of passing the disease among people living in the house.

Some people who become infected with bacteria or parasites show no symptoms. Others might have fever, diarrhea, stomach cramps, stomachache, headache, muscle pain, swelling of lymph nodes, joint pain, and/or vomiting, depending on the infection. The symptoms can start hours to weeks after eating contaminated food.

If you are concerned that you have been infected with bacteria and/or parasites from meat or seafood, ask your healthcare provider if there are tests to diagnose the infection. In some cases, there might be medications that can treat the infection and reduce the chance of harm to your baby.

Does eating raw, undercooked, and/or cold meat and seafood increase the chance of miscarriage?

Miscarriage is common and can occur in any pregnancy for many different reasons. If the meat/seafood is infected with certain bacteria or parasites and a woman becomes ill from eating it while pregnant, there might be an increased chance of pregnancy loss. High fever can also increase risks to the baby. For more information on fever during pregnancy, please see our fact sheet at https://mothertobaby.org/fact-sheets/hyperthermia-pregnancy/.

Does eating raw, undercooked, or cold meat and seafood increase the chance of birth defects?

Birth defects can happen in any pregnancy for different reasons. Out of all babies born each year, about 3 out of 100 (3%) will have a birth defect. We look at research studies to try to understand if an exposure, like eating raw, undercooked, and/or cold meat and seafood, might increase the chance of birth defects in a pregnancy.

When exposure to raw, undercooked, or cold meat and seafood happens, the chance for birth defects depends on if infection occurs and by which parasite or bacteria.

For example, if a woman gets toxoplasmosis during the first trimester, there is about a 10%–15% chance that the infection will be passed to the fetus (called congenital toxoplasmosis). Although the chance of passing the infection to the fetus increases later in pregnancy, the most serious effects are usually seen when infection happens in the first trimester. Babies with congenital toxoplasmosis can have problems affecting the brain, eyes, heart, kidneys, blood, liver, or spleen.

Other foodborne infections such as *E. coli*, *Listeria*, and *Salmonella* have not been linked to a higher chance of birth defects.

Does eating raw, undercooked, or cold meat and seafood increase the chance of other pregnancy-related problems?

If the food is contaminated with bacteria or parasites and a pregnant woman becomes infected, there can be other risks to a pregnancy.

Parasite/Bacteria	Increased Chance of…
Toxoplasma	Pregnancy loss

E. *coli*	Preterm delivery and pregnancy loss
Salmonella	Pregnancy loss and infection of amniotic fluid
Listeria	Preterm delivery and pregnancy loss

Does eating raw, undercooked, or cold meat and seafood in pregnancy affect future behavior or learning for the child?

Toxoplasmosis during pregnancy can sometimes cause long-term health problems for the child, including vision loss, hearing loss, or developmental delays. Many babies with congenital toxoplasmosis appear healthy at birth, but symptoms can develop months or even years later. Babies born with congenital toxoplasmosis should receive treatment and ongoing follow-up.

Listeria infections in newborns are uncommon but can be serious. Infected babies can develop sepsis (a blood infection) or meningitis (swelling around the brain and spinal cord). Prompt treatment with antibiotics is important because these infections can sometimes lead to long-term health problems.

Breastfeeding while eating raw, undercooked, or cold meat and seafood:

Breast milk can help protect your baby from infections. There have been case reports suggesting *Salmonella* might be passed to a nursing child during breastfeeding. However, most women with these types of infections do not need to stop breastfeeding. Diarrhea and other symptoms of *E. coli* infection might lower milk supply. In the case of *E. coli* and *Salmonella* infections, be sure to practice good hand washing. If you suspect that the baby has symptoms, such as diarrhea, contact your child's healthcare provider. Be sure to talk to your healthcare providers about all your breastfeeding questions.

If a man eats raw, undercooked, or cold meat and seafood, can it affect his fertility or increase the chance of birth defects?

Studies have not been done to see if a man eating raw, undercooked, or cold meat and seafood could affect fertility (ability to make healthy sperm) or increase the chance of birth defects. In general, exposures that fathers or sperm donors have are unlikely to increase the risks to a pregnancy. For more information on paternal exposures, please see the MotherToBaby fact sheet at https://mothertobaby.org/fact-sheets/paternal-exposures-pregnancy/.

Please click here for references.

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