



Toxoplasmosis and Listeriosis During Pregnancy.

Prevention tips



LE GOUVERNEMENT
DU GRAND-DUCHÉ DE LUXEMBOURG
Ministère de la Santé

Direction de la santé

During pregnancy, the foetus may be exposed to infectious diseases.

Two infections of food origin can have serious consequences on foetal development: **toxoplasmosis and listeriosis**.

You can protect yourself from them by adopting simple food and general hygiene measures.



What is toxoplasmosis?

Toxoplasmosis is a parasitic disease related to the ingestion of *Toxoplasma*, a parasite commonly present in **the ground** and **in meat**. Toxoplasmosis can also be transmitted by **cats** and their **faeces**.

Toxoplasma, which is responsible for the disease, is a parasite that is found either in its natural state in the intestines of cats or in the form of cysts in meat.

Toxoplasmosis is usually a benign disease (flu-like symptoms), but if caught **during pregnancy, it can harm the foetus** (nerve and eye damage, water on the brain, miscarriage).

Less than 50% of women are already protected during their pregnancy, due to previous contact with the parasite leading to the development of immunity.



Infection:

Infection in humans can occur in three ways:

- *by eating **undercooked meat** (where the parasite has not been destroyed by cooking),*
- *by eating foods (such as raw vegetables) contaminated by cat faeces,*
- *by touching the mucous membranes (eyes, mouth, etc.) with **contaminated hands**.*

In pregnant women, the parasite can cross the placental barrier and infect the foetus. The severity of foetal damage varies depending on the stage of the pregnancy and is greatest in early pregnancy.

Infection at the time of conception is very rare, but if it occurs, the risk to the infant is high.

The risk is highest up to the 16th week of pregnancy; transmission to the foetus is quite limited, but the consequences are serious if not treated: for example, miscarriage or birth defects.

From the 26th week of pregnancy to term, the chances of transmission increase, but the severity of the disease decreases substantially. Premature birth and eye disorders in the baby can occur.

If the baby has a normal birth, it can still have **heart or brain disorders, be blind, or subsequently die.**

How do you know if you are immune?

Toxoplasmosis is thus a benign disease that often goes unnoticed when it is contracted.

To find out whether you are immune and, therefore, protected against the infection during pregnancy, **you need a blood test** to check your antibody levels.

Any woman who has a positive reaction to the test before pregnancy has lasting protection through long-term immunity and is at almost no risk.

If the blood test reveals that you are not protected, a series of precautions will need to be taken to prevent any infection during your pregnancy.

In addition, a blood test will be performed regularly to make sure that you have not contracted the disease in the meantime.

When infection does occur, the mother is treated with medication and the foetus is closely monitored.



What precautions should I take if I am not immune?

You should follow the tips below:

- **Wash your hands** as often as you can, and especially:
 - before preparing food and before each meal,
 - if you have handled raw meat, soil, or raw vegetables.



- **Eat well-cooked meat and fish :**
no carpaccio, tartare, steak tartare, or raw fish;
wash your hands after handling raw meat or fish.



- **Avoid rubbing your eyes** while handling raw meat or if your hands are dirty.



- **Thoroughly wash all vegetables, fruits, and herbs that have been in contact with the earth.**



- **Only eat vegetables and fruits that have been well-washed** (salads, herbs), **peeled** (carrots, apples), or **cooked** (chicory, etc.).



- **Avoid playing with cats;** avoid touching anything that has been in contact with their faeces, or **use gloves** when handling materials that may be contaminated: garden soil, cat litter, etc.





What is listeriosis?

Listeriosis is an infection transmitted by a resistant bacterium that is present in soil, vegetation, and water. It can be **transmitted** from mother to child during **pregnancy** or at the time of delivery. To protect yourself, you should avoid eating the most commonly contaminated foods and follow certain rules when preparing and handling food.

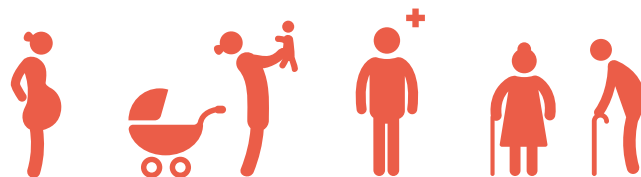
What causes listeriosis?

Listeriosis is caused by *Listeria monocytogenes*, a bacterium that is found everywhere in the environment (in the soil, in water, and on plants). Animals and humans can be carriers of the bacterium without being sick and can thus contaminate animal products (meat, milk, etc.). **Most infections in humans come from contaminated food.**



Who can be affected?

Most people do not become sick when they eat products contaminated by *Listeria*. However, **some groups** of people are at higher risk of catching the disease: primarily **pregnant women** and **newborns**, but also **people whose immune system has been weakened** (by cancer, diabetes, transplants, AIDS, etc.) or **the elderly**.



Why is it so dangerous?

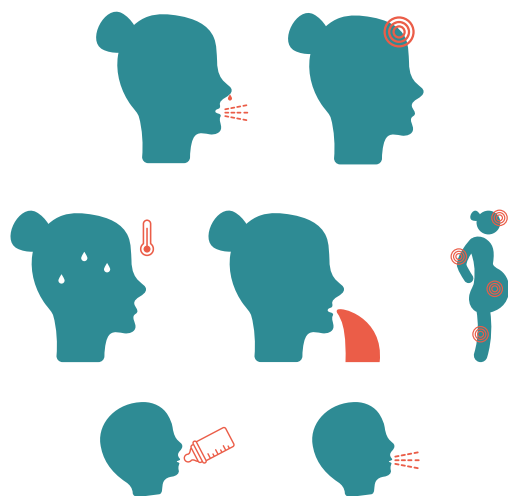
Hormonal changes in pregnant women put them at a 20 times higher risk of getting listeriosis than a healthy adult. The disease can then be transmitted to the foetus through the placenta, even if the mother does not feel sick. This can lead to premature delivery, miscarriage, or serious health problems in the newborn (e.g. meningitis).

What are the symptoms of listeriosis?

Several days or even weeks may go by before any symptoms of the disease appear. Thus the infection may be present without anyone realising it. This is why prevention is so important.

Symptoms are not specific in **pregnant women**: listeriosis may manifest in the form of a **mild cold**, accompanied by **headache, fever, muscle aches**, and sometimes **diarrhoea, nausea, vomiting, and cramps**. Severe cases cause serious lung and heart problems.

In **newborns**, listeriosis is expressed as **difficulty feeding and breathing** and can progress to a serious infection in infants younger than 60 days old. Babies can also be infected through the environment.



How do I know if I am infected?

Listeriosis can be detected in a **blood test**.

If any of the symptoms listed above occur, please contact your primary-care doctor as soon as possible. **Antibiotic treatment can prevent infection in the foetus.**



What can I do to avoid listeriosis?

Listeria is a bacterium that is resistant at temperatures near 0°C, so it continues to develop, although slowly, in food stored in the refrigerator. It is killed by pasteurisation and cooking. However, contamination can occur after these processes but before packaging.

Don't eat:

- *Raw milk or cheeses made from unpasteurised, raw milk*
- *Jellied deli meats*
- *Potted meats, pâté and foie gras*
- *Raw or smoked fish and seafood* (salmon, crustaceans, raw shellfish, surimi, tarama, etc.)
- *Raw or undercooked meat* (or bacon)
- *Raw eggs*
- *Food that has been unsealed in the refrigerator for too long*
- *Cooked meats served cold* (e.g. roast, pâté)
- *Mixed salads that have been prepared in advance and kept cold, raw seed sprouts* (soy, alfalfa, etc.)



Follow some simple rules:

- *Drink only UHT-pasteurised or sterilised milk*
- *Eat only cheese made from pasteurised milk, cheese in the gruyère family, and processed cheese*
- *Remove the rind from cheese*
- *Cook meat thoroughly*
- *Wash fruit, vegetables, and herbs before eating*
- *Carefully follow expiration dates, and make sure your refrigerator is clean and working properly*
- *Respect the cold chain (take cooling bags when shopping)*





Recommendations for good hygiene practices:



1. Clean

- Wash raw fruits and vegetables well.



- Wash hands and utensils after handling food.



2. Separate

- Keep raw food separated from cooked food.
- Prepare raw meat and fruits and vegetables separately.
- Do not use the same utensils for raw food and cooked food.
- Keep pets, flies and other insects, and rodents away from food.



3. Cook

- Thoroughly cook raw animal-based foods (meat, eggs, offal, etc.).



- Eat prepared meals and leftovers as soon as possible, and preferably after cooking ($> 65^{\circ}\text{C}$ at the centre).



4. Refrigerate

- Store food at: $< 4^{\circ}\text{C}$



- Refrigerate foods right away.



- Clean the refrigerator regularly.



- Follow use-by dates.



For more information: www.sante.lu

If you have any questions, consult your primary-care doctor, gynaecologist, pharmacist, or midwife, or get in contact via any of the following addresses. Maternity wards offer childbirth preparation classes:

- **Clinique Bohler, Luxembourg**

Tel. 26333-1
www.cbk.lu

- **Maternité Grande-Duchesse Charlotte (CHL), Luxembourg**

Tel. 44 11 3202
www.chl.lu/maternite/front

- **Centre hospitalier Emile Mayrisch (CHEM), Esch/Alzette**

Tel. 5711-44001
www.chem.lu

- **Centre hospitalier du Nord (CHdN)**

Tel. 8166-51110 (Ettelbruck)
www.chdn.lu

- **Association Luxembourgeoise des Sages-femmes asbl**

Tel. 32 50 07
www.sages-femmes.lu
Pre- and post-natal follow-up, preparing for delivery.

- **Initiativ Liewensufank asbl**

Tel. 36 05 98
www.liewensufank.lu
Tips and courses before and after the birth.

- **Planning Familial**

Tel. 54 51 51 (Esch/Alzette)
Tel. 81 87 87 (Ettelbruck)
Tel. 48 59 76 (Luxembourg)
www.planningfamilial.lu
Pregnancy test, medical-psycho-social counselling.

- **Direction de la Santé**

Tel. 247-85564
www.sante.lu

- **Société Luxembourgeoise de Gynécologie et d'Obstétrique (SLGO)**

Tel. 22 12 58
www.slgo.lu

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