



Information for
pregnant women

Prenatal care



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It is required to undergo a number of examinations during pregnancy to check the proper development of the foetus.

There are regular and irregular clinical and laboratory examinations provided within the prenatal care.

Regular examinations

They are performed at each visit at the pregnancy counselling clinic and include:

- obtaining the medical history,
- external examination of the pregnant woman, with determination of her weight and blood pressure, urine chemistry analysis (presence of glucose and proteins),
- bimanual vaginal examination,
- detection of signs of foetal vitality.

Irregular examinations

They are performed only in a specified week of pregnancy.

We have compiled the following overview for you to know when to come for each examination and what to expect:

1st trimester: examination in the week 1–13 of pregnancy

- starting week 6 – pregnancy confirmation and the first pregnancy examination
- week 8 to 10 – initial examination in pregnancy
- week 8 to 10 – blood tests in pregnancy and Rh factor determination
- week 11 to 13 – regular examination and first-trimester screening

2nd trimester: examination in the week 14–17 of pregnancy

- week 16 – triple test (genetic examination in pregnancy)
- week 20 – extensive ultrasound examination
- week 24 to 28 – OGTT (gestation diabetes test)

3rd trimester: examination in the week 28–40 of pregnancy

- week 30 to 32 – ultrasound screening
- week 35 to 38 – vaginal swab
- every week starting from the week 37 – follow-up before the labour
- starting from the week 37 – cardiotocography

The following procedures are recommended in pregnancy, in addition to the above examinations:

- visit to the dentist,
- preventive inspection by your general practitioner,
- ECG examination.

You can register your labour site (register at the maternity hospital) starting the end of the week 14 of pregnancy (week 14 + 0).

1st trimester: examination in the week 1–13 of pregnancy

The first trimester begins with fertilization and ends with the week 13 of pregnancy. It is considered to be the most risky since the foetus is at its most vulnerable in the first 13 weeks and is very sensitive to harmful effects. All important organs of the child develop during the first trimester, including foetal nerve tube formation and closure, its face, brain and limbs. The following examinations are necessary during the first trimester, at the following intervals:

In case of a normal course of pregnancy, you will visit the counselling clinic:

every 4 to 6 weeks until the week 36 of pregnancy,

starting the pregnancy week 37 until the labour, approximately every week (according to your condition and the recommendation of your physician).

In case of high-risk pregnancies, the dates will be recommended by your attending physician.

At each inspection, your physician will check-up the following:

- weight,
- blood pressure,
- swelling of the limbs and varicose veins in the lower limbs,
- the presence of glucose and proteins in urine,
- foetal vitality using ultrasound,
- general condition (including the vaginal examination).

Initial pregnancy inspection – week 8 to 10

You will receive a pregnancy card at the initial inspection. Your physician will record the course of pregnancy at each visit of the counselling clinic. What can you expect at the initial inspection?

- determination of general medical history – your physician will ask you questions about your medical condition. He/she will ask you about your previous injuries, surgeries, whether you have any allergies, if you smoke, what drugs you take, your last menstruation, use of hormonal or other contraception before pregnancy, the course of previous pregnancies, etc. Also, it is important to prepare for questions about the medical condition of your family members (i.e. occurrence of tumour diseases, thyroid gland disease, diabetes, congenital malformations, hypertension, etc.);
- gynaecological and ultrasound examinations;
- breast examination;
- urine and blood collection – laboratory blood determines your blood type and Rh factor, provides blood count – haematocrit and red blood cell, white blood cell

and platelet count, haemoglobin levels and fasting blood glucose level. A serology analysis will be performed to test for possible HIV, hepatitis B and syphilis. Urine examination will reveal the absence of proteins, glucose, bile or blood;

- blood pressure measurement as a part of a regular follow-up;
- pelvic dimension measurement.

Blood tests in pregnancy and Rh factor

Rh factor is an antigen present on the surface of red blood cells. Its function is not fully clear so far. However, it is certain that it can endanger pregnancy.

If a pregnant woman is **Rh negative** (Rh-), i.e. without the antigen, the blood type and Rh factor presence of the father are also determined. If the child's father is Rh positive (Rh+), the baby will most likely be Rh positive. The mother's immune system may develop antibodies against the foetus when mother's negative blood meets positive blood of the foetus (via placenta or during the labour). Eventual treatment is provided both to the mother and the child. It always depends on severity of the disease.

The course of first pregnancy of an Rh-negative mother, whose foetus is Rh positive (inherited from the father), is usually with no complications. The consequences are usually manifested only in next pregnancy. If the next baby is also Rh positive, even a small amount of foetal blood entering the mother's blood circulation is sufficient. The immune system of then mother begins to destroy foetal red blood cells and may cause a haemolytic disease in the baby. This can result in anaemia, severe neonatal jaundice, brain damage, and even miscarriage or foetal death in the uterus in extreme cases.

Production of antibodies in Rh negative women can be prevented. If the baby is Rh positive based on blood collection from the umbilical cord after the labour, the woman will be administered immunoglobulin injection no later than 72 hours after the labour. This way, the body of the mother will not produce antibodies even in next pregnancy. The current protocols require that immunoglobulin is administered to Rh negative women preventively in the week 28 of pregnancy.

Regular examinations and genetic tests in pregnancy – week 11 to 13

We perform routine examinations between the weeks 11 and 13 (blood pressure, urine, weight check-up, etc.).

Furthermore, we recommend an examination to detect genetic defects, the so-called **first-trimester screening** (also referred to as combined screening or NT screening). It combines an examination of blood of the mother and a detailed ultrasound examination to detect nuchal translucency of the foetus. It aims at the following:

- to exclude deviations in the body structure of the foetus,
- to determine the individualised (personal) risk of the incidence of an abnormal number of chromosomes (so-called aneuploidy).

First-trimester screening is a much more effective and accurate examination than the so-called triple test reimbursed by public health insurance. It can detect the risk of Down syndrome and other disabilities with 80–90% accuracy. First-trimester screening is not covered by public health insurance. At our centre, we provide this screening within **the above-standard pregnancy card**.

In case of a positive result of the screening, we recommend genetic consultation with an ultrasound examination and possibly even other invasive examinations at higher-level sites, such as university hospitals, including biopsy of chorionic villi or amniocentesis (amniotic fluid collection). The genetic examination of chromosomes enables us to demonstrate a foetal genetic defect with 99.5% probability.

Pregnancy card
or the above-standard care

further covers the following:

- sex determination, photography of the foetus,
- Doppler ultrasound flow examination in the week 28–30,
- ultrasound examination in the week 35 with estimation of the foetal weight.

Pregnancy card PLUS
for the above-standard care

additionally provides:

- 3D/4D (3D photo/video),
- foetal imaging, including the optional record of the results to a CD medium, in the week 25–29 of pregnancy.

All other items of the above-standard care provided by purchasing the "Annual card of the above-standard care" – detailed information at www.gynkrup.cz.

2nd trimester: examination in the week 14–17 of pregnancy

Of the three trimesters, the second trimester is the most comfortable and enjoyable. Pregnancy nausea and fatigue subside. The abdomen is still not so big and thus it does not limit the future mother. The foetus develops lungs, liver, kidneys and genitals. The eyes, eyelids, nose, ears and lips are also developed. The baby weighs about 30–55 grams at the beginning of the second trimester; and less than a kilogram at the end of it. You will feel the first movements of the baby in the week 18–20. These will become more and more intense later. The following examinations will be performed during the second trimester:

Triple test (genetic examination in pregnancy) – week 16

The triple test is an analysis of your blood sample. It determines the risk of Down and Edwards syndrome based on your age and the level of four specific substances:

- AFP – alpha-foetoprotein, formed by the developing foetus,
- hCG – human chorionadotropin, a pregnancy hormone,
- Estriol – unconjugated estriol, which is important for the proper course of pregnancy,
- SP1 – specific pregnancy protein.

A positive result, i.e. an increased risk of foetal congenital malformations, does not necessarily mean severe impairment of the foetus. Should that be the case, the physician will recommend verification of the result by amniocentesis (collection of amniotic fluid). Amniocentesis may provide a number of findings. Typically, it can detect all chromosomal defects, as well as, e.g. neural tube clefts not caused by a chromosomal defect. Unlike ultrasound and blood examinations, which provide point on a possible defect, amniocentesis has a 100% informative value.

Collection of amniotic fluid is not painful. It may be described as rather unpleasant. It is performed on an outpatient basis under ultrasound visualisation in the following way:

- About 20 ml of amniotic fluid is collected using a thin needle inserted through the abdominal wall.
- You will remain under medical supervision for approximately 2 hours after collection.
- A subsequent resting regimen period of about 2 weeks is recommended.

Possible complications during amniocentesis include premature amniotic fluid outflow, bleeding or foetal injury. However, the risk of complications is minimal if you follow the advices and recommendations of your gynaecologist. The full results of amniocentesis will be available within 2–3 weeks.

Extensive ultrasound – week 20

The second, extensive genetic ultrasound examination is used to detect developmental defects in the baby. The examination evaluates:

- the number of foetuses,
- vitality,
- biometrics, where BPD (biparietal diameter), HC (head circumference), AC (abdomen circumference) and FL (femur length) parameters are measured,
- foetal morphology,
- placental localisation,
- volume of amniotic fluid.

You will also undergo the usual urine examinations, blood pressure measurement, measurement of your weight and gynaecology examinations.

OGTT (pregnancy diabetes test) – week 24–28

Pregnancy diabetes or gestational diabetes is a type of diabetes which develops only during pregnancy. During this, the body loses its ability to maintain blood glucose levels in a normal range. Glucose circulating in blood passes through the placenta into the blood circulation of the child and is converted into foetal fat. The baby then grows unnaturally fast, leading to a high birth weight, larger organs, resulting to a potential risk of a slower development and hypoglycaemic shock after the labour.

Gestational diabetes is detected via the **oral glucose tolerance test** (OGTT). This is performed in the week 24–28 of pregnancy.

How to prepare for the test and how is the examination performed?

The usual diet containing at least 150 to 200 g of carbohydrates is recommended for women three days before the OGTT. Fasting for 8 to 10 hours is required before the test. Any physical exertion and smoking must be avoided.

On the day of the examination, you will arrive to the collection room on an empty stomach. Three blood samples will be collected there:

- First on an empty stomach.
- Another blood sample will be collected one hour after you drink the glucose solution.
- The last sample is collected in another hour. You will be allowed to eat and drink normally only after that.

If you have gestational diabetes, you will be recommended a special diet. The dietary counselling clinic will help you to find a diet regimen – you will be recommended to avoid sweets, eat regularly and monitor the amount of carbohydrates in your food. Dietary adjustments are usually sufficient to keep your blood glucose levels normal even without drugs. Insulin is prescribed only in patients with very high blood glucose levels.

3rd trimester: examination in the week 28–40 of pregnancy

The foetus grows in the uterus very quickly during the third trimester. The child's brain is significantly larger. The baby is able to respond to the sounds around thanks to that. Its lungs also grow substantially and red blood cells are beginning to form in the bone marrow. The baby gains the weight and its length grows. Therefore, the mother's abdomen grows quickly and her weight rises. The following examinations will be performed during the third trimester:

Standard examination including blood collection and blood count check-up

- Ultrasound screening – week 30–32
- The examination evaluates the following:
 - the number of foetuses,
 - vitality,
 - biometrics, where BPD (biparietal diameter), HC (head circumference), AC (abdomen circumference) and FL (femur length) parameters are measured,
 - foetal morphology,
 - placental localisation,
 - volume of amniotic fluid.

Vaginal swab – week 35 to 38

Vaginal swab is performed in this period to prevent complications during the labour. It detects possible type B streptococcus infection. It poses virtually no threat to the woman. However, the foetus may get infected during the passage through the birth canal, which may cause severe infections for the baby. Therefore, pregnant women with a positive test result are administered preventive intravenous antibiotics during the labour.

Prenatal follow-ups – every week starting the week 37

These follow-ups include routine examinations before the labour.

Cardiotocography – starting the week 37

The examination uses two probes placed on the abdomen of the pregnant woman. The baby's heart rate and uterine wall tension are evaluated.

Cardiotocography, also referred to as "monitor", is performed once a week starting the week 37 of pregnancy and more often starting the week 40 of pregnancy, as recommended by your physician (usually once every 3 days, including a cervical examination). The examination lasts about 30 minutes. The woman is examined lying on her side or in a sitting position. The examination can detect the risks for the foetus related to eventual lack of oxygen, the presence of uterine contractions, etc.

Further information about examinations and follow-ups during pregnancy

All pregnancy examinations are based on perinatology guidelines set by the Czech Gynaecological and Obstetrical Society. They are voluntary, so you may refuse to undergo them. However, it is advisable to undergo all the examinations your doctor recommends based on your medical condition.

Ultrasound examinations in pregnancy

Your gynaecologist will perform an ultrasound examination at least three times during your pregnancy:

- in the week 11–14 of pregnancy,
- in the week 18–23 of pregnancy,
- in the week 30–32 of pregnancy.

Dental examination

You should not miss a preventive visit to your dentist during pregnancy. Pregnant women are entitled to a preventive dental inspection covered by public health insurance twice a year.

Preventive inspection by your general practitioner and ECG during pregnancy

The date of the preventive inspection is not set. Your general practitioner will perform a preventive examination and record all important data your gynaecologist should know into the pregnancy card (severe diseases, etc.).

Don't forget to have an ECG examination. This is required for all pregnant women. Treatment of acute conditions during pregnancy and during the labour cannot be ruled out. Examination is necessary especially in women with a heart disease. ECG curve may be assessed by any general practitioner.

Tips and advices for pregnancy

Preparing for pregnancy

You can prepare your body for the baby if you are planning pregnancy. Pay attention to your lifestyle and regular exercise. It is strongly recommended to quit smoking and avoid any addictive substances. If you are overweight, we recommend weight reduction before pregnancy, not during pregnancy. But you should not be underweight either. You can lose even more weight due to lack of appetite during the first trimester and further weight loss might harm you and your baby. Choose a balanced diet that will benefit your body and psychical condition.

Which drinks should I avoid during pregnancy? What about alcohol and coffee?

Avoid alcohol throughout your pregnancy. Alcohol passes through the blood circulation into the placenta and further into the body of the foetus and may adversely affect its development.

As for coffee and its harmfulness, experts do not agree. However, you can have one cup of coffee a day in case of problem-free pregnancy. Don't be afraid of coffee substitutes – they taste like coffee and often contain substances beneficial to the organism.

Sunbathing during pregnancy

Adequate sun exposure is important during pregnancy. It will provide you with the vitamins you need. However, a long stay in strong sun may endanger both the foetus and the future mother. The skin responds to strong sun light by formation of dark pigment spots (this reaction is caused by pregnancy hormones). Sun is therefore more suitable in the morning or in the late afternoon. Don't forget to cover your head. Also adhere to drinking regimen.

Solarium during pregnancy

There is insufficient evidence to claim that solarium directly harms the foetus. However, it is generally believed that it is not beneficial for either the mother or the baby. Therefore, it is better to avoid this tanning method until after the labour.

Hair dyeing during pregnancy

Research in this area is also quite limited. However, most studies suggest that chemicals in semi-permanent and permanent hair dyes are not highly toxic and may be safely used during pregnancy.

In addition, the amount of hair dye which may penetrate the skin into the body of the woman is very small. It is therefore unlikely for the dye to reach the foetus. Even this small amount is not considered harmful to the foetus.

However, it is often recommended to wait with hair dying until the second trimester. You may also choose highlights or semi-permanent colour without ammonia and bleaches for safer hair dying during pregnancy. The safest variant for a pregnant woman is natural henna. It does not last as long as permanent dyes, but it is more gentle for your skin.

Physical activity and exertion during pregnancy

Good fitness is very important for a pregnant woman. It will help you throughout pregnancy; it has fundamental positive effects on the course of the labour and also the recovery afterwards. If you do sports, you don't have to limit yourself significantly during the first months. We only recommend avoiding lifting heavy objects and overloading. Adequate sport activity levels is suitable, preferably walking or swimming. Swimming is beneficial for the future mother just before the labour. Also focus on strengthening of back muscles and proper posture. You will appreciate strong back especially after the labour, it will help you to lift, lay and carry your baby.

Carrying heavy things during pregnancy

It is not recommended to carry heavy things during pregnancy. However, it is sometimes unavoidable – especially if you work or have an older child at home. Unless you have a high-risk pregnancy, occasional carrying of heavier things shouldn't hurt you. Try to avoid it anyway. It is especially important not to strain the abdomen when lifting objects.

Tips for dealing with heavy objects:

- Do not hesitate to ask for help or try to find a way to reduce strain on the abdomen as much as possible.
- When lifting things, engage the muscles in your legs and arms, avoid quick lifting.
- Always lift objects by squatting, not bending forward.
- Get steps for your older child; move the child from a small crib to a larger bed with a barrier from which it is able to get down on its own.
- Buy fewer things and do smaller purchases more often; use a backpack instead of a bag. It is ideal to shop online and use the delivery service.
- If you suffer from lumbar pain, consider getting a pregnancy lumbar belt. It will at least partially help you with the weight of your pregnant abdomen.

Sex in pregnancy

Sexual activities during pregnancy are not considered harmful. You can have sex whenever you feel like it in case of problem-free pregnancy. You don't have to worry about your partner's penis hurting your child. The baby is perfectly protected in the uterus by amniotic fluid and mucous membranes. At the end of pregnancy, the woman should avoid having her abdomen compressed during sex. Thus, choose suitable positions. The missionary position is not ideal after the first trimester because the uterus and foetus can be compressed.

Sex during pregnancy is not recommended in the following cases:

- high-risk pregnancy, risk of miscarriage,
- vaginal bleeding,
- cervix problems (premature opening of the cervix increases the risk of infection),
- placental problems (if the placenta covers the cervix, sex could lead to bleeding and other complications),
- in case your partner suffers from a sexually transmitted disease,
- infection or inflammation in the intimate parts (applies to both partners),
- risk of premature birth,
- after your amniotic fluid flows out.
- If you have any doubts about this issue, ask your gynaecologist.

X-RAY scans during pregnancy

Do not forget to inform the attending staff about your pregnancy before any X-RAY examination. The examination may be carried out with certain precautions; it may be carried out using a lead apron to avoid irradiation and protect the abdomen of the woman. The foetus is at the highest risk from the third week to the fourth month. If possible, avoid X-RAY scans during this time interval. If you underwent an abdominal X-RAY scan when you and the attending staff did not know of your pregnancy, the risks should be discussed with your gynaecologist and some additional examinations may be necessary. In general, X-RAYS are harmful to the foetus. However, one exposure does not necessarily endanger your child.

Drugs in pregnancy

A pregnant woman must carefully choose not only suitable food and beverages, but also drugs. Some drugs are harmful to the foetus; other drugs are associated with minimal risks. Consult the physician, who is informed about your pregnancy, before you use any drugs. Treatment of some medical problems can be postponed to the period after the labour. However, some diseases may be associated with high risks for the mother and the foetus and it is advisable to start their treatment immediately.

In case of pain (such as headaches), you can use paracetamol without any worries (paracetamol is contained e.g. in Paralen). Its use during pregnancy is safe.

If it is required to use antibiotics, your physician will prescribe drugs safe even for pregnant women (or the baby).

Consult the physician not only about drugs, but also about vitamins and herbs.

Pregnancy products and preparation for the labour

The range of products for pregnant women is very diverse. It includes vitamins, maternity teas, various food supplements, cosmetics, household equipment such as maternity or nursing pillows and more. Feel free to buy books on preparation for the labour and care for the child. If you drive regularly, you will certainly appreciate a seat belt designed specifically for pregnant women.

In addition to baby products, gradually prepare your hand luggage for the maternity hospital. If the course of your pregnancy is normal, it is advisable to have the luggage ready about a month before the date of the labour.

Sources: alza.cz and *Kniha o těhotenství, porodu a dítěti part 1.–3.*, Antonín Pařízek