

# Pregnant!

## General information

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Information from midwives, general practitioners, and obstetricians

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This brochure contains general information about what pregnant women can usually expect in terms of care and advice. Sometimes you may receive other advice or information from a doctor, possibly because your situation differs or because things may be done differently in practice.

Written information is always additional to the consultation with the doctor. That's why the above named organizations are not legally responsible for any shortcomings of this brochure. Nonetheless, we have certainly put a lot of thought into the content, which is updated annually. You can find this brochure (in Dutch) on the internet via [www.rivm.nl/zwangerschapsscreening](http://www.rivm.nl/zwangerschapsscreening) and in English via [www.rivm.nl/pns\\_en/](http://www.rivm.nl/pns_en/).

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You can find a pdf file of this brochure at [www.rivm.nl/zwangerschapsscreening](http://www.rivm.nl/zwangerschapsscreening) (in Dutch), click on 'Bloedonderzoek' and 'Folder'. You can find a pdf file of this brochure in English via [www.rivm.nl/pns\\_en/](http://www.rivm.nl/pns_en/), click on 'Blood test' and then on 'Information'.



# Pregnant!

Being pregnant is very special. Congratulations! Undoubtedly you have a lot of questions concerning your pregnancy and check-ups. For example, what can you expect from your first visit to the midwife, general practitioner (GP), or obstetrician? What will be checked at the following appointments? Are there other examinations? What about your diet, use of medicine, sports, and work? Is your partner welcome at the clinic? This brochure gives you information about all these subjects. Although we mainly address the pregnant woman here, much of the information is also important for your partner.

Pregnancy is a natural process. This brochure reviews many possible problems. Fortunately, most pregnancies are free of problems. If you still have questions after you have read this brochure, just ask your midwife, GP, or obstetrician. After all, pregnancy is a time for many questions, and we cannot discuss everything within the scope of this brochure.

## Big changes

Pregnancy is a period of great physical and emotional changes. Each woman experiences it differently. Some feel better than ever during the nine months. Others have unpleasant symptoms. The symptoms differ from woman to woman and from pregnancy to pregnancy. While one woman will continue to work until four to six weeks before her due date, another will have to adjust her activities because of her symptoms. There are also many emotional changes. Pregnancy is a happy time for most women and their partners. Sometimes there are worries about relationships, work, money, the course of the pregnancy, or other things.

## First visit to the midwife, GP, or obstetrician

Once you know you are pregnant, it is important to make an appointment as soon as possible. At your first appointment, there will be some questions, for instance, about your pregnancy, your health, your partner's health and your relatives, and about your lifestyle. Usually there is a short examination at this first appointment. Your blood pressure is measured. Sometimes the size of the uterus is estimated, which can be done externally, but in some cases also by internal examination.

At the first check-up, an ultrasound scan is often made, from which you can see how long you have been pregnant, whether the baby's heart is beating, and possibly whether there is more than one baby. You will be asked for a blood sample (see the section 'The blood test' on page 19). Of course you can also ask questions yourself and provide information about your own situation. It is useful to write down your questions and remarks beforehand so that you don't forget any. Your partner or another person accompanying you is very welcome at any pregnancy check-up.

## What will the midwife or doctor ask you?

### Your pregnancy

The midwife, GP, or obstetrician will ask whether this is your first pregnancy. If it is not, you will be asked about the course of your previous pregnancies. The first day of the last menstruation can be used to determine the length of the pregnancy and the date of the birth. For this purpose, it is important to know whether your last menstruation was normal and on time. It is wise to write down the date of the first day of the last menstruation and take this information with you, along with the date you stopped taking the pill (if you used it). The dates of any pregnancy test are also important. The midwife, GP, or obstetrician will also bring up the subject of prenatal screening (see page 23).

### Your health

Questions about your health will be about previous illnesses, operations, and treatments. If you have used any medicines in the last few months, or if you have any particular complaints, it is important to mention them. It is also important to mention it if you smoke or use alcohol and/or drugs or have done so in the past.

You will be asked about blood transfusions and unsafe sex in connection with the chance of infection with a sexually transmitted disease such as AIDS. You can read more about this in the section 'The blood test' (see page 19).

### The health of your family members

It is wise to let your doctor know if there are any diseases or possible hereditary disorders in your family or that of your partner. Examples are diabetes, high blood pressure, cystic fibrosis, spina bifida, and muscular diseases.

It is also important to mention it if there are children or adults in the family who have congenital disorders such as Down syndrome or a heart condition.

## Your living conditions

Do you live alone or with a partner? What are your daily activities, such as occupation and hobbies? If there are unusual circumstances in your life, then you should mention them.

If you are pregnant, of course various problems can occur in the areas of relationships, finances, housing, or work, for example. Furthermore, previous negative experiences (sexual or otherwise) can cause stress during the pregnancy. If so, talk to someone you trust, your partner, a good friend, or a family member. Tell your midwife or doctor. If necessary, he or she will refer you to a special social worker.



# Check-ups during pregnancy

Your midwife or doctor will provide regular check-ups during your pregnancy. Usually the schedule calls for a check-up every four weeks in the first half of the pregnancy, then a period of check-ups every three weeks, and later every two weeks. There are weekly check-ups in the last weeks. Depending on your personal situation, more or fewer check-ups can be planned.

What topics come up at your check-ups?

## Consultation

During the check-up you will be asked how you feel and how you experience the pregnancy. You will be given a physical examination. And of course you may ask any questions that you may have.

## Physical examination

At each check-up the growth of the womb will be checked. The midwife or doctor feels the uterus through the stomach with his/her hands to determine whether the baby has grown enough. Starting at the third month, the doctor or midwife often listens to the baby's heart. In the last months of the pregnancy the doctor also looks at the positioning of the baby. In the last weeks he or she feels whether the baby's head, or possibly the buttocks (in the breech presentation) has moved down in the pelvis.

Your blood pressure is usually measured at each check-up because it is unlikely that you would notice a change of blood pressure yourself. The blood pressure is usually noted as the systolic pressure over the diastolic pressure (for example 120/60). Low blood pressure during the pregnancy will do no harm, but may cause annoying symptoms such as dizziness. Toward the end of the pregnancy it is normal for the diastolic pressure to rise a bit. Blood pressure that is too high makes extra care for mother and baby necessary. See [www.nvog.nl](http://www.nvog.nl) (in Dutch), click on 'Patiëntenvoorlichting' in the left column, followed by 'Verloskunde', 'Verloskunde, specifiek' and 'Hoge bloeddruk in de zwangerschap'.

# Advice for daily life

In general, while you are pregnant, you can still do everything you used to do before you were pregnant, such as work, sports, sex, and driving a car. It is important that you look after yourself well, listen to your body, and take the following advice.

## Folic acid

You probably already take folic acid. If not, then you can start and continue until you are 10 weeks pregnant (10 weeks after the first day of the last menstruation). Take tablets of 0.4 or 0.5 milligram of folic acid each day. These tablets can be bought over the counter at the chemist's or the pharmacy ('apotheek'). Folic acid reduces the chance that the baby will have serious disorders like spina bifida. See [www.slikeerstfoliumzuur.nl](http://www.slikeerstfoliumzuur.nl) (in Dutch).

## Healthy diet

A lot of information about a healthy diet during pregnancy is available. This brochure includes general information which, from a medical viewpoint, is important. A healthy and varied diet is important during your pregnancy. You do not have to eat for two, but dieting to lose weight while you are pregnant or breastfeeding is not sensible.

Fresh fruit and vegetables are important sources of vitamins, minerals, and fibre. Potatoes, bread (white or wholemeal), rice and pasta (such as macaroni) are important sources of energy. Milk, cheese, eggs, meat, chicken, and fish are important for the calcium and protein needs of the growing baby and the mother herself. Low-fat margarine (halvarine in Dutch), butter, margarine, and fat fish meet the vitamin A and D needs. Use sugar sparingly and don't snack too much. Preferably, choose food that is fresh or freshly prepared, and store it in the fridge as short a time as possible.

Vegetarian food during pregnancy is not a problem. However, without meat or fish on the menu, it is very important to be careful that you eat enough vitamin B and iron. Especially wholegrain products, potatoes, legumes, eggs, and dairy products contain vitamins B.

Don't eat soft cheeses made with raw milk ('au lait cru'). Raw milk, straight from the farm, for example, must be cooked before you consume it. Listeria bacteria can grow in raw milk. Infection with these bacteria can have consequences for your baby. There is no risk in consuming pasteurized milk or cheese made from pasteurized milk.

Don't eat raw or half-raw meat (such as ground beef or 'filet Américain'), and wash raw vegetables and fruit thoroughly. Insufficiently cooked meat and unwashed vegetables and fruit sometimes contain pathogenic organisms which can cause toxoplasmosis or other diseases. Infection during pregnancy can have consequences for the unborn baby. If you have previously had toxoplasmosis, then you are immune to this disease.



It is preferable not to eat liver while you are pregnant, and don't eat a liver product, such as liver sausage ('leverworst') more than once a day. Liver contains a lot of vitamin A. Too much vitamin A can be harmful to the unborn baby.

When you are pregnant or breastfeeding and you want to fast, discuss this with your obstetric health professional. You can postpone the fasting if, for example, it would endanger your pregnancy.

If you want to learn more about diet during pregnancy, then have a look at [www.voedingscentrum.nl](http://www.voedingscentrum.nl), and click on 'webshop' (in Dutch).

## Smoking

Smoking while you are pregnant is an enormous risk. Not only your own smoking, but spending much time in smoky surroundings can also be harmful to your pregnancy. The harmful substances in cigarettes reduce the blood circulation in the placenta, which in turn reduces the flow of oxygen to the baby. As a consequence there is a risk that the baby

will not grow sufficiently. Babies whose mothers smoke, often weigh less – sometimes too little – at birth, and they are more often born prematurely.

This can make them more vulnerable. They have respiratory diseases in their first years more often than other children. Furthermore, there are some indications that cot death (sudden infant death syndrome) occurs more frequently if people smoke near the baby. The advice to parents-to-be is: stop smoking and avoid smoky areas as much as possible. If you need help to stop smoking, you can discuss this with your doctor or midwife. See [www.stivoro.nl](http://www.stivoro.nl) (in Dutch) for more information about pregnancy and smoking.

## Alcohol

Drinking alcohol during pregnancy can be harmful to the unborn baby. We advise women who want to become pregnant and those who are pregnant or breast-feeding not to drink alcohol. The children of mothers who drank alcohol moderately or excessively during pregnancy have an increased chance of retarded growth.

## Drugs

The use of hard drugs (amphetamines, XTC, heroin, and cocaine) during pregnancy is very strongly discouraged. The use of soft drugs (weed, hash, magic mushrooms, and energy pills) during pregnancy is also discouraged. Hard drugs are very harmful for an unborn baby. The baby also becomes addicted to heroin and other opiates, cocaine, amphetamines, and probably XTC. After the baby is born, he or she will have to recover from the addiction in the incubator department. In such cases, premature birth occurs more often, and the risk of death immediately before or immediately after birth is increased. A shortage of oxygen can retard growth.

If you use drugs, then tell your midwife, GP, or obstetrician. Talk about it openly and don't be afraid to say what and how much you use. Together you can discuss what solutions are possible. You will always be referred to an obstetrician who will monitor your pregnancy. You can find more information in the brochure 'Een dikke buik en druggebruik' [Pregnancy and drugs], in Dutch, by the Stichting Mainline (an independent organization for improving the life of drug users).

## Medicines

Medicines in the form of pills, powders, capsules, injections, salves, creams, and plasters are prescribed by a doctor or a midwife. If you use medicines or remedies that are not

prescribed by a doctor or a midwife, then we speak of self-medication. You must always be careful when you are pregnant or want to become pregnant. Certain creams can contain a harmful dose of vitamin A.

Therefore, only use preparations that have been prescribed, and tell the doctor (and the dentist) if you are trying to get pregnant or are pregnant. This is important because some substances can influence the development of your baby early in the pregnancy. It is also sensible to mention your pregnancy or pregnancy wish at the pharmacy.

Vitamin supplements have no extra health value. They are not necessary if you eat sensibly. Some pills or substances that contain vitamin A are even harmful if you consume them in excess. Extra vitamin D is only recommended to women with dark skin, particularly if they wear a veil and get little sunlight.

The only painkiller that is safe to use during pregnancy is paracetamol. Check the package information leaflet for the correct dose. If you need other painkillers, consult your GP. If the doctor or dentist finds it necessary or advises an anaesthetic, there is no objection because of pregnancy. But make sure you always tell your doctor or dentist if you are pregnant.

## Contagious diseases in your surroundings

Does anybody in your surroundings have a children's disease with spots on the skin, such as chicken pox, German measles, or fifth disease (slapcheek)? Or have you been in contact with anybody who has another contagious disease? If so, get in touch with the person who is monitoring your pregnancy or your GP. Contagious diseases can sometimes have consequences for your unborn baby. If in doubt, contact your doctor or midwife.

## Harmful substances and radiation

Try to avoid contact with the following substances as much as possible while you are pregnant: turpentine-based paint, pesticides, and chemicals (such as photo-developing fluids). At present, no harmful effects of hair dye have been found.

If an X-ray is necessary while you are pregnant, be sure you say clearly that you are pregnant. Sometimes this investigation can be postponed until after the baby is born. If not, the uterus can often be shielded. The baby then gets as little radiation as possible. No harmful effects of microwaves and TV or computer screens have ever been identified.

## Cat litter box and gardening

It is important to wear gloves while cleaning the cat litter box and working in the garden. A parasite that can cause toxoplasmosis can infest the excrement of cats (especially young ones). Toxoplasmosis can harm the unborn baby. How you can prevent infection with toxoplasmosis is described on page 10.



## Sports

For sports, the rule is: do what you always did, but do less or stop when you notice any unpleasant symptoms or when you are more tired than normally. It is better to try not to exert yourself more than you did before you were pregnant. Be sure that you drink enough fluids.

You can swim, cycle, and do fitness exercises very well to the end of the pregnancy. It is sensible to avoid sports such as hockey where you risk your stomach being bumped into, and sports where you easily bump into other people or where you can fall. Diving with oxygen tanks is not allowed during pregnancy because the mother's sensitivity to the bends (decompression sickness) is increased.

## Pregnancy classes

There are many classes for staying healthy and fit while you are pregnant as well as classes to prepare you for giving birth. Even if you have unpleasant symptoms, it is wise to take a class. You get posture and exercise advice from an expert. Sign up in good time for such a class. More information about the available classes in your neighbourhood can be found at your midwife's, GP's or obstetrician's, and at the home care organization in your area.

## Sex

The way intimacy and sexuality are experienced during pregnancy differs from person to person and from pregnancy to pregnancy. For a normal pregnancy there are no special do's and don'ts about sex. Sexual intercourse cannot cause a miscarriage or harm the baby.

You can always discuss problems and questions about this subject with your midwife, GP, or obstetrician. This is also true of previous unpleasant sexual experiences or any problem with an internal examination. If you mention this, your obstetric care professional will also take it into account when you are giving birth.

## Work

Certain work conditions may cause risks for your pregnancy. That's why there are various regulations for pregnant women and employees who have just given birth. These regulations have been established in the 'Working Conditions Act' and 'Pregnant Employees Decree'.

Work where you are exposed to vibrations (lorries and agricultural machines), ionizing radiation (radiation of radioactive materials), chemical substances or risks of infection does not promote good health during pregnancy. Neither does heavy physical work that involves much lifting, pulling, pushing, or carrying. If you have such working conditions, consult your employer. He/she must adjust the work or possibly offer you other work. You can also consult the company medical officer ('Arbo-dienst') or address your questions to the labour inspector ('arbeidsinspectie'). Your employer may offer you a voluntary preventive consultation with the company medical officer who can map out your work-related risks and advise your employer about them. Of course you can also always contact your midwife or GP about this.

If you work nights or in shifts, you can ask your employer to adjust your working hours and free time during your pregnancy. A pregnant woman has the right to extra breaks, and in principle is not obliged to work night shifts or overtime. These rules are also effective for the first six months after you give birth. If it is not possible to arrange adjustments to your work so that it is healthy and safe, then your employer must offer you other work on a temporary basis. At the end of this brochure you will find the names of some organizations that provide more information about pregnancy, parenthood, and work.

## Maternity leave

In the Netherlands, every woman has the right to 16 weeks of maternity leave. This leave usually begins 4–6 weeks before her due date and continues for 10 weeks after the date of birth. If you give birth early, then the leave still lasts 16 weeks; if you give birth later, then the leave is automatically longer. You can arrange your maternity leave flexibly; for example, you can stop working later. You can also extend it with your vacation days.



Of course it is important to discuss this with your employer (or the office paying you social benefits) in plenty of time to arrange it. You can also discuss the possibilities of parent's leave with your employer.

## Vacations and long trips

If you are pregnant, in many cases you can travel safely. If you intend to go to distant countries, get in touch with your GP or Community Health Service (GGD) for traveller's advice. Generally a travel destination is advised where good medical care is available in case unexpected complications occur. This is not always the case in distant countries. Moreover, in primitive circumstances you can more easily contract an infectious disease that is accompanied by a high fever or diarrhoea.

There is no objection to mother and child flying from a medical viewpoint. Airlines generally do not want to transport pregnant women after 32–34 weeks of pregnancy because they do not want to risk labour or birth during the flight.

Stays at high altitudes are not advisable. The lower oxygen pressure of the air means that less oxygen is available. The recommendation is: no long-term stays at places higher than 2000 metres (6500 feet).

## Sauna and sunbed

It is not known whether a high air temperature is harmful during pregnancy. It may be wise to avoid long, hot baths, saunas and sunbeds in the first months of pregnancy. Sunbeds can cause or worsen melasma (pregnancy mask – a brown discoloration of the skin of the face). Sunbathing can have the same effect.

# Pregnancy symptoms

The symptoms can be different for every woman and for every pregnancy. Every woman experiences pregnancy in a different way. This chapter describes some of the most common symptoms and gives you some tips.

## Tiredness

You can be tired especially in the first three months of the pregnancy. During this time, many women need more sleep. This is because of hormonal changes. Sometimes anaemia is the cause. A blood test can detect this.

## Nausea

Especially in the first three to four months you can have trouble with morning sickness and vomiting. Not eating usually makes it worse. So start with a light breakfast, and after that try to divide your food into small, light meals. You can see for yourself which foods you can tolerate best.

## Heartburn

Some women have trouble with heartburn. Coffee, orange juice, and fat can make the symptoms worse. If you have too much trouble, there are medicines that you can use. They are available from your drugstore or pharmacy ('apotheek'). Always check first whether or not you can use a medicine while you are pregnant.

## Constipation

Your intestines work somewhat slower during pregnancy. That's why you are prone to constipation: the stools are harder and pass less frequently. This is particularly so if you take iron tablets. Fibre-rich food (raw vegetables, fruit, and wholegrain products), possibly with added bran, can help. Make sure that you also drink about two litres of fluid a day. Physical activity is also important to prevent constipation. So be sure that you get enough exercise every day.

## Haemorrhoids

Haemorrhoids occur more often during pregnancy. Haemorrhoids are bulges in swollen anal tissue which can itch and be painful. Straining can make the symptoms worse. Therefore try to avoid constipation and hard stools.

## Frequent urination

While you are pregnant, you have to urinate more often than usual. As the uterus grows, more pressure builds on your bladder, so that you feel that you have to urinate sooner. If you feel the need to urinate very often, you may have a bladder infection, which usually gives you a burning sensation when you urinate. In that case, take a urine sample to your GP to have it tested. If you do have an infection, a culture of your urine will be made and you will get a prescription.

## Vaginal discharge

Vaginal discharge often increases during pregnancy. This is normal. Ask about it if the discharge has an abnormal smell or colour, or if you have itchiness, pain, or a burning sensation. If this is the case, you may have an infection. If necessary, you will be given medicine for it.

## Loss of blood during pregnancy

One of every five women loses blood in the first three months of pregnancy. The causes differ; for example, it could be due to the implantation of the embryo or a tiny wound in the cervix. This can be annoying, but it is not dangerous to the pregnancy. Miscarriages occur in about half of the cases of bleeding. The body rejects the embryo, and the result feels like a heavy menstruation. Although a miscarriage is often sad or bewildering, there is nothing you can do to prevent it. Get in touch with your midwife or doctor if you are uneasy or worried. If you lose blood after the third month (which happens less often), always contact your midwife or doctor.

For more information (in Dutch) see: [www.nhg.org](http://www.nhg.org) (click on 'patiëntenvoorlichting' and use the search engine to find 'miskraam'), or [www.nvog.nl](http://www.nvog.nl) (click on 'Patiëntenvoorlichting' in the left column, followed by 'Verloskunde', 'Verloskunde, specifiek' and 'Bloedverlies in de eerste helft van de zwangerschap').

## Braxton Hicks contractions

You feel the muscles of the womb contract from time to time. These are called Braxton Hicks contractions ('hard abdomen' in Dutch). This condition often occurs on exertion and disappears again when you relax.

Braxton Hicks contractions from time to time do no harm. If it happens often, it might mean that you should slow down.

## Back or pelvic pain

Your weight and posture will change, and the joints of the pelvis become looser. This can sometimes cause pain in the back or pelvis. If it is very annoying, contact your midwife or doctor. Light exercise is good. Good posture can reduce the symptoms. Make sure you bend your knees when you lean down or lift something. Be sure your lower back has enough support when you are sitting. When you get out of bed, turn on your side first, then raise yourself up sideways.

## Fluid retention

Your body retains more fluid when you are pregnant. This may sometimes cause swollen feet and ankles. This can get worse if it is warm and you do not move around much. Be sure that you move enough, and if necessary, put your legs up while you are sitting or lying down.

## Varicose veins

Some women get varicose veins during pregnancy. Be sure that you move around regularly and try not to stand or sit for a long time. Use a footstool or a cushion when you are sitting or lying down to put your legs on. Elastic support stockings also help reduce the symptoms of varicose veins.

## Pigment spots

The sun can cause brown spots on your face (a 'pregnancy mask'). Protect your skin from the sun and use a sunscreen lotion to prevent this, and stay in the shadow or wear a hat. After the pregnancy, the pigment spots usually disappear by themselves.

## Mood changes

During and after pregnancy you may have trouble with changes of mood (you might be touchy, gloomy, have trouble concentrating, or be over-the-top happy). It may be caused by concern about combining pregnancy and work or the relationship with your partner. Anxiety about giving birth or worries about the health of your unborn baby may burden you. If so, it is important that you feel free to discuss these matters openly. Your midwife or doctor will be understanding and willing to support you in this.

# The blood test

At your first appointment with your midwife, GP, or obstetrician, a blood sample is taken to be tested. You may be referred to a laboratory for this. The test is done to prevent your baby from being ill. Should it show that your baby has any chance of becoming ill, it is often possible to treat the condition and protect your baby. Your blood will only be tested with your permission. In the standard test, your blood is examined for:

- Haemoglobin concentration
- Blood group
- Rhesus-D factor
- Antibodies against red blood cells
- Syphilis (lues)
- Hepatitis B
- HIV

## Haemoglobin

The test for the haemoglobin content of the red blood cells shows whether you are anaemic. Anaemia usually lends itself well to treatment and is not harmful to your baby.

## Blood group

It is important to know your blood group in case you ever need a blood transfusion. Your blood group can be A, B, AB, or O.

## Rhesus-D factor

The blood test can determine the RhD factor (Rhesus-D factor). You are either RhD negative or RhD positive. It is a question of heredity, just like the colour of your eyes and hair. Of the pregnant women, 84% are RhD positive and 16% are RhD negative. If you are RhD positive, there are no consequences.

However, an RhD-negative pregnant woman needs special attention to prevent complications if she has an RhD-positive baby. During the pregnancy there is a small chance that blood from the baby gets into the mother's bloodstream. There is a good chance of this during the birth. If blood from an RhD-positive baby does get into the RhD-negative mother's bloodstream, then the mother can make antibodies against the baby's

blood. These antibodies can get to the baby's blood through the umbilical cord and break the blood down so that this baby or the mother's next baby can become anaemic.

This is why it is important to determine your RhD status. There are two possibilities: if you are RhD positive, nothing happens. If you are RhD negative, then your blood will be tested again in week 30 of the pregnancy for possible Rh antibodies. Within a week after that, you will receive an injection of anti-RhD immunoglobulin. The injection reduces the chance that you yourself start making antibodies that can make the baby sick. The baby does not notice the injection and runs no risk at all. If you are RhD negative, the baby will be checked on after the birth. For this purpose, blood is taken from the umbilical cord. If your baby is RhD positive, you will receive another injection of anti-RhD immunoglobulin within 48 hours. Because of this, your body will make no antibodies, which is important if you become pregnant again with an RhD-positive baby. Furthermore, you may receive extra anti-RhD immunoglobulin in a number of special obstetric situations.

## Other antibodies against red blood cells

Not only when you are RhD negative is there a risk that your body will make antibodies. Other antibodies can be made due to a previous pregnancy or a blood transfusion. These antibodies may be harmful to your baby's health: there is a chance that they may reach and break down your baby's blood through the umbilical cord and the placenta. If such antibodies are found in your blood, it will be further examined to find out what kind of antibodies they are. Your midwife or doctor will discuss with you whether further testing of your blood is necessary or will refer you to the right clinician. See [www.nvog.nl](http://www.nvog.nl) (in Dutch); click on 'Patiëntenvoorlichting' in the left column, followed by 'Verloskunde', 'Verloskunde specifiek', 'Bloedgroep, rhesusfactor and irregulaire antistoffen'.

## Syphilis (lues)

Syphilis, also called lues, is a sexually transmitted disease (STD) that one can get from unsafe sex. In the beginning of the pregnancy, the placenta protects the baby from the disease, but the baby can be infected later in the pregnancy. For this reason the disease must be treated as early in the pregnancy as possible. If the blood test shows that you have syphilis, you will be referred to a doctor and treated with antibiotics (penicillin injections).

## Hepatitis B

Hepatitis B is a disease that infects the liver with hepatitis B virus. The first symptoms can appear between 6 and 26 weeks after infection, but this infection may go entirely unnoticed. After being infected, some people go on carrying the hepatitis B virus with them. These people are called ‘carriers’; they can infect others. If you carry the hepatitis B virus, it will not harm your baby during the pregnancy, but during the birth the baby can come into contact with the virus and become infected. If you are a carrier, your baby will receive hepatitis B immunoglobulin shortly after birth. These instant antibodies are given to your baby in an injection and they can protect him or her from the virus. It is also very important that your baby him- or herself builds up immunity to hepatitis B. This is why the baby is immunised. The first immunisation takes place within 48 hours after birth, and the next ones will be at the ages of 2, 3, 4, and 11 months. If you are a carrier of the virus, your doctor will discuss with you how you can keep the chance of infecting those around you as small as possible. You will also be referred to your GP and/or the Community Health Service (GGD). You can find a general brochure about hepatitis B in several languages at [www.rivm.nl/rvp/informatie/vertalingen.jsp](http://www.rivm.nl/rvp/informatie/vertalingen.jsp). A brochure about pregnancy and hepatitis B can be found at [www.rivm.nl/rvp/informatie/folders.jsp](http://www.rivm.nl/rvp/informatie/folders.jsp) (in Dutch).

## HIV

HIV is the virus that causes AIDS. You can be infected with HIV by having unsafe sex with someone who has HIV, or by infected blood that gets directly into your bloodstream (for example, by using other people’s drug needles). If you are infected with HIV, this virus can be transferred via the blood to your baby during the pregnancy or birth, or later via breastfeeding. This can be prevented by special measures during pregnancy and childbirth. It is therefore worthwhile to have an HIV test done at the beginning of your pregnancy.

If the HIV test is positive, then you are a carrier of the virus. In that case you will be referred to a special HIV centre. If you want more information, ask your midwife or doctor for the brochure ‘Testen op HIV, informatie voor zwangere vrouwen’ [HIV test, information for pregnant women, in Dutch] or go to [www.hivnet.org](http://www.hivnet.org) and click on “EN” for the brochure ‘Information for mothers-to-be’.

## Additional test for sexually transmitted diseases (STDs)

Is there a chance that you and/or your partner have contracted a sexually transmitted disease through unprotected, different contacts? Then it is important that you tell your midwife or doctor.

Examples of sexually transmitted diseases (besides HIV and syphilis) are chlamydia and gonorrhoea. These diseases do not always produce symptoms. The consequences of these STDs can sometimes be far-reaching: the baby can develop eye or lung infections after birth. One way to test for STDs is to culture a sample taken from the cervix. The treatment consists of a course of antibiotics that will not harm the unborn baby. Your partner must also be treated.

## Syphilis, hepatitis B, or HIV, what then?

The important thing is to start the treatment as soon as possible to prevent the baby getting the disease. If you do have hepatitis B, syphilis, or HIV, it will also have consequences for your social life. So it is important to take measures to prevent your partner and other people in your immediate and not-so-immediate surroundings becoming infected. Your caregiver will refer you to the local Community Health Service (GGD) or your doctor. A positive test result can – especially if it concerns HIV – also have consequences if you want to get insurance or a mortgage. Furthermore, there are consequences for additional insurances such as those set up by the Social Security (Incapacity for Work) Act ('WAO') or costs of illness for one-man businesses. You can find more information about this at [www.bpv.nl](http://www.bpv.nl) (in Dutch) or [www.hivnet.org](http://www.hivnet.org) (click on "EN").

## More information?

You can always ask your midwife, GP, or obstetrician. You can also find more information at [www.hivnet.org](http://www.hivnet.org) (click on "EN") about living with HIV or AIDS, working with HIV, the consequences for insurance and more.

# Extra tests

## Ultrasound scan

Every pregnant woman is offered an ultrasound scan in the beginning of her pregnancy. Sometimes an extra ultrasound scan is made. Some of the possible reasons for this are:

- Loss of blood at the beginning of the pregnancy (see page 17);
- Doubt about the growth and size of the baby;
- A position of the baby that is difficult to determine by external examination.

## Investigation of congenital and inheritable diseases

As a pregnant woman in the Netherlands, you can have your unborn baby screened if you want to. First consider whether you would want to receive the kind of information that this screening test would give you. Try to think what it would mean to you if an abnormality were to be found. If you do not want such information, you can skip the rest of this chapter.

There is a combined screening test that will tell you how great a chance there is that your baby will have Down syndrome. The test consists of a blood test and an ultrasound scan showing for neck fold measurement between 9 and 14 weeks of pregnancy. An ultrasound scan at 20 weeks (the anomaly scan) can detect whether your baby has spina bifida or another congenital condition. These examinations, the combined screening test, and the ultrasound scan at 20 weeks fall under the heading of prenatal screening. Perhaps these tests may offer you some reassurance about the health of your baby. Sometimes, however, they can cause much concern and make you face difficult choices, for example, about possible further tests, or ultimately even a choice about whether you want to continue or discontinue your pregnancy. A brochure with more information can be downloaded at [www.rivm.nl/zwangerschapsscreening/20\\_wekenecho/folders/](http://www.rivm.nl/zwangerschapsscreening/20_wekenecho/folders/) (available in several languages).

Not all diseases can be discovered before birth. Even if prenatal screening shows that the chance of Down syndrome or a physical defect is small, this does not mean that your baby does not have it for sure. The baby could also have another condition that is not discovered. The question of whether your unborn baby is completely healthy cannot be answered with certainty.



Your midwife, GP, or obstetrician will ask you if you want more information about such tests so that you can decide whether you want such information or not. If you do, you will be given a brochure so that you can read more about this form of prenatal screening. A discussion will follow and you will get explanations about the various tests. Then you can decide whether you want the tests or not.

There are brochures with information about prenatal screening: 'Information on the Down's syndrome screening test' and 'Information on the anomaly scan'. These brochures are available in Dutch, English and several other languages at [www.rivm.nl/zwangerschapsscreening/downscreening/folders](http://www.rivm.nl/zwangerschapsscreening/downscreening/folders).

In some situations, other tests will be considered for you. These tests, known as prenatal diagnostics, can help determine whether your baby has a given congenital disorder. The tests use chorionic villus sampling, amniocentesis, or extensive sonographic examination.

You are eligible for these tests if you are 36 years old or older, or if there is a medical reason. For example, if there is a congenital or heritable disorder in your family or your partner's, if you have a certain disorder yourself (such as diabetes) or if you use medicines that can be harmful to the pregnancy. If you have one or more of these situations, then discuss it with your midwife, GP, or obstetrician. Ultimately you are the one who decides whether you want such tests.

For more information about prenatal screening, you can go to the following websites:  
[www.rivm.nl/zwangerschapsscreening](http://www.rivm.nl/zwangerschapsscreening) (in Dutch)  
[www.rivm.nl/pns\\_en/](http://www.rivm.nl/pns_en/) (in English)  
[www.prenatalescreening.nl/keuzehulp.php](http://www.prenatalescreening.nl/keuzehulp.php)  
[www.nvog.nl](http://www.nvog.nl) (in Dutch)  
[www.erfelijkheid.nl](http://www.erfelijkheid.nl) (in Dutch)  
[www.zwangernu.nl](http://www.zwangernu.nl) (information in English about 'Chorionic Villus Sampling' and 'The Amniocentesis Test')  
[www.knov.nl](http://www.knov.nl) (in Dutch).

# Childbirth and afterwards

## Location of the birth

If the course of the pregnancy is normal and there have been no special circumstances in your previous childbirth, then in principle, you can choose whether you have the baby at home or in hospital. You can discuss the possibilities with your midwife, GP, or obstetrician. If complications arise during your pregnancy or during labour, you will be advised to give birth in hospital. About half of the women who plan to give birth to their first baby at home have to go to the hospital during labour. Women who have previously given birth can usually give birth at home. In total, seven out of ten women in the Netherlands give birth in hospital.

## Maternity nurse ('Kraamzorg')

The primary maternity time is the first week or 10 days after giving birth. The maternity nurse assists the midwife or GP during a delivery at home. Then she will take over the care for the baby and the mother in the maternity bed. This is also the case if you give birth in hospital. You must arrange maternity care early in the pregnancy through a maternity care organization. You can get more information from the home care organizations or the maternity care organizations in your area. If you spend your maternity time, or part of it, at home, the midwife or the GP will drop by for medical check-ups and a conversation. After the maternity period, care is passed on to the baby and child health care centre ('consultatiebureau') in your neighbourhood. A nurse will automatically contact you for an interview.

## Breastfeeding

Breastfeeding is advised as the first choice for feeding babies world-wide. If this is not possible, then there are good alternatives. You can get more information (in Dutch) at [www.borstvoeding.nl](http://www.borstvoeding.nl) or from your obstetric health professional.

## The first weeks with the baby

Pregnancy and the birth of a baby are major events. Your body needs time to recover. It is normal that this takes several weeks or months. Emotions also play an important role. The care for a new baby means that a lot in daily life will change. Your body must also recover from hormonal changes, which can cause you to be happy at one moment and to burst out in tears at another. Give yourself time to get used to these changes.



## Newborn blood spot screening

In the first week after birth, a blood sample is taken from your baby's heel. This blood is tested in a lab for some uncommon, but serious, disorders. The test is important. Early discovery of these disorders can prevent or limit very serious damage to the physical and/or mental development of your baby. The diseases cannot be cured, but they can be treated, with medicines or diet, for example. A home care employee or the midwife will visit you at home for the blood spot screening. In the third trimester of your pregnancy you will receive a brochure about the newborn blood spot screening from the midwife or doctor. More information: [www.rivm.nl/pns\\_en/heelprick/](http://www.rivm.nl/pns_en/heelprick/). A brochure is available in English and several other languages.

## Newborn hearing screening

Good hearing is very important to your baby's development. Children who cannot hear sounds of low volume later have problems learning to talk spontaneously. A hearing test is done to see whether your baby can hear well. A small earplug is placed in your baby's ear. The earplug is connected to a measuring device which measures your baby's hearing. Each ear is tested separately. You get the results immediately after the test. The hearing test is done at the same time as the blood spot screening in most districts.

## Immunisation of your baby

The government invites all children in the Netherlands to take part in the National Immunisation Programme. This programme immunises babies and children against diphtheria, whooping cough (pertussis), tetanus, polio, Haemophilus influenzae type b (Hib) diseases, pneumococcal infection, hepatitis B (only for risk groups), mumps, measles, German measles (rubella), and meningitis C. All of these are infectious diseases that are difficult to treat and can have serious consequences for the health of your baby.

Within 4–6 weeks after your baby’s birth, you will automatically receive an information package at home. It will contain the request card for vaccination, a vaccination card and a brochure about the National Immunisation Programme. Participation is not obligatory, but most babies and children (more than 95%) do take part in the programme. The government offers the vaccinations at no cost to you. The only condition is that the child health care centre or the local Community Health Service (GGD) carries out the immunisations with the official vaccines. For more information, you can consult the child health care centre or the GGD. Or go to [www.rivm.nl/rvp/](http://www.rivm.nl/rvp/), click on ‘Documentatie & links’ in the left column and ‘Voorlichting in een andere taal’. Information is available in English and several other languages.

### Registration of your data

If you have a blood test, your medical details will be registered. This takes place at the responsibility of the RIVM Regional Offices (RIVM-RCP), the Dutch Perinatal Registry (Stichting Perinatale Registratie Nederland) and the Sanquin Blood Supply Foundation (Stichting Sanquin). The purpose of this registration is to collect important medical data concerning pregnancy and birth about both mother and baby.

### Why are the data registered?

The nationally collected medical data are used for medical-scientific and statistical research. That’s why midwives, GPs, obstetricians, and paediatricians participate in data registration: they believe it is important to help in such research to increase the medical knowledge concerning pregnancy and birth and to improve the quality and efficiency of the care. Two examples showing the importance of registration are the – fortunately rare – cases of stillbirth and serious disorders of the baby. The registered data facilitate research into the causes and what can be done to prevent such cases in the future.

### What, exactly, is registered?

Your midwife, GP, or obstetrician can provide you, if you wish, with more information about the data that are registered and will ask you for permission for the registration. If you decide, for whatever reason, not to give this permission, your decision will, of course, have absolutely no influence on your treatment. Your data will then be processed so that they cannot be traced back to you. On the basis of the Personal Data Protection Act, you can always later request the responsible agency or authority to let you inspect your personal data and/or to remove them.

For more information about the authority that is responsible for the registration, the data that are registered, for what purpose they are registered, and what research is done with them, see the brochure ‘Zwanger: registratie of your gegevens’ [Pregnant: registration of your data].

See [www.perinatreg.nl](http://www.perinatreg.nl) (click on the Union Jack), [www.rivm.nl/pns\\_en](http://www.rivm.nl/pns_en) or [www.sanquin.nl](http://www.sanquin.nl) (click on the Union Jack).

# More information

## Relevant websites

Dutch Association for Obstetrics and Gynaecology: [www.nvog.nl](http://www.nvog.nl)

Royal Dutch Organization of Midwives: [www.knov.nl](http://www.knov.nl)

Dutch College of General Practitioners: [www.nhg.org](http://www.nhg.org)

National Association of General Practitioners: [www.lhv.nl](http://www.lhv.nl)

Erfocentrum: [www.erfocentrum.nl](http://www.erfocentrum.nl)

National Institute for Public Health and the Environment: [www.rivm.nl/pns\\_en/](http://www.rivm.nl/pns_en/)

Information about pregnancy in different languages: [www.zwangerwijzer.nl/#](http://www.zwangerwijzer.nl/#)

## Sexually transmitted diseases

Brochure 'Testen op HIV. Informatie voor zwangere vrouwen' [HIV tests. Information for pregnant women, in Dutch] is available from your GP, midwife, or obstetrician.

General information about sexually transmitted diseases: [www.soa aids.nl](http://www.soa aids.nl) (also in English).

Information about living with HIV: [www.hivnet.org](http://www.hivnet.org) ("EN" for information in English).

Information about hepatitis B in several languages: [www.rivm.nl/rvp/informatie/vertalingen.jsp](http://www.rivm.nl/rvp/informatie/vertalingen.jsp).

Hepatitis B and pregnancy (in Dutch): [www.rivm.nl/rvp/informatie/folders.jsp](http://www.rivm.nl/rvp/informatie/folders.jsp).

## Nutrition

Information about pregnancy and nutrition (in Dutch) via the Nutrition Centre Info Line: phone 070 306 88 88 or go to [www.voedingscentrum.nl](http://www.voedingscentrum.nl) and click on 'webshop' (in Dutch).

Information about breastfeeding (in Dutch): [www.borstvoeding.nl](http://www.borstvoeding.nl).

Information about Ramadan and medicine use (in Dutch, downloadable brochures in Turkish and Arabic): [www.ramadan-medicijngebruik.nl/node/31](http://www.ramadan-medicijngebruik.nl/node/31).

## Smoking

The brochure 'Roken, niet waar de kleine bij is' [Smoking, not in the little one's space, in Dutch] (part of information package 'Zwangerschap' [Pregnancy]) is available from your GP, midwife, or obstetrician, or can be ordered from Stivoro: phone 0900 93 90.

For more information about pregnancy and smoking and how to stop smoking, see [www.babyfit.nl](http://www.babyfit.nl) (in Dutch) or phone Stivoro on 0900 93 90.

## Alcohol and pregnancy

The brochure 'Zwangerschap, borstvoeding en alcoholgebruik' [Pregnancy, breastfeeding and alcohol, in Dutch] is available from your midwife or obstetrician. You can also find information (in Dutch) about this subject at [www.alcoholinfo.nl](http://www.alcoholinfo.nl) and [www.drugsinfo.nl](http://www.drugsinfo.nl) (use the search term 'zwangerschap').

## Drugs

The brochure 'Een dikke buik en druggebruik' [Pregnancy and drugs, in Dutch] is available via the Stichting Mainline, 020 682 26 60 or via [www.mainline.nl](http://www.mainline.nl). You can also find a lot of information in Dutch at [www.drugsinfo.nl](http://www.drugsinfo.nl) (use the search term 'zwangerschap').

## Psychological symptoms during and after pregnancy

The Trimbos Institute (030 297 11 00 or [www.trimbos.nl](http://www.trimbos.nl)) has a brochure 'Het beste voor mij en mijn baby' [The best for me and my baby, in Dutch] that answers questions about the psychological symptoms that can occur during pregnancy and afterwards.

## Work

There is a brochure 'Pregnancy and maternity leave' issued by the Ministry of Social Affairs and Employment. For more information and a free copy of the brochure, phone 0800 90 51, or go to [www.szw.nl](http://www.szw.nl), click on 'English', then search for 'pregnancy'.

Brochure 'Veilig en gezond werken tijdens zwangerschap en na de bevalling' [Working safe and sound during pregnancy and after childbirth, in Dutch] is available from Ministry of Social Affairs and Employment. Phone 0800 90 51, or <http://home.szw.nl>, click on 'onderwerpen' and choose 'Zwanger en werken'.

The brochure 'Schadelijke stoffen op het werk bij kinderwens en zwangerschap' [Working with toxic materials while you are pregnant or trying to become pregnant, in Dutch] can be ordered via 0900 66 555 66 (€0.25 per minute) or [erfolijn@erfocentrum.nl](mailto:erfolijn@erfocentrum.nl); it can also be downloaded from [www.erfelijkheid.nl](http://www.erfelijkheid.nl) (click on "S").

## Prenatal examination

For more information about pregnancy screening, go to [www.rivm.nl/pns\\_en](http://www.rivm.nl/pns_en).

The brochures ‘Information on the Down’s syndrom screening test’ and ‘Information on the anomaly scan’ are available from your GP, midwife, obstetrician or at [www.rivm.nl/zwangerschapsscreening/downscreening/folders](http://www.rivm.nl/zwangerschapsscreening/downscreening/folders) and [www.rivm.nl/zwangerschapsscreening/20\\_wekenecho/folders](http://www.rivm.nl/zwangerschapsscreening/20_wekenecho/folders) (in several languages).

The brochure ‘Echoscopie tijdens de zwangerschap’ [Ultrasound scan during pregnancy, in Dutch] is available from your GP, midwife, or obstetrician, or at [www.nvog-documenten.nl](http://www.nvog-documenten.nl), click on ‘Overzicht documenten’.

The brochure ‘Prenatale screening bij erfelijke of aangeboren afwijkingen’ [Prenatal screening for congenital and inheritable disorders, in Dutch] is available from your obstetrician or at [www.nvog-documenten.nl](http://www.nvog-documenten.nl), click on ‘Overzicht documenten’.

For general information and addresses about the standard blood test during pregnancy for infectious diseases and blood groups, go to [www.rivm.nl/pns\\_en/bloodtest/](http://www.rivm.nl/pns_en/bloodtest/).

The brochure about hepatitis B and pregnancy (‘Hepatitis B en zwangerschap’, in Dutch) is available at [www.rivm.nl/rvp/informatie/folders.jsp](http://www.rivm.nl/rvp/informatie/folders.jsp). More information in English at: [www.rivm.nl/rvp/informatie/vertalingen.jsp](http://www.rivm.nl/rvp/informatie/vertalingen.jsp).

More information about screening and diagnostics: [www.prenatalescreening.nl](http://www.prenatalescreening.nl). This site has a questionnaire, ‘keuzehulp’, in Dutch, to help you decide whether you want such screening. For more information (in Dutch) about heredity, tests and heritable congenital diseases, go to [www.erfelijkheid.nl](http://www.erfelijkheid.nl).

## Newborn blood spot screening

For more information about the newborn blood spot go to [www.rivm.nl/pns\\_en/heelprick/](http://www.rivm.nl/pns_en/heelprick/).

## Other information sources

More information about lifestyle, folic acid, chronic disorders and pregnancy is available at [www.zwangernu.nl](http://www.zwangernu.nl) and [www.zwangerwijzer.nl](http://www.zwangerwijzer.nl) (both in Dutch). You can download a brochure in several languages by clicking on ‘downloaden’.

Ministry of Public Health, Welfare and Sports: [www.minvws.nl](http://www.minvws.nl) (in Dutch).

National Institute for Public Health and the Environment: [www.rivm.nl](http://www.rivm.nl).

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To order:

Midwives, GPs, and obstetricians can order extra copies of this brochure from the RIVM Regional Offices (RIVM-RCP). See [www.rivm.nl/rcp/](http://www.rivm.nl/rcp/).

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