

# Pregnant!

## General information

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Information from midwives, general practitioners  
and obstetricians

2010 NVOG, KNOV, NHG, LHV, VVAH, Erfocentrum, and RIVM. This brochure contains general information for women who are pregnant and their partners.

This brochure was produced in cooperation with the Patient Information Committee of the Dutch Association for Obstetrics and Gynaecology (NVOG), the Royal Dutch Organization of Midwives (KNOV), the Dutch College of General Practitioners (NHG), the National Association of General Practitioners (LHV), the Association of Doctors Practising Obstetrics (VVAH), the Erfocentrum (the National Information Centre for Heredity, Pregnancy, and Medical Biotechnology), and the National Institute for Public Health and the Environment (RIVM). Everybody may make copies of this brochure without asking permission, provided the copies are complete and unabridged and the source is acknowledged.

This brochure contains general information about what the pregnant woman can usually expect in terms of care and advice. Sometimes you may receive other advice or information from a general practitioner (GP), midwife, or obstetrician, possibly because your situation is different or because things may be done differently in practice.

Written information is always additional to the consultation with the midwife, GP, or obstetrician. That's why the above-named organizations are not liable for any shortcomings of this brochure. Nonetheless, they have certainly put a lot of thought into the content, which is updated annually. You can download this brochure in English and Dutch from [www.rivm.nl/pns](http://www.rivm.nl/pns) > 'Bloedonderzoek' > 'Publieksinfo'.

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# Pregnant!

Being pregnant is very special. You probably have a lot of questions about your pregnancy and check-ups. 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 doctor's surgery? This brochure gives you information about all these things. Pregnancy is a natural process. Most women have symptoms during pregnancy that just belong to being pregnant. You can read more about them in this brochure as well.

We address this information to you, the expectant mother, but a lot of the information is important for your partner as well. If you still have questions after reading this brochure, just ask your midwife, GP, or obstetrician.

## 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 can go on working 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, or the course of the pregnancy.

## Looking after your pregnancy

In the Netherlands, a midwife, or sometimes a general practitioners (family physician) who practises obstetrics, monitors the pregnancy and birth as long as possible. Both are trained in the care of normal pregnancies and births. However, if you need specialist care during the pregnancy or birth, you will receive it from an obstetrician in the hospital. Thanks to the good cooperation between midwives, GPs, and obstetricians, you can count on the very best care for you and your baby.

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

Once you know you are pregnant, it is important to make an appointment with your midwife or GP as soon as possible. If you need the care of a specialist, they will refer you to an obstetrician at the hospital.

At your first appointment, there will be some questions, for instance, about your pregnancy, your health, your partner's and relatives' health, and about your daily circumstances. Usually there is a short examination at this first appointment. Your blood pressure will be checked, and perhaps the size of the uterus will be estimated.

At about the time of the first check-up, a sonogram 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). The midwife, GP, or obstetrician will discuss the various pregnancy tests with you (see pages 18–24).

You will be told how you can get in touch with someone if you have any questions or concerns.

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 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 is needed to determine how long you have been pregnant and the expected 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 for yourself, and take it with you, along with the date you stopped taking the pill (if you used it). The dates of any pregnancy tests are also important.

## Your health

Questions about your health will be about illnesses, operations, blood transfusions, and treatments. If you have used any medicines in the last few months, or if you have any particular symptoms, 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.

## The health of your family members

If there are any diseases or health conditions in your family or that of your partner, it is wise to mention them. Examples are diabetes, cystic fibrosis, spina bifida, muscular diseases, Down syndrome, and heart conditions.

## Your everyday circumstances

Do you live alone or with a partner? What are your daily activities? If there are unusual circumstances in your life, then you should mention them. During your pregnancy, you may encounter changes in the areas of relationships, finances, housing, or work.



# Check-ups during pregnancy

Your midwife, GP, or obstetrician will provide regular check-ups during your pregnancy. Usually there is a check-up every four weeks in the first half of the pregnancy. The frequency of the check-ups increases until it becomes weekly at the end of the pregnancy. 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. And of course you may ask any questions that you have. At the end of the pregnancy, the delivery will be discussed, along with your wishes and expectations in this regard.

## Physical examination

At each visit, the growth of the uterus will be checked. The midwife, GP, or obstetrician feels the uterus through the stomach with his or her hands to determine whether the baby has grown enough. Starting at the third month, the doctor often listens to the baby's heart. In the last months of the pregnancy, the midwife, GP, or obstetrician 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 a breech presentation), has dropped down in the pelvis.

Your blood pressure is usually measured at each check-up. 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 give rise to annoying symptoms such as dizziness on shifting your position. Toward the end of the pregnancy, it is normal for the diastolic pressure to rise somewhat. You usually don't notice blood pressure that is too high yourself, but it makes extra care for mother and baby necessary.

For more information (in Dutch), go to [www.nvog.nl](http://www.nvog.nl), click Voorlichting near the top of the page, then Voorlichtingsbrochures. Scroll down to the end of the list to choose an item about pregnancy.

# Advice for daily life

## Alcohol

The use of alcohol during pregnancy can be harmful to the unborn baby. The amount of alcohol that will lead to a problem is uncertain at the present time. It is a known fact that even small amounts of alcohol can be harmful. We advise women who want to become pregnant and those who are pregnant or breast-feeding not to drink alcohol.

For more information (in Dutch), go to [www.STAP.nl](http://www.STAP.nl), then choose Alcohol & Zwangerschap; or [www.zwangernu.nl](http://www.zwangernu.nl), then choose Alcohol.

## Contagious diseases in your surroundings

Your having a contagious disease can have consequences for your child. Does anybody in your surroundings have a children's disease with spots on the skin, such as chicken pox, German measles, or fifth disease (slapped cheek syndrome)? Or have you been in contact with anybody who has another contagious disease? If so, and if you have not had the disease in question yourself, then get in touch with the person who is monitoring your pregnancy or your GP.

## Drugs

The use of drugs during pregnancy is very inadvisable. Soft drugs (cannabis, marihuana, weed, and hash) can be a health risk to the pregnancy and the baby. It is a known fact that the use of soft drugs increases the harmful effects of other stimulants or substances such as alcohol. The inability to do without soft drugs (addiction) has adverse consequences for pregnancy. The baby can get withdrawal symptoms after the birth.

Hard drugs are a risk for the unborn baby. Cocaine, ecstasy (XTC), and heroin are dangerous. Depending on the kind of drug, the child can have a birth defect and/or a developmental disorder and/or be addicted. Not enough is known about magic mushrooms and smart drugs. If you use hard drugs regularly, stopping during pregnancy can give the unborn baby withdrawal symptoms. To stop, consult your specialist about this matter.

## Folic acid

You probably already take folic acid. If not, and you have only been pregnant a short time, then you can start and continue until you are 10 weeks pregnant (that is, 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 ('apothek'). Folic acid reduces the chance that the baby will have serious disorders like spina bifida.

For more information, see [www.slikeerstfoliumzuur.nl](http://www.slikeerstfoliumzuur.nl) (in Dutch).

## Cat box and gardening

A parasite that can cause toxoplasmosis can infest the excrement of cats (especially young ones). Toxoplasmosis can harm the unborn baby. It is important to wear gloves while cleaning the cat box and working in the garden. A sandbox can also be a source of toxoplasmosis. If you have had toxoplasmosis in the past, you are immune to it.

You can read how to prevent a toxoplasmosis infection on page 13.

## Medicines

Always tell your midwife, GP, or obstetrician about your use of medicines. 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 of using medicines when you are pregnant. Tell your doctor and your dentist if you are trying to get pregnant or are pregnant. 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.

You can safely use paracetamol for pain symptoms. Consult the package information leaflet for the dose. Use other painkillers only after consulting your doctor. There is no objection to an anaesthetic at the dentist's.

## Smoking

Smoking while you are pregnant is an enormous risk. Not only your own smoking, but spending much time in smoky surroundings can be damaging to your pregnancy. Cigarettes contain harmful substances. These substances reduce the blood circulation in the placenta, which in turn reduces the flow of oxygen to the baby. This means that the baby will not grow as well as he or she should. 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.

Our advice to both parents-to-be is: stop smoking and avoid smoky areas as much as possible. If you need help to stop smoking, you can discuss it with your doctor or midwife. For more information (in Dutch), go to [www.stivoro.nl](http://www.stivoro.nl).

## 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. Magnetic resonance imaging (MRI) is not dangerous for the baby. No harmful effects of microwave ovens, TV, or computer screens have ever been identified.

## Sexuality

The way of experiencing intimacy and sexuality 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. Then she or he will take them into account during physical examination and when you are giving birth. This is also true of previous unpleasant sexual experiences or any problem you may have with an internal examination.

## Sports

For sports, the rule is: do what you always did, but do less or stop when you notice that there are unpleasant symptoms or when you are more tired than usual. It is better to try not to exert yourself more than you did before you were pregnant. Be sure that you drink enough fluids. Sporten waarbij u risico loopt om iets tegen uw buik aan te krijgen, of sporten waarbij u gemakkelijk met andere mensen botst of kunt vallen, zijn minder verstandig. Denkt u hierbij aan sporten als hockey, volleybal, skiën en voetbal.

You can swim, cycle, and do fitness exercises very well to the end of the pregnancy. It is sensible to avoid sports where you risk your stomach being bumped into, and sports

where you easily bump into other people or where you can fall. Such sports include hockey, volleyball, skiing, and soccer. Diving with an oxygen tank is not a good idea during pregnancy because then you have a greater chance of getting the bends (decompression sickness).

## Toxoplasmosis

See cat box and gardening.

## Vacations and long trips

In many cases you can travel safely during pregnancy. If you intend to go to distant countries, get in touch with your doctor or Community Health Services (GGD) for travel advice and vaccinations. There is no objection to mother and unborn baby flying from a medical viewpoint. Airlines generally do not want to transport pregnant women after 32 to 34 weeks of pregnancy because they do not want to risk birth during the flight.



## Vitamin preparations

Vitamin preparations have no extra health value. Special pregnancy vitamins are not recommended. They are not necessary if your diet is healthful and varied. Some things that contain vitamin A are even harmful if you eat an excess of them. Extra vitamin D is recommended to women with dark skin, particularly if they wear a veil and get little sunlight.

## Nutrition

It is important to have a fresh, healthful, and varied diet during your pregnancy. The food guide pyramid can help you with this. You do not have to 'eat for two'; conversely, dieting to lose weight during pregnancy is unwise.

If you are pregnant and you want to fast, discuss it with your obstetric health professional. You can postpone the fasting.

If you do not eat meat or fish, it is important to make sure that you get enough B vitamins and iron. Especially whole wheat products, potatoes, legumes, eggs, and dairy products contain B vitamins. Legumes and eggs are also important sources of iron, as are meat substitutes.

Don't eat cheeses made with raw milk ('au lait cru'). 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 meat or meat cooked rare, such as uncooked ground beef - 'filet Américain' - or roast beef. 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.

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

For more information, go to [www.voedingscentrum.nl](http://www.voedingscentrum.nl), and choose English at the top of the page.

## 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.

Work where you are exposed to vibrations (lorries and agricultural machines), ionizing radiation (radiation from radioactive materials), chemical substances, or risk 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 or she must adjust the work or possibly offer you other work. You can also consult the company medical officer ('Arbodienst') or address your questions to the labour inspection office ('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, GP, or obstetrician about this.

If you work nights or in shifts, you can ask your employer to adjust your working hours and breaks 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 during the first six months after you give birth. If it is not possible to arrange adjustments to your work so that it is healthful 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.

For more information (in Dutch), go to [www.zwangerwijzer.nl](http://www.zwangerwijzer.nl).

## 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. Sign up early to take a class. More information about the available classes in your neighbourhood can be provided by your midwife, GP or obstetrician or by the home care section of your Community Health Services (GGD).

## Maternity leave

It is important for you to be well rested when labour begins. Every woman has the right to 16 weeks of maternity leave. This leave usually start after 34 weeks of pregnancy and lasts until 10 weeks after the delivery date. If you give birth earlier, then the leave still lasts 16 weeks; if you give birth later, then the leave is automatically longer. You are always entitled to a leave of 10 weeks after giving birth. There is a regulation for parental leave as well as a regulation for pregnancy leave.

For more information, go to [www.szw.nl](http://www.szw.nl) and search for bevallingsverlof (in Dutch).

# Pregnancy symptoms

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

## Haemorrhoids

Haemorrhoids occur more often during pregnancy than at other times. Haemorrhoids are bulges in small blood vessels near the anus. They can itch and be painful. Straining can make the symptoms worse. So try to avoid constipation and hard stools.

## Loss of blood during pregnancy

Loss of blood occurs fairly often during pregnancy, especially the first three months. The causes differ; examples are the implantation of the embryo or a tiny wound in the cervix. Sometimes a miscarriage is the reason for the bleeding. Get in touch with your midwife, GP, or obstetrician if you have a loss of blood.

For more information (in Dutch) go to [www.nvog.nl](http://www.nvog.nl) > 'Voorlichting' > 'Voorlichtingsbrochures' or go to <http://nhg.artsenet.nl> > 'NHG-patiëntenbrieven' > 'Zwangerschap'.

## Heartburn

Some women have trouble with heartburn. Coffee, orange juice, fat, and carbonated drinks are some of the things that can make the symptoms worse. If heartburn gives you too much trouble, avoid these foodstuffs. If the heartburn persists, consult your midwife, GP, or obstetrician.

## Emotions during pregnancy

Pregnancy is a period of great changes for most people. It is accompanied by many different, sometimes changeable, emotions, both for you and your partner. The emotions can be positive or negative. If the negative emotions dominate, it is important that you can discuss them. Feel free to talk about these emotions, for example, with your midwife, GP, or obstetrician.

## Braxton Hicks contractions

You feel the muscles of the uterus contract now and then during pregnancy. These are called Braxton Hicks contractions ('hard stomach' or 'hard abdomen' in Dutch). It does not cause dilation. A hard stomach from time to time does no harm. If it happens often, contact your midwife, GP, or obstetrician.

## 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 will see for yourself which foods you can tolerate best.

## Tiredness

You can be tired, particularly in the first three months of the pregnancy. At this time, many women need more sleep. This is because of hormonal changes. Anaemia is seldom the cause.

## Pigment spots

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

## Back or pelvic pain

Your weight and posture will change and the joints of your pelvis become looser during pregnancy. This can sometimes cause pain in the back or pelvis. Good posture can reduce the symptoms. If you have trouble with back or pelvis pain, contact your midwife, GP, or obstetrician. Light exercise is good. Make sure you bend your knees when you lean down or lift things. 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.

For more information (in Dutch), go to [www.nvog.nl](http://www.nvog.nl) > 'Voorlichting' > 'Voorlichtings-brochures'.

## Varicose veins

Some women get varicose veins in the legs during pregnancy. Varicose veins sometimes occur in the labia. Be sure that you move around regularly and try not to stand or sit for a long time. When you are sitting or lying down, use a footstool or a cushion to put your legs on. Elastic support stockings also help reduce the symptoms of varicose veins. After the baby is born, the varicose veins shrink quickly.

## Frequent urination

While you are pregnant, you have to urinate more often than usual. As the uterus grows, more pressure builds on your bladder. This makes you feel that you have to urinate sooner. If you feel the need to urinate very often, you may have a bladder infection. Then you usually have a burning sensation when you urinate. In that case, take a urine sample to your doctor to have it tested. If you do have an infection, some medicine will be prescribed for you.

## 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, some medicine will be prescribed for you.

## Fluid retention

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

## Constipation

Your intestines work somewhat more slowly during pregnancy. That's why you have a bowel movement less often and the stools are harder. Fibre-rich foods such as raw vegetables, fruit, and whole-wheat products, possibly with added bran, will help. Make sure that you drink about two litres of fluid a day. Physical activity is also important for bowel movement.

# The blood test

At your first appointment, your midwife, GP, or obstetrician will see that a blood sample is taken to be tested. The test is done to protect your baby from certain illnesses. If the test shows that your baby has a chance of becoming ill, it is often possible to treat you to protect the baby. Your blood will only be tested with your permission. In the standard test, your blood is examined for:

- Haemoglobin content
- Blood group ABO
- Rhesus D factor
- Blood group antibodies
- Syphilis (lues)
- Hepatitis B
- HIV.

A glucose value is also often determined.

## 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. Your blood is also tested to see whether you are Rhesus-D-positive or -negative.

## Rhesus-D-factor

The blood test can determine the Rhesus-D-factor (RhD). You are either RhD-negative or RhD-positive. It is a question of heredity, just like the colour of your eyes and hair. Of 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 pregnancy, there is a small chance that blood from the baby gets into the mother's bloodstream. There is a fairly large chance

of this during birth. If this happens, then an RhD-negative mother can make antibodies against an RhD-positive baby's blood. These antibodies can get to the baby's blood through the umbilical cord and break it 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 RhD-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 in any way and runs no risk at all. If you are RhD-negative, the baby will be checked after 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. 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 kinds of antibodies can be made due to a previous pregnancy or after a blood transfusion. These antibodies may be harmful to your baby's health: there is a chance that they may reach your baby's blood through the umbilical cord and the placenta, then break it down. If such antibodies are found in your blood, it will be further examined to find out exactly what kind of antibodies they are. Your midwife, GP, or obstetrician will discuss with you whether further testing of your blood is necessary or will refer you to the right clinician.

For more information (in Dutch), go to [www.nvog.nl](http://www.nvog.nl) > 'Voorlichting' > 'Voorlichtingsbrochures'.

## Syphilis (lues)

Syphilis, also called lues, is a sexually transmitted disease (STD) that one can get from unsafe sex. To prevent the baby becoming infected, it is important to detect the disease as early in the pregnancy as possible. If the blood test shows that you have syphilis, you will be referred to an obstetrician and treated with antibiotics.

## Hepatitis B

Hepatitis B is a viral disease that infects the liver. Sometimes people have no symptoms and don't know that they are infected. After infection, some people go on carrying the hepatitis-B virus with them. These people are called carriers, and they can infect others. If you are a carrier, 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. That's why your baby will receive hepatitis-B immunoglobulin shortly after birth. These instant antibodies are given to your baby in an injection, and they protect him or her from the virus. It is also important that your baby him- or herself builds up immunity to hepatitis B. This is why the baby is immunized. The first immunization takes place within 48 hours after birth, and the next ones will be at the ages of 2, 3, 4, and 11 months.

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 (in Dutch) can be found at [www.rivm.nl/rvp/informatie/folders.jsp](http://www.rivm.nl/rvp/informatie/folders.jsp).

## Hiv/aids

Hiv is the virus that causes hiv/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, it can be transferred via your blood to your baby during pregnancy or birth, or later via breastfeeding. Using virus inhibitors during pregnancy greatly reduces the chance of the baby becoming infected. It is therefore worthwhile to have a hiv-test 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.

For more information, go to [www.soaids.nl](http://www.soaids.nl) and click English at the top of the page or go to [www.hivnet.org](http://www.hivnet.org), click EN, followed by > 'Publications, booklets' > 'Information for mothers-to-be'.

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

If you do have hepatitis B, syphilis, or hiv, there will be 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. The Community Health Services (GGD) are also involved here.

A positive test result for hepatitis B or hiv can also have consequences if you want to get insurance or a mortgage.

## More information?

You can always ask your midwife, GP, or obstetrician. You can also find more information about living with hiv or aids, working with hiv, and the consequences for insurance at [www.weldergroep.nl](http://www.weldergroep.nl) (in Dutch) or [www.hivnet.org](http://www.hivnet.org) (in Dutch and English).

## Additional test for sexually transmitted diseases

Is there a chance that you and/or your partner have contracted a sexually transmitted disease (STD)? Then it is important that you tell your midwife, GP, or obstetrician. Examples of STDs (besides hiv and syphilis) are chlamydia and gonorrhoea. Such diseases do not always produce symptoms. These STDs can cause the baby to develop an eye or lung infection after birth. After a positive test, the treatment of an STD consists of a course of antibiotics that will not harm the unborn baby. Your partner must also be treated.

# Additional testing

## Ultrasound scan

Every pregnant woman is offered an ultrasound scan at in the beginning of her pregnancy. This ultrasound scan determines how long you have been pregnant. 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.

For more information (in Dutch), go to [www.nvog.nl](http://www.nvog.nl) > 'Voorlichting' > 'Voorlichtingsbrochures'.

## Investigation of congenital and inheritable diseases

### Prenatal screening

Many parents-to-be wonder whether their baby will be healthy. That is understandable. Fortunately most babies are born healthy. As an expectant mother in the Netherlands, you have the option of having your baby examined before birth. We call this prenatal screening.

First consider whether you want to have such information. Try to think what it would mean to you if an abnormality were found. If you don't want the information, you can skip the rest of this section.

Prenatal screening consists of two parts: the combined screening test and the 20-week sonogram.

#### *The combined screening test*

The combined screening test, done early in pregnancy, will tell you if there is an increased risk that your baby will have Down syndrome. The test entails no risk for you or your baby.

The two parts of the test are:

A blood test for you when you are 9 –14 weeks pregnant;

A nuchal translucency scan (ultrasound) between 11 and 14 weeks of pregnancy to assess the amount of fluid at the back of the baby's neck. The thin layer of fluid is always

present, even in healthy babies. The thicker the layer, the more likely it is that the baby has Down syndrome.

### **The test results**

The results of the blood test and the nuchal translucency scan, combined with your age and the exact length of the pregnancy, determine how likely it is that the baby has Down syndrome. The test does not provide certainty. If there is an increased risk, you will be offered a follow-up examination. Your midwife, GP, or obstetrician will inform you about this.

### *The 20-week ultrasound scan*

The 20-week ultrasound scan is also called an anomaly scan. Its main use is for determining the possible presence of spina bifida or another congenital birth defect. This scan is extensively studied to ascertain the development of the baby's organs. Other physical anomalies may be seen here as well. Further, the anomaly scan reflects whether the baby is growing well and whether there is enough amniotic fluid.

The combined test and the anomaly scan can perhaps give you some reassurance about the health of your baby. Sometimes they can worry you and make you face difficult choices. For example, about possible follow-up tests or examinations, or even about whether you want to continue or discontinue your pregnancy.



Not all diseases can be investigated and discovered before birth. Even if prenatal screening shows that the chance of Down syndrome or a physical defect is small, this does not mean for certain that your baby does not have it. 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 these tests. Then 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 the tests. 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 two information folders about prenatal screening: 'Information on the Down's syndrome screening test' and 'Information on the anomaly scan'.

You can find them in several languages at:

[www.rivm.nl/zwangerschapsscreening](http://www.rivm.nl/zwangerschapsscreening) > 'Downsscreening' > 'Folders' > 'Other languages';  
[www.rivm.nl/zwangerschapsscreening](http://www.rivm.nl/zwangerschapsscreening) > '20 wekenecho' > 'Folders' > 'Other languages'.

## Prenatal diagnostics

The result of the combined test indicates a likelihood. If you have an increased risk, you can choose to have additional testing to get certainty. This testing consists of chorionic villus sampling (between 11 and 14 weeks of pregnancy) or amniocentesis (after 15 weeks). Such testing is also referred to as prenatal diagnostics.

In some cases, you can immediately choose to have prenatal diagnostics; for example if you are 36 years old or older. Or if there is an inherited or congenital defect in your immediate family. Or if you use certain medicines that could be harmful to your baby.

For more information about prenatal screening and prenatal diagnostics, see:  
[www.rivm.nl/zwangerschapsscreening](http://www.rivm.nl/zwangerschapsscreening) > 'Downsscreening' > 'Folders' > 'Other languages';

[www.rivm.nl/zwangerschapsscreening](http://www.rivm.nl/zwangerschapsscreening) > '20 wekenecho' > 'Folders' > 'Other languages';

[www.prenatalescreening.nl/keuzehulp.php](http://www.prenatalescreening.nl/keuzehulp.php) (in Dutch);

[www.nvog.nl](http://www.nvog.nl) > 'Voorlichting' > 'Voorlichtingsbrochures' (in Dutch);

[www.erfelijkheid.nl/erfelijkheid/genetictesting.php](http://www.erfelijkheid.nl/erfelijkheid/genetictesting.php) (in English);

[www.zwangernu.nl](http://www.zwangernu.nl) (articles in English are on the right-hand column of the page)

[www.knov.nl](http://www.knov.nl) > 'Voor (bijna) zwangeren' > 'Zwanger' > 'Prenataal onderzoek' (in Dutch).

# Giving birth and after

## 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. This could be the case if the labour takes too long or if the baby has defecated in the amniotic fluid. Then the midwife will contact the hospital obstetrician and hand over the care to him or her. In the Netherlands, this happens to about half the women having their first baby. About two of every ten women who have previously given birth have to go to the hospital. In total, seven out of ten women give birth in hospital.

## Preparation for childbirth

It is important that you are well prepared for childbirth. You can take a pregnancy course, read about giving birth, or talk about it with your midwife, GP, or obstetrician. Think about what your wishes and expectations are beforehand, and discuss them. Consider what you expect from those who will be helping you and how you want to deal with pain during childbirth.

For more information (in Dutch), go to [www.knov.nl](http://www.knov.nl) > 'Voor (bijna) zwangeren' > 'Zwanger' > 'Bevallen: voorbereiding en pijnbestrijding'.

## Maternity care ('Kraamzorg')

You will receive maternity care for the first week after giving birth. The maternity carer assists the midwife or GP during a home birth. Then she takes over the immediate care for the mother and baby. This is also the case if you give birth in hospital. Maternity care must be arranged early in pregnancy via a maternity care organization. You can get more information at the home care organizations or private maternity care organizations in your area. If you are at home during your maternity time or a part of it, the midwife or GP will visit you regularly for medical check-ups and a talk. After this period, healthcare for the baby is turned over to the child healthcare centre ('consultatiebureau') in your neighbourhood. A nurse will contact you for an interview.

## Breastfeeding

Breastfeeding is advised as the first choice for feeding babies world-wide. There are courses you can take while you are pregnant to prepare for breastfeeding. You can also consult a lactation expert.

For more information (in Dutch), go to [www.borstvoeding.nl](http://www.borstvoeding.nl) or consult your obstetric healthcare professional.

If breastfeeding is not an option for you, formula or bottle feeding is a good alternative.

## Jaundice in newborn babies

Most babies begin to look a bit yellow when they are a few days old, despite their own skin colour. This is due to a certain degradation product (bilirubin) from the blood, which gets into the baby's skin. This is usually harmless and disappears on its own in a few days. Sometimes the amount of bilirubin is so high that it can cause brain damage. This is why the baby is checked for it in the first few days. If the baby is jaundiced, the amount of bilirubin can be determined with a skin test or a blood test. If the results show a high concentration of bilirubine, the baby is usually treated with light therapy in the hospital.

## 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. A baby changes a lot in your daily life. Give yourself time to get used to these changes. 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.

## Newborn heel prick screening

In the first week after birth, blood is taken from your baby's heel. This blood is tested in a lab for some uncommon, but serious, metabolic disorders. Early discovery of these disorders can prevent or limit very serious damage to the physical and/or mental development of your baby. The conditions cannot be cured, but they can be treated, for example, with medicines or diet. Someone from the home care or the Community Health Services (GGD) or the midwife will visit you at home for the heel prick sample, also called newborn blood spot screening. In the third trimester of your pregnancy you will receive a brochure about the heel prick from the midwife, GP, or obstetrician.

For more information, go to [www.rivm.nl/hielprik](http://www.rivm.nl/hielprik) > 'Folders' > 'Other languages'.

## Newborn hearing test

Good hearing is very important to your baby's development. Children who do not hear well can have problems developing language and speech. Not speaking well and not understanding others can have consequences for learning as well as for the emotional and social development of a child.

A hearing test can reveal a newborn's loss of hearing early. The earlier the discovery, the sooner the treatment can begin. This is favourable for the development of language and speech.

For the hearing test, a small, soft earplug is placed in your baby's ear. A soft, rattling sound goes through the earplug. The earplug is connected to a measuring device which measures your baby's hearing. The test takes a few minute and is painless. The baby usually sleeps through it. You get the results immediately after the test. The hearing test can be repeated twice if necessary. The hearing test is done at the same time as the heel prick test in most districts, between four and seven days after birth. In some regions, hearing is tested at the child healthcare centre ('consultatiebureau') when the baby is a few weeks old. For more information, go to [www.rivm.nl/gehoorscreening](http://www.rivm.nl/gehoorscreening) > 'Folders' > 'Algemeen'.

## Immunisation of your baby

The government invites all children in the Netherlands to take part in the National Vaccination Programme. This programme immunizes babies and children against diphtheria, whooping cough (pertussis), tetanus, polio, type b Haemophilus influenzae (Hib) diseases, pneumococcal infection, mumps, measles, German measles (rubella), and meningococcosis C. Children in risk groups are immunized against hepatitis B.

Most infectious diseases are difficult to treat and can have serious consequences for the health of your baby. Within 4 to 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 proof-of-vaccination card, and a folder about the National Vaccination 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.

For more information, please contact the child healthcare centre or the Regional Health Services (GGD). Or go to [www.rivm.nl/rvp](http://www.rivm.nl/rvp) > 'Documentatie en links' > 'Voorlichting in een andere taal' (several languages).

## Registration of your data

### Registration of your data

If you have a blood test, your personal medical details will be registered. This takes place at the responsibility of the RIVM Regional Coordination Programmes [RIVM-Regionale Coördinatie Programma's] and the Dutch Perinatal Registry [Stichting Perinatale Registratie Nederland]. The purpose of this registration is to collect important personal medical data concerning pregnancy and birth about both mother and baby.

### Why are the data registered?

The nationally collected medical data are a source of data for medical-scientific and statistical research. That's why midwives, GPs, obstetricians, and paediatricians participate in data registration. They believe it is important that such research can help to increase the medical knowledge concerning pregnancy and birth as well as 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 baby disorders. The registered data facilitate research into the causes and what can be done to prevent such cases in the future.

### What, exactly, is registered?

If you wish, your midwife, GP, or obstetrician can provide you with more information about the data to be registered. They 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 (in Dutch) 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, read Informatie voor geregistreerden, informatie voor zwangeren [Information for those registered, information for pregnant women (in Dutch)] at [www.perinatreg.nl](http://www.perinatreg.nl) > 'Wat wordt geregistreerd'. Or go to [www.rivm.nl/zwangerschapsscreening](http://www.rivm.nl/zwangerschapsscreening) and search for Privacy in the zoek box (in Dutch).

# 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)
- Erfocentrum: [www.erfocentrum.nl](http://www.erfocentrum.nl), [www.zwangernu.nl](http://www.zwangernu.nl), [www.zwangerwijzer.nl](http://www.zwangerwijzer.nl)
- RIVM: [www.rivm.nl/zwangerschapsscreening](http://www.rivm.nl/zwangerschapsscreening)

## Alcohol and pregnancy

The brochure Pregnancy, breastfeeding and alcohol [Zwangerschap, borstvoeding en alcoholgebruik] is available via your midwife, GP, or gynaecologist or via [www.alcoholinfo.nl](http://www.alcoholinfo.nl). There is also information (in Dutch) about this at [www.drugsinfo.nl](http://www.drugsinfo.nl) > thema's > zwangerschap

## Drugs

The brochure Een dikke buik en druggebruik, zwangerschap en drugs [Pregnancy and drugs] is available via Stichting Mainline, phone 020 682 26 60 or via [www.mainline.nl](http://www.mainline.nl). See also [www.drugsinfo.nl](http://www.drugsinfo.nl) > thema's > zwangerschap.

## Hearing tests

See: [www.rivm.nl/gehoorscreening/folders](http://www.rivm.nl/gehoorscreening/folders) > 'Algemeen'. This site provides brochures in English, French, German, Spanish, Portuguese, Turkish and Papiamentu, Chinese and Arabic

## Heel prick

See [www.rivm.nl/hielprik](http://www.rivm.nl/hielprik) > 'folders'. This site provides brochures in English, French, German, Spanish, Portuguese, Turkish and Papiamentu, Chinese, and Arabic

## Prenatal tests

- [www.rivm.nl/zwangerschapsscreening](http://www.rivm.nl/zwangerschapsscreening).
- The brochures Information on the Down's syndrome screening test and Information on the anomaly scan are available at [www.rivm.nl/zwangerschapsscreening](http://www.rivm.nl/zwangerschapsscreening)
- The brochure Echoscopie tijdens de zwangerschap [Ultrasound during pregnancy (in Dutch)], is available from your midwife, GP, or obstetrician, or at [www.nvog.nl](http://www.nvog.nl) > Voorlichting > Voorlichtingsbrochures
- General information and addresses for standard blood testing during pregnancy for infectious diseases and blood group: [www.rivm.nl/zwangerschapsscreening](http://www.rivm.nl/zwangerschapsscreening)

- Brochure Hepatitis B (in several languages) at [www.rivm.nl/rvp/informatie/vertalingen.jsp](http://www.rivm.nl/rvp/informatie/vertalingen.jsp)
- Brochure Hepatitis B en zwangerschap [Hepatitis B and pregnancy, in Dutch]: [www.rivm.nl/rvp/informatie/folders.jsp](http://www.rivm.nl/rvp/informatie/folders.jsp)
- Prenatal screening and diagnostics: [www.prenatalescreening.nl](http://www.prenatalescreening.nl) (in Dutch)
- Heredity, testing, heritable, and congenital conditions (in English): [www.erfelijkheid.nl/erfelijkheid/genetictesting.php](http://www.erfelijkheid.nl/erfelijkheid/genetictesting.php)

### Psychologic symptoms during and after pregnancy

The Trimbos Institute publishes a brochure about stress and psychologic symptoms during pregnancy and afterwards: *Het beste voor mij en mijn baby* [The best for me and my baby (in Dutch)] and is available at [www.trimbos.nl](http://www.trimbos.nl) (enter baby in the zoek box) or phone 030 297 11 00.

### Smoking

- The brochure *Roken, niet waar de kleine bij is* [Smoking, not in presence of the baby (in Dutch)] is available from your midwife, GP, or obstetrician, or can be ordered from Stivoro: phone 0900 9390.
- Information about pregnancy and quitting smoking, see [www.stivoro.nl](http://www.stivoro.nl) (in Dutch) or phone Stivoro on 0900 9390.

### Sexually transmitted diseases and other infectious diseases

- The brochure *Testen op HIV. Informatie voor zwangere vrouwen* [Testing for HIV. Information for pregnant women] is available from your midwife, GP, or obstetrician.
- Information about STDs at [www.soaaids.nl/english](http://www.soaaids.nl/english)
- Informaion about living with HIV: see the HIV Association's website at [www.hivnet.org](http://www.hivnet.org), click 'EN' for information in English
- Hepatitis B and pregnancy (in Dutch): [www.rivm.nl/rvp/informatie/folders.jsp](http://www.rivm.nl/rvp/informatie/folders.jsp)

### Nutrition

- For information about pregnancy and nutrition, phone the Infoline at the Nutrition Centre [Voedingscentrum] on 070 306 88 88 or see [www.voedingscentrum.nl](http://www.voedingscentrum.nl) and choose English at the top of the page.
- 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)

## Work

- For a free copy of the brochure Zwangerschap: veilig werken en verlof [Pregnancy: safe work and leave] from the Ministry of Social Affairs and Employment, phone 0800 8051, or go to [www.szw.nl](http://www.szw.nl), choose English > 'Health and safety at work' > 'Working safely during pregnancy'.
- The brochure Schadelijke stoffen op het werk bij kinderwens en zwangerschap [Dangerous substances at your work and pregnancy or intended pregnancy, in Dutch] is available at [www.erfelijkheid.nl](http://www.erfelijkheid.nl). Phone 0900 66 555 66 (0.25 eurocent per minute).

## Other information sources

- About life style, folic acid, chronic conditions, and pregnancy, see [www.zwangernu.nl](http://www.zwangernu.nl) and [www.zwangerwijzer.nl](http://www.zwangerwijzer.nl), click on 'Downloaden'
- Ministry of Health, Welfare and Sport: [www.minvws.nl](http://www.minvws.nl)
- National Institute for Public Health and the Environment: [www.rivm.nl](http://www.rivm.nl).

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