

Pregnant!

Information and advice from midwives,
general practitioners and obstetricians

2012 version



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This brochure describes the healthcare services available to expectant mothers in the Netherlands and offers general advice. It is possible that your healthcare professional (GP, midwife or obstetrician) will give different advice in your specific situation. Written information complements but cannot substitute for personal advice from a medical professional. Although this brochure has been compiled with the greatest possible care, the publishers disclaim liability for errors and omissions. This brochure is updated annually and is available for download (in Dutch and English versions) from www.rivm.nl (search for 'zwanger' or 'pregnant').

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An online version of this brochure can be found at www.rivm.nl (search for 'Pregnant'). The brochure is also available in Dutch.



Pregnant!

Being pregnant is very special. You will probably have many questions about your pregnancy and the various check-ups you will be invited to attend. What should you expect during a visit to the midwife, general practitioner (GP) or obstetrician? What tests and examinations are available? What about diet, sport, work and taking medicine? This brochure offers information about these and many other topics. Most expectant mothers experience symptoms which are part and parcel of being pregnant. These too are described in this brochure.

Changes

Pregnancy is a period of significant changes, both physical and emotional. Every woman will experience being pregnant differently. Some feel better than ever for nine months, while others may have some health problems. Some can continue working as usual until six weeks before the due date, while others have to adjust their activities somewhat sooner. You may experience emotional changes such as mood swings. For most women and their partners, pregnancy is a happy time. However, there can be concerns about relationships, work, finances or the course of the pregnancy itself.

Care during pregnancy

In the Netherlands, expectant mothers receive expert care throughout pregnancy and childbirth, provided by a midwife or a general practitioner who practises obstetrics. They are specially trained to oversee a normal pregnancy and birth. If you require specialist care during either pregnancy or childbirth, you will be referred to an obstetrician at a nearby hospital. The excellent cooperation between midwives, GPs and obstetricians means that you can always be assured of the best possible care for you and your baby.

About this brochure

In this brochure, we use the term 'healthcare professional'. This may refer to a midwife, your general practitioner or an obstetrician, depending on your situation. Although the brochure focuses on you, the expectant mother, much of the information it contains is also relevant to your partner.

There is a wealth of additional information available. A list of websites and other sources is included at the rear of this brochure. If you have any further questions, your healthcare professional is there to help.

1 The first visit to the midwife or obstetrician

Pregnant? Make an appointment as soon as possible

As soon as you know that you are pregnant, you should make an appointment with the midwife or obstetrician as soon as possible. He or she will inform your GP.

You must exercise caution when taking medicines during pregnancy. You should therefore inform your pharmacist that you are pregnant.

What will the midwife or obstetrician discuss with you?

Your first visit to the midwife or obstetrician will usually involve a short physical examination. She (or he) will measure your blood pressure and may wish to check the size of your uterus. You will have an opportunity to discuss the following aspects:

- **Due date.** During your first or second visit, you will be offered an ultrasound examination (also known as a sonogram or 'echo'). This will help the midwife or obstetrician to determine how long you have been pregnant. The ultrasound also shows whether the baby's heart is beating normally, and whether there is more than one baby: you may be expecting twins! To calculate your 'due date', the midwife will ask whether your last period was normal and on time. You may find it useful to write down the date of your period and the date on which you stopped taking the contraceptive pill (if applicable) and take these notes with you to the appointment.
- **Previous pregnancies.** The midwife or obstetrician will ask whether this is your first child. If not, you will be asked about the course of previous pregnancies: were there any problems?

- **Your health.** To form a general impression of your health, the midwife or obstetrician will ask about your medical history: any diseases you have had, operations and treatments, and whether you have ever received a blood transfusion. Have you been taking medication in the last few months? Do you have any current health complaints? She will also ask whether you smoke, drink alcohol or use drugs, or have done so in the past.
- **Health of your family members.** You will be asked about the health of both your own family and your partner's family. Is there any history of diabetes, cystic fibrosis, spina bifida, Down's syndrome, muscular disorders or heart defects, for example?
- **Your personal situation.** Do you live alone or with a partner? What does your work involve? What hobbies do you have? You should tell the midwife about any unusual circumstances and keep her informed of any subsequent changes, e.g. in your relationship, finances, home or work situation.
- **Tests and examinations.** Your healthcare professional will explain the blood tests (see page 18) and will discuss the optional screening for Down's syndrome (see page 18) and the 20-week ultrasound scan (page 21).

Ask questions

You are encouraged to provide as much information as you can and to ask any questions you may have. You may find it useful to write down your questions before the appointment so that you don't forget. You are welcome to bring your partner or a friend/family member to any appointment.



2 Check-ups during pregnancy

From once every four weeks to once a week

Your midwife or obstetrician will monitor the course of your pregnancy at regular intervals. Usually, you will be invited for a check-up every four weeks during the first half of the pregnancy. The frequency then increases to weekly appointments as the due date approaches. However, this is only a general indication: more or fewer appointments may be scheduled depending on your personal situation. What do these check-ups involve?

First, your midwife or obstetrician will ask how you are feeling and how you are experiencing the pregnancy. Once again, you are encouraged to ask any questions you may have. Towards the end of your pregnancy, you will discuss the birth itself and any wishes and expectations you may have.

Physical examination

Every appointment includes a physical examination:

- Your abdomen and uterus will be checked to ascertain that your baby is growing normally.
- From the third month onwards, the midwife will also check the baby's heartbeat.
- During the final months of pregnancy, the midwife will check the position of the baby in the womb: has the head dropped down into the pelvic area? In some cases, the baby is 'upside down' (known as a breech presentation); this is nothing to worry about but it is best to know in advance.
- Your blood pressure will be measured. Low blood pressure during pregnancy is not a cause for concern but can cause some minor problems, such as feeling faint or dizzy when standing up. High blood pressure does not cause any symptoms but will require extra care for you and your baby.

Your healthcare professional may wish to conduct an additional ultrasound as a precaution, especially if:

- there is any doubt about the size and growth of your baby.
- you have experienced unusual blood loss.
- the position of the baby cannot be determined by external examination

Please remember to bring your progress chart to every appointment!

3 Health during pregnancy

When you are pregnant, looking after your health becomes more important than ever. After all, your health affects that of your baby. You can expect many physical changes. Most are part and parcel of being pregnant but can nevertheless cause some anxiety. This chapter describes some of the most common health problems experienced by expectant mothers and offers advice about how to ensure a healthy pregnancy. If you have any questions, your healthcare professional is there to help.

Haemorrhoids

Haemorrhoids (piles) are enlarged and swollen blood vessels in or around the lower rectum and anus which can cause itching and pain. Unfortunately, they are very common during pregnancy. Pressure can worsen the symptoms and it is therefore advisable to ensure regular, soft bowel movements (see page 15).

Alcohol

Women who are pregnant, wish to become pregnant or who are breastfeeding are strongly advised not to drink alcohol. Drinking alcohol during pregnancy can harm the unborn child. No 'safe' intake has been established, although it is known that in some cases even a very small quantity of alcohol can have harmful effects. For further information, see www.stap.nl (includes information in English) and www.zwangernu.nl (in Dutch only).

Contagious diseases

If you catch a contagious disease while pregnant, the health of your unborn child could be affected. If you come into contact with anyone who is suffering from a contagious disease, you should contact your healthcare professional. This is particularly important in the case of childhood diseases which cause spots or rashes, such as German measles (rubella), chickenpox or fifth disease ('slapped cheek syndrome').

Blood loss

Inform your healthcare professional if you experience any loss of blood (vaginal bleeding) during pregnancy. There is no need to panic: blood loss is relatively common during pregnancy, particularly during the first three months. There are several possible causes, such as the fertilized egg implanting itself into the womb or a small abrasion to the cervix. It is far less common for bleeding to be a sign of a miscarriage.

Heartburn

Some expectant mothers experience frequent or severe acid indigestion ('heartburn'). It is often made worse by drinking coffee, orange juice or fizzy drinks, or by eating fatty foods. Try cutting these out of your diet. If this does not relieve the problem, ask your midwife or obstetrician for advice.

Drugs

You are strongly advised to avoid all (recreational) drugs during pregnancy. The use of soft drugs (marijuana, weed, hash) can seriously harm your baby, especially in combination with alcohol or tobacco. Hard drugs, such as cocaine, ecstasy (XTC) and heroin, are known to carry a very high risk. As yet, there is insufficient research on which to base any statement about the safety of eating 'magic mushrooms' while pregnant. Depending on the drug concerned, your baby could be born with a congenital defect, a developmental disorder or withdrawal symptoms.

If you use hard drugs, stopping during pregnancy can cause withdrawal symptoms in the unborn child. Always seek professional help and advice.

Emotions during pregnancy

For most women, pregnancy is a time of great changes. It can bring about many different emotions for you and your partner. Those emotions can be either positive or negative, sometimes in rapid succession ('mood swings'). If the negative emotions dominate, you should discuss them with a professional such as your midwife or obstetrician.

Folic acid

Folic acid can reduce the risk of your child being born with spina bifida. You are probably already taking a folic acid supplement. If not, and if you are still in the early stages of pregnancy, it is not too late to start. You should take folic acid until the tenth week of pregnancy (i.e. ten weeks after the first day of your last period). The recommended dose is 0.4 or 0.5 milligrams per day. Folic

acid tablets can be obtained 'over the counter' from any pharmacist or high street chemist: no prescription is required. For further information (in Dutch), see www.slikeerstfoliumzuur.nl.

Braxton Hicks contractions

You may experience sudden spasms of the uterine muscles. These are termed Braxton Hicks contractions (popularly known as 'practice contractions') and are very common. Occasional contractions are not a cause for concern. However, if you experience them regularly or with increasing frequency, it is advisable to inform your midwife or obstetrician.

Gardening and the litter box (toxoplasmosis)

You should always wear gloves when working in the garden or cleaning a cat's litter box. Cat excrement (and particularly that of kittens) can contain a parasite which causes toxoplasmosis, a disease which can harm your unborn child. Children's sandboxes can also be a source of toxoplasmosis. If you have had toxoplasmosis in the past, you have probably developed some immunity.

Eating raw meat is another possible source of toxoplasmosis infection: see page 16.

Medicines

Always tell your healthcare professional about all medicines you are taking, whether prescription drugs or 'over the counter' remedies (self medication). You must exercise extreme caution in taking any pharmaceutical product. Some can influence the baby's development even in the earliest stages of pregnancy. You should therefore tell your dentist and pharmacist that you are pregnant.

It is safe to take paracetamol for pain relief provided you do not exceed the recommended dose. Read the package and the patient enclosure carefully. Always consult your healthcare professional before taking any other type of painkiller or medicine. There is no known risk associated with dental anaesthetics, but do inform your dentist that you are pregnant.

Nausea

You may experience nausea and vomiting during the first three to four months of pregnancy, especially early in the day ('morning sickness'). It is often worse if you haven't eaten. You should therefore start the day with a light breakfast. After that, try to divide your food intake into several small meals. You will soon discover which foods you can tolerate best.

Tiredness

You may feel very tired, especially during the first three months of pregnancy. Many women feel that they need more sleep. This is usually due to hormonal changes and is only very rarely associated with anaemia. If you are concerned, ask your healthcare professional for advice.

Pigment spots

Exposure to ultraviolet light (sunlight or a sunbed) may cause brown patches on your face, known as melasma or 'the mask of pregnancy'. This is due to hormonal changes and is nothing to worry about. You should avoid exposure where possible. Do not use the sunbed; wear a hat and apply a sunscreen lotion when outdoors. If you do develop pigment spots, they will usually disappear in time.



Frequent urination

When you are pregnant, you will probably feel the urge to urinate more often than usual. As your womb expands, it exerts greater pressure on the bladder. If you need to urinate very often and you experience a burning sensation when you do pass water, you may have a bladder infection. Take a urine sample to your GP for testing. If you do have an infection, he or she will prescribe medication.

Smoking

Expectant mothers, women trying to become pregnant and those who are breastfeeding are strongly advised not to smoke. If you do smoke, stop now – and that goes for your partner too! You will both find it far easier to quit if you support each other.

Smoking during pregnancy carries a serious risk. Cigarette smoke contains harmful substances which can impede the flow of blood to the placenta. The unborn baby therefore has less oxygen and may not grow as much as he or she should. Babies whose mothers smoke are often more vulnerable than others:

- They have a lower birthweight.
- They are more likely to be born prematurely.
- They are more likely to suffer from childhood asthma.

Secondhand smoke can also have an adverse effect during pregnancy. Moreover, there is some evidence to suggest that cot death (sudden infant death syndrome) is more frequent among babies who are exposed to smoke.

If you need help to quit smoking, ask your healthcare professional. See also www.stivoro.nl.

Backache and pelvic pain

During pregnancy you may experience pain in the (lower) back or pelvic region. Good posture may help to alleviate the symptoms. If not, seek advice from your healthcare professional.

Gentle exercise is also good for you. Some general advice:

- Bend your knees when stooping or lifting.
- Support your lower back with a cushion when sitting.
- If you have difficulty getting out of bed, first turn onto your side and then lift your upper body sideways from the waist.

Chemicals and other hazardous substances

Try to avoid contact with:

- Oil-based paints
- Pesticides (such as fly spray)
- Chemicals (such as photo developer).

Hair colouring products are not known to have any harmful effect.

Sex

Intimacy and sexuality can be experienced differently during pregnancy. This varies from one person to another and even from pregnancy to pregnancy. In a normal pregnancy, there are no firm rules or guidelines. Sexual intercourse cannot cause a miscarriage and will not harm the baby.

If you have any questions or problems with regard to sex during pregnancy, you should discuss them with your healthcare professional. He or she can then take them into account during any physical examinations and during childbirth itself. You should also mention any previous

unpleasant sexual experiences, or if you should have any problems with an internal examination.

Varicose veins

Some women develop varicose veins during pregnancy, usually on the lower legs although they can also affect the labia. Try to remain active and avoid lengthy periods of sitting or standing still. When you do wish to sit or lie down, elevate your legs using a footstool or cushion. Well-fitting elastic support stockings can also help to reduce the risk of varicose veins. If they do occur, they will generally shrink and fade once the baby is born.

Sports

You can continue to play sports during pregnancy unless you start to feel more tired than usual or you experience any specific problems. Try not to exert yourself more than you did before you were pregnant. Ensure that you drink enough fluids.

Swimming, cycling, walking and fitness exercises can all be continued until the very last days of pregnancy. You should avoid sports in which there is a risk of physical contact, especially with the abdominal region (your 'bump'), or in which you may fall: hockey, volleyball, football and skiing, for example. Diving with breathing apparatus is discouraged during pregnancy due to the increased risk of decompression sickness ('the bends').

Radiation

An MRI scan during pregnancy carries absolutely no risk to you or your baby. Similarly, there is no evidence to suggest that (computer) monitors, television screens or microwave ovens have any harmful effects in normal use. If you are referred for an X-ray examination, you must inform the radiographer that you are pregnant. In many cases it will be possible to postpone the investigation until after the baby is born. Alternatively, your uterus can be shielded so that the baby is exposed to as little radiation as possible.

Vaginal discharge

Vaginal discharge often increases during pregnancy. This is normal but check with your healthcare professional if the discharge has an abnormal smell or colour, or if you experience itching, pain or a burning sensation. These can all be signs of an infection. If necessary, you will be prescribed medication.

Holidays and long journeys

Inform your healthcare professional if you are planning to travel abroad. If you intend to visit a country outside Europe, contact your GP or Municipal Health Department (GGD) for travel advice and any necessary vaccinations. You must inform them that you are pregnant. There are no medical grounds to preclude expectant mothers from flying but most airlines will not carry passengers who are more than 32 weeks into pregnancy, simply because they would prefer you not to give birth while in the air. (Some apply a 34-week limit.)

Constipation

Your digestive system works more slowly during pregnancy. You may therefore find that you have to visit the lavatory less often and that your stools are harder. A high-fibre diet which includes raw vegetables, fruit and wholemeal products can help. You can also try adding bran to your regular meals. You should drink about two litres of fluid every day and maintain a reasonable level of physical activity.

Vitamin supplements

Provided you have a healthy and varied diet, vitamin supplements are unnecessary. If you nevertheless wish to take a supplement, either as a pill or a drink, choose one which is formulated especially for expectant mothers. These products do not contain retinol (a form of Vitamin A) which can harm your baby's health in large doses.

Fluid retention

Your body retains more fluid when you are pregnant and this may cause swollen feet and ankles. The problem is often worse in warm weather or if you remain inactive for lengthy periods. Take adequate exercise and elevate your legs while sitting or lying.

Diet and nutrition

It is essential to have a fresh, varied and healthy diet during pregnancy. The 'Food Triangle' produced by the Netherlands Nutrition Centre (www.voedingscentrum.nl) provides a handy guide. Contrary to popular belief, you are not 'eating for two'. However, it would not be wise to go on a weight-loss diet during pregnancy. If you wish to fast for any reason, you should probably postpone doing so until after the baby is born. Discuss this with your healthcare professional.

What can you eat during pregnancy and what should you avoid?

- **Vegetarians:** you can safely avoid meat and fish during pregnancy but you must ensure that

you get enough B vitamins and iron. B vitamins are mainly found in unrefined (wholemeal) cereal products, potatoes, legumes, eggs and dairy produce. Legumes and eggs are also good sources of iron, as are meat substitutes such as soya.

- **Unpasteurized cheeses:** You should avoid any cheeses made with unpasteurized milk. These are labelled 'au lait cru' and are not on general sale in Dutch supermarkets, although you may encounter them on holiday or at a farmhouse. Listeria bacteria can thrive in unpasteurized milk. A listeria infection can seriously harm your baby's health. There is no risk in drinking pasteurized milk or in eating cheese made from pasteurized milk.
- **Raw meat, fruit and vegetables:** Avoid raw meat (such as steak tartare) or undercooked meat (such as filet americain, rare steak or continental-style roast beef). Raw fruit and vegetables must be thoroughly washed before eating. Raw meat and uncooked fruit or vegetables are potential sources of toxoplasmosis, a disease which can harm your baby's health.
- **Liver.** It is preferable to avoid eating liver. You should limit your consumption of products which contain liver (such as leverworst or pâté) to no more than one small portion a day. Liver contains a high level of Vitamin A, which can be harmful to your unborn child.

Work

Whether your work presents any risks during pregnancy will depend on the nature of that work and the working conditions. Are you exposed to vibration (driving a truck or agriculture machinery), ionizing radiation, chemical substances or infectious agents? All carry some degree of health risk, as does physically demanding work such as frequent lifting, pulling, pushing or carrying. If your work exposes you to any level of risk, consult your employer who is legally required to make the necessary adjustments for employees who are pregnant or have recently given birth.

If you have any questions about health and safety in the workplace, you can also consult your company medical officer or contact the Labour Inspectorate (www.arbeidsinspectie.nl). Your employer may offer you a (voluntary) preventive consultation with the company medical officer, who will assess the work-related risks and advise your employer accordingly. Of course, you can also consult your midwife, obstetrician or GP at any time.

If you usually work shifts, you can request your employer to modify your hours of work. Expectant months are also entitled to extra breaks. In principle, you cannot be required to work night shifts or overtime. These rules continue to apply for the first six months after you give birth. If it is not possible to adjust your regular work so that it is entirely risk-free, your employer is required by law to offer you alternative employment. For further information (in Dutch) see: www.zwangerwijzer.nl and www.strakzwangerworden.nl (risico's op het werk).

Pregnancy classes

There are many classes available to help you stay fit and healthy while you are pregnant, and to prepare you for the delivery itself. Your healthcare professional can tell you which classes are available in your region and how to register.

Maternity leave

It is important that you are well rested when labour begins. You are entitled to 16 weeks' maternity leave, which will usually begin in week 35 of your pregnancy. Maternity leave continues for ten weeks after the birth of your baby. If you give birth earlier than the calculated due date, your maternity leave entitlement remains 16 weeks. If you give birth later than the due date, the leave is extended accordingly. Alongside the maternity leave arrangements there are also provisions for 'parental leave'. For further information (in Dutch) go to www.rijksoverheid.nl and search for '*bevallingsverlof*'.

4 The blood test

During your first appointment, your health care professional will tell you about an optional blood test. It will only be conducted with your express consent. If you agree to give a blood sample, it will be sent to the laboratory to determine:

- Your blood group: A, B, AB or O.
- Your Rhesus D- and Rhesus c-blood group.
- Whether your blood contains antibodies to foreign blood groups
- Whether you have been exposed to syphilis, hepatitis B or hiv.

If the blood test reveals any risk, it is often possible to provide treatment during pregnancy to protect your baby. For this reason, the test is offered at the earliest possible moment so that treatment can also be commenced promptly. In some cases, the laboratory will also be asked to check your blood glucose level and your haemoglobin (Hb) level. If the haemoglobin level is too low, you are suffering from anaemia. This is easy to treat and poses no risk to your baby.

Antibodies to foreign blood groups

During pregnancy and childbirth, red blood cells from your baby can enter your own blood-stream. If your child has a different blood group to your own, your body may produce antibodies to this 'foreign' blood group. The laboratory can check whether this is the case. It is important to know, since some antibodies can enter the baby's blood through the umbilical cord and 'attack' the baby's own red blood cells causing anaemia. The antibodies can also have this effect in subsequent pregnancies.

If such antibodies are found, further testing may be necessary. Your healthcare professional will explain what this involves.

Rhesus blood group

Women with either of two specific blood types have a greater likelihood of producing antibodies to other blood groups: those with Rhesus D-negative blood en Rhesus c-negative blood. These women need extra attention during pregnancy. As part of the blood test, the laboratory will therefore ascertain your Rhesus D- and Rhesus c-blood group.

Do you have Rhesus D-negative blood?

If you are D-negative, your blood will be re-tested for antibodies to foreign blood types in week

27 of your pregnancy. This time, the laboratory will also determine whether your baby is D-negative or positive.

If your baby is D-positive, there is a chance that your body will produce antibodies against his or her blood. To reduce this chance, you will be given an 'anti-D' injection in week 30. This presents absolutely no risk to you or your baby. After delivery, you will be given a further injection. Very occasionally, a third injection is required. Your healthcare professional will tell you if this is the case.

If both you and your child are D-negative, the injections are not necessary since your body will not produce any antibodies.

Do you have Rhesus c-negative blood?

If you are c-negative, it is possible that your body will start to produce antibodies to your child's blood. This will be investigated by means of a blood test in week 27. No injection is available to stop you producing these antibodies. Therefore, if such antibodies are found, your midwife or obstetrician will wish to step up supervision of your pregnancy, with additional check-ups to ensure that your baby's health is not at risk.

Infectious diseases

Syphilis

Syphilis is a sexually transmitted infection (STI) which, if untreated, can be passed on to the unborn child. It is therefore important to test for syphilis early during pregnancy, and, if the test is positive, to begin treatment as soon as possible. You will be referred to a specialist and given a course of antibiotics.

Hepatitis B

Hepatitis B is an infectious disease which affects the liver. Some people experience no symptoms and are therefore unaware that they are carriers of the hepatitis B virus. The blood test will determine whether you are a hepatitis B carrier. The virus is not harmful to your baby's health during pregnancy, but there is a risk of transmission during childbirth.

If the blood test reveals that you are carrying the virus, your baby will be given an injection of antibodies soon after birth to protect against the virus. It is also important that your baby him- or herself builds 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.

Hiv

Hiv stands for human immuno-deficiency virus, which can lead to aids. You can contract hiv through unsafe (unprotected) sex with an infected partner, or through contact with infected blood.

If the blood test reveals that you are hiv-positive (you have the virus) you will be referred to a specialized hiv centre. You can pass on the virus to your baby during pregnancy or childbirth, or in your milk during breastfeeding. You can significantly reduce the risk of transmission by taking antiretrovirals during pregnancy. For further information, go to www.soa aids.nl or www.hivnet.org.

Syphilis, hepatitis B or hiv: what now?

If you discover that you have syphilis, hepatitis B or hiv, there could be implications for both your health and your social life. It is essential that you take appropriate measures to prevent your partner or others becoming infected. Your GP or local GGD can advise. A positive test result for hiv may have consequences if you wish to take out life insurance.

Further information about living with hiv/aids and insurance-related matters can be found at www.weldergroep.nl, www.soa aids.nl or www.hivnet.org.

See page 28 for further information about the privacy of your personal data.

5 Testing for congenital and hereditary conditions

The first question on most prospective parents' lips is, 'will our child be healthy?' Happily, the vast majority of babies are born in perfect health. As an expectant mother, you can opt to have your baby screened for certain conditions even before birth:

- A screening for Down's syndrome indicates the likelihood of your baby having this condition.
- The 20-week ultrasound scan determines the possibility of neural tube defects (such as spina bifida or anencephaly) and other congenital disorders.

It's your decision

Your healthcare professional will ask you whether you would like further information about prenatal screening for Down's syndrome and other birth anomalies. If so, you will be given a brochure describing exactly what these tests involve. Your midwife or obstetrician will also explain the tests in in-depth consultation and discuss the implications with you.

Prenatal screening can serve to reassure you that your baby is healthy. However, an abnormal result can be a source of concern and may require you to make some very difficult choices. You must decide for yourself whether you wish to have the tests. Similarly, only you can decide what to do in the light of the results. Follow-up testing may be available. You can opt to discontinue an investigation at any time.

Screening for Down's syndrome

The optional combined test is conducted at an early stage of pregnancy and reveals whether

there is an increased likelihood of your baby having Down's syndrome. This test carries absolutely no risk to you or your child. The two parts of the test are:

- A blood test between weeks 9 and 14. A small sample of blood will be taken and sent to the laboratory.
- A measurement of the skin fold in yours child's neck. This is conducted by means of an ultrasound, in the period between weeks 11 and 14 of your pregnancy. There is always a layer of fluid here, even in healthy babies. However, the thicker the layer, the more likely it is that the baby has Down's syndrome.

For further information, see www.rivm.nl/downscreening and www.prenatalescreening.nl.

Test results

The combined screening test offers an indication of the likelihood of your baby having Down's syndrome. The result is not definitive. An assessment is made on the basis of the blood test results, the ultrasound scan, your age and the precise duration of pregnancy. The combined screening test also provides an indication of the likelihood of your baby having Patau syndrome (also known as 'trisomy 13') or Edwards syndrome ('trisomy 18'). You will be informed whether there is an increased likelihood of your baby having any of these conditions unless you specifically ask not to be told.

If the test does reveal an increased likelihood of Down's syndrome you can opt for further tests which will provide greater certainty. Your midwife or obstetrician will explain what this involves.



The 20-week ultrasound scan

The 20-week ultrasound scan is also known as the anomaly scan. The main purpose is to determine the possible presence of spina bifida, anencephaly or certain other congenital disorders. There is no risk to you or your baby. Not all potential abnormalities can be identified before birth. It is therefore impossible to

state with absolute certainty that your baby will be born in perfect health. However, please remember that the likelihood of your baby having any physical defect is extremely small. For further information, see www.rivm.nl/zowekenecho and www.prenatalescreening.nl.

Follow-up testing

You will usually be told the results of the 20-week echo during the appointment itself. If any physical anomaly is detected or suspected, the consequences for your baby are not always clear at this stage. In most cases, you will therefore be offered follow-up tests. Your sonographer, midwife or obstetrician will explain precisely what this entails. You can of course ask any questions. Remember that every form of prenatal screening is optional, and that you yourself must decide what action to take in the light of the results.

The follow-up testing involves a extensive ultrasound examination at the hospital. You may also be offered a further blood test and an amniocentesis (in which amniotic fluid is drawn from the womb through a needle).

After further testing

The follow-up tests may confirm that your baby does indeed have some form of birth anomaly. If so, you will always be invited to discuss the situation with one or more specialists. You may face a very difficult choice: whether to continue the pregnancy.

6 Preparing for the birth

A birth plan

- It is important to prepare thoroughly for childbirth. You can take pregnancy classes, read about what is involved, and talk about it with your healthcare professional. Think about your wishes and expectations beforehand:
- What do you expect from those who will be helping you at the time,
- and how you wish to deal with pain during childbirth?

A written 'birth plan' will help you to discuss your wishes with healthcare professionals and your partner. Your midwife or obstetrician will advise you whether your wishes are realistic.

Location of childbirth

If you are under the care of a midwife and the pregnancy has proceeded normally, you can generally decide whether you would prefer to give birth at home or at the hospital (attended by your own midwife). If you have been under the care of a specialist obstetrician, if there have been any complications or if complications are expected, you should give birth in hospital. This may be necessary if you have high blood pressure or if the baby is in a breech presentation ('upside down'). If this is your first child, there is a 50% chance that you will be advised to give birth in hospital, or transferred to hospital during labour. If it is not your first baby, the likelihood of your requiring hospital care falls to just 6%.

Breastfeeding

Breastfeeding is now recommended as first choice for all babies. Prenatal classes are available to help you prepare, or you can seek advice from a lactation consultant. If you have any questions about breastfeeding after you have given birth, ask your maternity carer or the staff of the child healthcare centre ('Consultatiebureau'). For further information (in Dutch) see www.borstvoeding.nl or ask your healthcare professional. If breastfeeding is not an option for any reason, formula milk is a good alternative.

7 After childbirth

The first weeks with your baby

Pregnancy and childbirth are joyous events, but they can also take their toll, both physically and emotionally. Your body will need time to recover, which may well take several weeks or months. This is perfectly normal. Your daily routine will change considerably now there is a new member of the family. Allow time to adapt.

Registering the birth

You or your partner must register the birth with the local authority ('municipality') within three working days. Remember to take valid ID. A copy of the registration certificate will be forwarded to the child healthcare centre and the organization which arranges postnatal tests such as the 'heel prick'. You will need a copy of the certificate to claim child support.

Maternity care

A maternity carer will be assigned to help you for the first week after giving birth. If you gave birth at home, she may well have assisted the midwife or GP. She then takes charge of care for both mother and baby. If you gave birth in hospital, the maternity carer will visit you once you return home. You should arrange for maternity care early in pregnancy, and no later than the 16th week. Ask your health insurer about the (types of) maternity care to which you are entitled. Your healthcare professional can also offer further information.

Jaundice in newborn babies

Most babies have a slight yellowish tinge for a few days, regardless of their natural skin colour. This is due to the presence of bilirubin, a natural breakdown product of the baby's blood. The yellow tinge is usually entirely harmless and will usually disappear after a few days. In some cases, the bilirubin level remains too high and medical intervention is required. Your baby will therefore be carefully monitored for several days. If the jaundice persists, bilirubin levels can be measured with a simple skin test or a small blood sample. If they remain too high, the standard treatment is phototherapy: exposure to a special bright light at your local hospital.

The heel prick

During the first week of life, a few drops of blood will be taken from your baby's heel and sent to the laboratory. It is then tested for a few extremely rare hereditary diseases. Although these conditions cannot be cured, they can be managed effectively by means of medication or diet. It is therefore important for your baby to have the heel prick (also known as the Guthrie test).

Provided you have registered the birth promptly, no further action is required: a home health worker, the Municipal Health Authority (GGD) or your midwife will visit you at home to take the blood sample. Towards the end of your pregnancy, your healthcare professional will give you a brochure about the heel prick and the postnatal hearing test.

See also www.rivm.nl/hielprrik.

Hearing test

Good hearing is important for your child's development. A child who does not hear well will have extra difficulty in developing normal language and speech, which in turn may affect his or her learning ability. The earlier any auditory deficiency is discovered, the sooner appropriate action can be taken. Your baby's hearing will therefore be tested shortly after birth, usually at home between four and seven days after birth. The test takes only a few minutes and does not cause any pain or discomfort. The hearing test is generally conducted during the same visit as the heel prick, although in some regions it is carried out when the baby is a few weeks old and takes place at the child healthcare centre ('Consultatiebureau'). In this case, you will receive an invitation by post.

See also: www.rivm.nl/gehoorscreening.

The child healthcare centre ('Consultatiebureau')

If you are at home in the first few days after birth, the midwife and maternity carer will provide the necessary care. After that, your local child healthcare centre will assume responsibility for providing all necessary care for you and your baby. No action is required on your part: someone from the centre will contact you for an introductory visit.

Vaccinations

The government invites all children in the Netherlands to take part in the National Vaccination Programme. They can then be vaccinated ('immunized') against diphtheria, whooping cough (pertussis), tetanus, polio, Haemophilus influenzae type B (HiB) diseases, pneumococcal infections, mumps, measles, German measles (rubella), meningococcal meningitis C, and hepatitis B.

Most contagious diseases are difficult to treat and pose a serious threat to your child's health.

You will be sent an information package within four to six weeks after your child is born. It contains the registration card for the vaccination programme, a vaccination certificate (which will be completed as each vaccination is given) and a brochure about the National Vaccination Programme.

These vaccinations are not mandatory but most children (over 95%) take part in the programme. There is no charge to you: all vaccinations are paid for by the government. For information and advice, please contact your child healthcare centre or GGD. Information (in several languages) is also available at www.rijksvaccinatieprogramma.nl.

8. Privacy

Your personal data and the blood test

If you decide to take the blood test during pregnancy, you will be asked to give some personal data. This information is required in order to arrive at an accurate diagnosis and to ensure that you can be contacted should treatment be required.

The personal data is entered into a national database known as Praeventis. Registration of data safeguards the quality and effectiveness of the blood test programme. The system will 'flag' any abnormal results where action has not already been taken and will notify your healthcare professional accordingly.

The data in Praeventis is subject to the highest levels of security. Only the staff responsible for monitoring the quality of your treatment have access to your personal information. The Praeventis system is administered by the National Institute of Public Health and the Environment (RIVM), which is also responsible for the security of the data it contains.

Once the blood test has been completed and the results known, you can ask for your personal data to be removed from Praeventis. You should submit this request to your healthcare professional.

Your personal data may also be recorded in a national database administered by Stichting Sanquin Bloedvoorziening, the foundation which oversees the blood transfusion service in the Netherlands. If you ever need a blood transfusion, the laboratory will then be able to access the necessary information. This database is also subject to the requirements of the Dutch Data Protection Act (Wet Bescherming Persoongegevens) so you can be certain that personal information will never be revealed to third parties without your express consent.

Information about the course of your pregnancy

Your midwife, obstetrician and/or GP will record certain information about the course of your pregnancy. This is necessary to ensure that you and your baby receive appropriate care. The information will be made available to other authorized healthcare professionals only when necessary and with your express consent.

This folder describes various screening programmes which are available during pregnancy or shortly after your baby is born. They involve various tests and examinations to safeguard your baby's health and development, or to diagnose certain conditions so that prompt treatment can be offered.

Why is your personal data needed?

If you opt to take part in one or more screening programmes, you will be asked to give some personal information. This is required to ensure that the screening programme is effective and of appropriate quality. Your personal data is collected in various ways, since each screening programme involves a different group of healthcare professionals. However, the basic principle is always the same: your personal data will only be used for the purposes of the investigation in question, and to ensure the efficiency and quality of the screening programme as a whole. Some data may also be used for research purposes, but in this case it will almost always be anonymized. Every possible precaution is then taken to ensure that the information can never be linked directly to you or your child. There are only a very few exceptional circumstances in which data which can be linked to an individual is used for the purposes of scientific research. If you object to your personal data being used in this way, please inform your healthcare professional. Further information is included in the brochure for each screening programme and on the RIVM website.

Registration for the heel prick

It is important that the 'heel prick' test takes place as soon as possible after your baby is born. Your midwife will therefore enter a 'notification of birth' directly into the RIVM/RCP Praeventis system. RIVM/RCP can then issue instructions to the appropriate local organization. If you have decided not to take part in the heel prick screening programme, you should inform your midwife accordingly. You will be asked to sign a waiver form and the notification will not be sent.

The Perinatal Registry

In the Netherlands, information about pregnancy and birth is also collected for various other purposes. The Perinatal Registry is a database of information supplied by all the healthcare professionals involved in prenatal, perinatal and postnatal care. The purpose of this database is to monitor, and where possible improve, the quality of care provided to expectant mothers and young children. It also supports scientific research with a view to increasing medical knowledge about all aspects of pregnancy and childbirth. The database is administered by the Dutch Perinatal Registry Foundation (NPR).

What is involved?

Your healthcare professional will always ask for express permission for your personal data to be entered into the Perinatal Registry. You are entitled to withhold that permission if you wish. Needless to say, this will have absolutely no effect on the quality of the care you receive.

Further information about the privacy of information in the Perinatal Registry can be found at www.perinatreg.nl.

Further information about the privacy of personal data gathered for the screening programmes can be found in the relevant brochures and on the RIVM website.

9 More information

General

- Dutch Association for Obstetrics and Gynaecology (NVOG): www.nvog.nl. (Click on the 'Voorlichting' tab to access brochures in Dutch on topics such as blood loss, high blood pressure and pelvic floor problems.)
- Royal Dutch Organization of Midwives (KNOV): www.knov.nl/voor-zwangeren
- RIVM: www.rivm.nl/zwangerschapsscreening.
- Dutch College of General Practitioners (NHG): www.thuisarts.nl
- Erfocentrum: www.erfocentrum.nl, www.zwangernu.nl, www.zwangerwijzer.nl.

Alcohol and pregnancy

The brochure about alcohol, pregnancy and breastfeeding is available from your healthcare professional or from www.alcoholinfo.nl. Information (in Dutch) can also be found at www.drugsinfo.nl

Childbirth

- A brochure about preparing for labour and childbirth can be found at www.knov.nl/foldervoorbereidingopbevalling.
- A brochure about pain control during childbirth can be found at www.knov.nl/folderomgaanmetpijn.

Both brochures are available in English, French, German, Spanish, Portuguese, Turkish, Polish, Papiamento, Somali, Mandarin Chinese and Arabic.

Blood pressure

The brochure 'Hoge bloeddruk in de zwangerschap' can be downloaded from www.nvog.nl.

Blood tests

See: www.rivm.nl/zwangerschapsscreening

A brochure about blood types, factors and irregular antibodies can be found at www.nvog.nl.

Drugs

A brochure about the use of recreational drugs during pregnancy is available from Stichting Mainline, tel. 020 682 2660, or www.mainline.nl.

Information (in Dutch) can also be found at www.drugsinfo.nl.

The hearing test

Further information and a brochure about the hearing test for newborn babies can be found at www.rivm.nl/gehoorscreening. Online information is available in English, French, German, Spanish, Portuguese, Turkish, Papiamento, Chinese and Arabic.

Hepatitis B

A brochure about hepatitis B and pregnancy can be found at www.rivm.nl/rvp (click on 'Brochures')

The heel prick

Further information and a brochure about the heel prick test can be found at www.rivm.nl/hieelprik. Online information is available in English, French, German, Spanish, Portuguese, Turkish, Papiamento, Chinese and Arabic.

Screening for Down's syndrome and the 20-week ultrasound scan

- Further information and a brochure about screening for Down's syndrome can be found at www.rivm.nl/downscreening. Online information is also available in English, French, German, Spanish, Portuguese, Turkish, Papiamento, Chinese and Arabic.
- Further information and a brochure about the 20-week ultrasound scan can be found at www.rivm.nl/zowekenecho. Online information is also available in English, French, German, Spanish, Portuguese, Turkish, Papiamento, Chinese and Arabic.
- A general brochure about ultrasound tests during pregnancy can be found at www.nvog.nl or obtained from your healthcare professional.
- Further information about screening and diagnostics can be found at www.prenatalescreening.nl. This site also includes a checklist to help you decide whether to take part in the screening programmes.
- Information about (testing for) congenital and hereditary conditions can be found at www.erfelijkheid.nl.

Psychological and emotional problems

The Trimbos Institute has published a brochure about stress and emotional problems, including postnatal depression. It can be downloaded from www.trimbos.nl (search for 'baby') or by calling 030 - 297 11 00.

Smoking

- A brochure about the risks of smoking during pregnancy is available from your healthcare professional or from Stivoro, tel. 0900-9390. See also www.stivoro.nl.

STDs and other infectious diseases

- A brochure about hiv testing for pregnant women is available from your healthcare professional.
- General information about sexually transmitted infections (STDs) can be found at www.soaaid.nl.
- Information about living with hiv can be found at www.hivnet.org.
- A brochure about hepatitis B and pregnancy can be downloaded from www.rivm.nl/rvp (click on 'Brochures').

Diet and nutrition

- A telephone helpline is available to answer questions about diet and nutrition during pregnancy. Call 070 306 8888 or go to www.voedingscentrum.nl.
- Information about breastfeeding can be found at www.borstvoeding.nl.

Work

- Information about working while pregnant, maternity leave and other relevant matters is available from the Ministry of Social Affairs and Employment, tel. 1400 or go to www.rijksoverheid.nl
- A brochure about work-related risks is available at www.strakswangerworden.nl (risico's op het werk)

Other sources of information

- Information about lifestyle, folic acid supplements and chronic conditions: www.zwangernu.nl and www.zwangerwijzer.nl.
- Ministry of Health, Welfare and Sport: www.minvws.nl.
- National Institute for Public Health and the Environment: www.rivm.nl.

Colofon

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Contact address: RIVM Centre for Population Screening, P.O. Box 1, Dept. 49, 3720 BA Bilthoven,
email zwangerschapsscreening@rivm.nl

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Ordering

Healthcare professionals can order copies of this brochure from
www.rivm.nl/pns/folders-bestellen.

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