

Index

The following information is an index to the detailed information included in our pregnancy pack download.

- Pages 1-13- Outlines general information about pregnancy and staying healthy, exercise, back pain care and when you might need to seek medical attention.
- Pages 14-15- More detailed information about healthy eating in pregnancy, recommended serving sizes and nutritional needs.
- Pages 16-17- Detailed information about Folic acid intake in pregnancy and how it helps with the developing neurological system. Please note the dose recommended of Folic acid may vary based on your medical history.
- Pages 18-19- Explains how to reduce your risk of being exposed to Listeria.
- Pages 20-21- Provides some helpful tips about managing morning sickness, from regular meals, commonly used natural therapies and when you might want to look at medication prescribed by your GP or obstetrician.
- Pages 22-45- Provides an overview of the traditional testing for chromosomal abnormalities (Down Syndrome or Trisomy 21 being the most common) and how we survey pregnancies to pick up medical problems in the growing fetus. It also discusses Amniocentesis and other tests that may not be relevant to your pregnancy.
- Pages 46-47- A general overview of when ultrasound testing can be completed in pregnancy, again this does not apply to all pregnancies.
- Pages 48-49- Outlines the new born screening test, which is usually carried out by Midwives after your baby is born.
- Pages 50-51 Explains the process of completing the First Trimester screen. This test is designed to screen for Trisomy 21, 18 and 13. Most people know this as the 12 week scan. This is a blood test ideally completed at 10 weeks gestation plus details of maternal age and the thickness of the nuchal (neck) fold from the fetus on a scan at 12 weeks. This information then gives a risk of your baby having Trisomy 21, 18 and 13. It is not diagnostics and false positives and false negatives exist (i.e. it may indicate there is a problems but further testing is normal, or you have normal test

but your baby can still be born with Down's Syndrome). Should you choose to have this test you should have counselling with your GP prior.

- Pages 52-53- Explains the process of having the Non Invasive Pre Natal Test or "NIPT", screening for Trisomy 21, 18 and 13 using technology that has been around for about 15 years. From 10 weeks fractions of fetal DNA can be picked up in maternal blood and this can be tested for Trisomy 21, 18 and 13. It is still considered a screening test, but is far more accurate than the traditional first trimester screen above. At the moment an early anatomy scan at about 12-14 weeks is also advised to check for obvious fetal abnormalities unrelated to the risk of Trisomy 21, 18 and 13. All Women then go on to have a formal Anatomy scan at 19 weeks regardless of any prior testing. Please speak to your GP about this further if you choose to have the NIPT test.

NOTE: Both the first trimester screen and NIPT tests are not covered by Medicare, please speak to your GP about the costs.

- Pages 54-61- Is an overview of many different services available in Western Australia to support families. From useful hospital numbers to help with babies sleep, support with being a Dad, child development, mental health and crisis care.



Healthy Pregnancy

For a normal, healthy woman, there should be nothing difficult or particularly worrying about having a baby.

A woman's body is built for having babies. You may find you get tired more quickly than usual while you are pregnant – but you are not an invalid. Most of the time, you should go about the business of daily living just as you do normally.

You need to look after yourself a little more carefully than usual, though. For nine months, your body is caring for an extra person. Extra care is important to make sure the baby has the best possible start in life, and that you are in the best possible health when you begin the job of looking after your baby.

Pregnant? How You Can Tell

Usually, the first sign that you are pregnant is that your monthly periods stop.



Try to get into the habit of keeping a calendar record of when your periods start. This makes it easier to know straight away when one is late or has been missed. It also makes it easier to work out when the baby is due.

Other signs may indicate you are pregnant:

- You may feel sick, or actually be sick, especially in the morning.
- You may need to pass urine more often.
- You may have a feeling of fullness, tenderness or prickling in your breasts.

The date your baby is due can be estimated accurately by ultrasound if you are not sure of the date of your last period.

See Your Doctor Early

See your doctor as early as possible in your pregnancy. This gives him or her a chance to decide about any treatment you might need later.



Most pregnancies follow a normal course. However, if there are complications, the doctor needs to be able to detect them early enough to prevent them causing serious trouble.

It's best to go to the doctor after you have missed your second period. After that, you will probably be asked to go once a month until 28 weeks, and more often later in the pregnancy.

A normal, full-term pregnancy lasts for about 40 weeks. By seeing you regularly, the doctor can make sure both you and the baby are making normal progress.

The doctor will check your weight, blood pressure and urine regularly, as well as checking the baby's growth and development. (Your doctor will probably ask you to take a fresh urine sample in a clean bottle at each visit).

Early in the pregnancy, a blood test is taken to check your blood group and Rhesus (Rh) factor.

It is important for your blood group to be known. Carry your blood group card with you at all times.

If a blood test shows that your blood is Rh negative, your doctor will arrange for further blood tests to be taken. If your baby's blood is Rh positive and incompatible with yours, complications may develop. Regular blood tests will give warning of possible trouble, so it can be averted.



After the baby is born, you may be given an injection to prevent Rh complications in future pregnancies.

Talk about how you feel with your husband or partner, and share jobs between you. Let children help with household tasks – but don't ask them to do anything they can't do safely. If other people offer to help, let them.

Do really important jobs first, and don't worry if less important jobs are left undone.

Work

If your work is looking after small children and the home, just relax when you can.

If you have a job outside the home, it is best to take off the last six weeks before the baby is due. Talk with your doctor about what you want to do. What the doctor suggests will depend on your health and the sort of work you do.

Find out from your employer or union representative what maternity leave is available to you, and what other rights you have. The Department of Human Services – Centrelink, can tell you whether you are eligible for Family Allowance or other benefits.

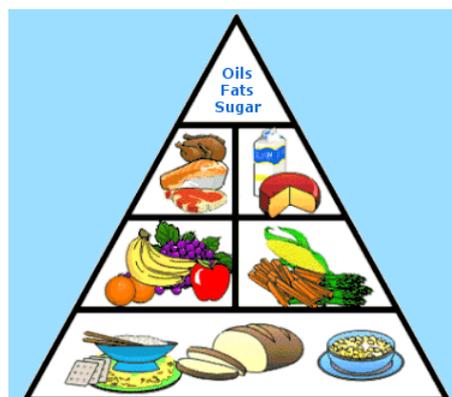


Nutrition

You need a normal, healthy diet while you are pregnant. There is no need to feel you must “eat for two”- it's the quality of what you eat that is important, not the quantity.

The Five Food Groups make a good starting point for choosing a healthy diet. You probably learned about them at school:

- Breads and cereals
- Vegetables and fruit
- Milk and Cheese
- Meat, eggs, poultry, fish, beans
- Butter and table margarine



Alcohol

It is best not to drink alcohol while you are pregnant.

Alcohol can affect the unborn baby's development. It is important to be particularly careful during the first few months you are pregnant.

Care of Teeth

Pregnancy does not have a bad effect on healthy teeth, and they should stay healthy if cared for. Clean them after each meal, and avoid sugary foods – particularly between meals.

Visit a dentist early in the pregnancy, so any necessary work can be carried out well before the baby is due.

Remember that while you are pregnant you are caring for the baby's teeth as well as your own. Babies' teeth begin to form from about the sixth week of pregnancy. These tooth buds are the foundations on which good teeth are built and they need good nutrition, particularly calcium, phosphorus and fluoride.

Calcium and phosphorus are found in food. Fluoride is a trace element often supplied in water.

Exercise

You need exercise as well as rest. Daily exercise while you are pregnant helps to keep you fit by toning up your heart and lungs and gives you the extra stamina you need for labour and mothering. Also, exercise can be relaxing if you feel tense.

Swimming and brisk walking are both good forms of exercise.

You may also enjoy exercising in an antenatal fitness group run by a physiotherapist. Your doctor or maternity hospital should be able to provide contacts.



While you are pregnant you should avoid contact sports, water skiing, scuba diving, vigorous horse riding, prolonged jogging and advanced aerobics. Also, you should avoid becoming overtired or overheated during exercise or from sauna bathing.

If you have had any pregnancy problems such as threatened miscarriage, high blood pressure or back pain, you should consult your doctor before starting any exercise program.

Breast Care

Breastfeeding is best and has many advantages for both you and the baby. It is a convenient and complete source of all nutrients and helps the baby develop antibodies against some infections. It also helps the mother's uterus to return to normal as soon as possible.

Your doctor or hospital will advise you about breast care. The Nursing Mothers' Association can provide advice and leaflets about breast care during pregnancy and breastfeeding. Addresses and telephone numbers are listed in metropolitan and country telephone directories.



Sexual Intercourse

You can go on having sexual intercourse right through pregnancy, unless your doctor says it is better not to. It will not harm the baby.

Talk over your feelings about love-making with your partner. Some women find they enjoy sex more while they are pregnant. Others enjoy it less.

Try adjusting your position so your partner does not put too much pressure on you.

Smoking

Did you know that even before birth, tobacco smoke can damage your baby?

Nicotine inhaled by a mother during pregnancy – or exhaled by others smoking nearby – passes through the bloodstream via the placenta into the unborn baby.

Nicotine increases the risks of bleeding, early labour, miscarriage, premature delivery, stillbirth and cot death. Try to give up smoking as early as possible in the pregnancy. If you can't give up, at least cut down.

Medicines

Some medicines contain drugs which could harm the unborn baby. Always make sure any doctor who prescribes something for you knows that you are pregnant. Check with your doctor or the pharmacists before you take over-the-counter medicines such as cold cures, cough medicines or laxatives.

Common Discomforts

Women often suffer some discomforts during pregnancy. These usually only last a short time and are not severe. If you are worried about anything, ask your doctor.

Morning Sickness

You may feel sick, or be sick, during the early weeks of pregnancy. It usually only lasts a few weeks – if it is very severe or lasts longer, discuss it with your doctor.

Some women feel sick only in the mornings, other go on feeling 'a bit off' all day.



A drink and a dry biscuit before you get up in the morning sometimes help. If you go on feeling sick, have small meals every hour or two instead of three large meals a day.

Avoid fried meals and fatty foods. Choose foods such as fruits, vegetables, bread, cereals and crackers.

Heartburn

This is a symptom of indigestion. Avoid fried, fatty and spicy foods and drinks containing caffeine such as coffee, tea and colas. Eating smaller meals more frequently and sleeping propped up on pillows may also help. There are medicines which help – but don't take anything without checking with your doctor first.

Constipation

Constipation is quite common during pregnancy. Hormonal changes early in pregnancy make the intestine sluggish, so contents are not moved along very quickly. In late pregnancy, constipation may be due to pressure on the intestine from the growing baby. Have plenty of fruit and vegetables, wholegrain cereals, breads and other high-fibre foods in your diet.



Water – or other fluid – is necessary to overcome constipation. Water wells the fibre in food and helps make softer motions. Six to eight glasses (one to two litres) a day is recommended.

Make sure you get enough exercise.

Ask your doctor if these suggestions are not enough. Some women find that iron tablets taken during pregnancy may aggravate constipation.

Varicose Veins

These may appear for the first time during pregnancy, or get worse if you already have them.

If you need to stand up for any length of time, raise and lower your heels slowly, about 10 times every two or three minutes.

Rest with your heels higher than your hips. On a sofa is good – sit or lie with your feet on one



arm of the sofa, but put cushions under your knees and in the small of your back, for support.

See that your knees and back are supported if you sit in a chair with your feet on a foot stool.

Sleep with the foot of your bed raised – placing two bricks under the foot of the bed is the best way. (This may also help if you suffer from leg cramps at night.)

Don't wear tight garters or anything else which constricts your thighs. Elastic stockings may help, but they should be put on first thing in the morning, before your legs go over the side of the bed.

Haemorrhoids (Piles)

Piles are varicose veins around the anus, or back passage. They can be caused by constipation. A high-fibre diet, fluids and exercise can all help. Putting your feet on a low stool when you are at the toilet is sometimes helpful. Avoid standing for long periods.

Ointments and suppositories may help – ask your doctor or pharmacist.

Swollen Ankles

These are usually worse at the end of the day, or in hot weather. Wear comfortable shoes, and keep your feet up as much as possible.



Persistently swollen feet, ankles or hands may be a sign of something which needs medical attention. Ask your doctor.

Leg Cramps

Leg cramps are quite common during pregnancy. Stretching your calf muscles before you go to bed should help.

Stand facing a wall with your feet about half a metre from it. Place the palms of your hands against the wall and lean against it, then walk your feet further from the wall until you feel the calf muscles stretching. Hold the position for a minute or two.

Raising the foot of the bed as for varicose veins may also help, if you suffer from cramps.

Rubbing the cramped muscle often makes it worse. Discuss cramps with your doctor if they worry you.

Vaginal Discharge

As long as this isn't sore or itching, a slightly increased discharge may be normal. If it is excessive or irritating, tell your doctor. (Tell your doctor immediately if you think your waters may have broken at any stage, or if there is a 'show' of blood.)

Backache

Your back is more vulnerable to strain while you are pregnancy because its ligaments are softened by pregnancy hormones. Standing, sitting and walking correctly will help you to avoid strain and backache. Start being careful as soon as you know you are pregnant.



You should:

- 'Stand tall'
- Sit with your lower back supported (a small cushion is useful)
- Work in a position where you do not have to stoop
- When lifting – bend your knees, not your back; hold what is being lifted close to your body; move your feet, don't twist from your back

Try to get somebody else to do your lifting for you.

If your back pain persists, see your doctor or a physiotherapist. It may need further attention.



Danger Signs

It is important to tell your doctor immediately:

- If you have any blood loss at any time during pregnancy
- If you think your waters may have broken (a watery discharge could indicate this)
- If you develop swelling of your fingers or face

Headache and abdominal pains should also be reported to your doctor.

Toxaemia of Pregnancy

This can be detected by a rise in blood pressure, changed in the urine, swelling of the face, fingers and ankles and sometimes by excessive weight gain.

Management includes rest, sometimes by admission to hospital. Occasionally early labour may be induced.

Antenatal Classes

There are various types of classes available for expectant parents, run by community nurses, midwives and physiotherapists.

Parenthood classes are particularly useful if you are having your first baby. They help prospective parents plan for their birth experience and look ahead to the lifestyle changes which occur when a baby arrives. They also provide the opportunity to discover how babies grow and develop and help couples decide how to provide a suitable environment for their child.



Childbirth preparation classes include information on labour and birth. You will be helped to learn relaxation and breathing skills which will help you to cope with tension in labour and at other times in your life. Your partner or another support person is welcome at most classes. You should book early.

Fitness for pregnancy classes concentrate mainly on exercise, and may include relaxation and discussion sessions.

Classes are available at King Edward Memorial Hospital in Subiaco and other maternity hospitals. Telephone (08) 9340 1368 between 8.00am and 9.00am or 3.00pm and 4pm Monday to Friday (excluding Wednesdays) to book KEMH classes. Contact your local hospital for details of local classes. There are also privately run classes – you can ask at your local Child Health Centre for more information.

When to go to Hospital

The first warning that labour is beginning is usually a feeling of tightness across your abdomen, or a backache. Either is caused by contractions of the uterus which radiate from the back to a tight feeling at the front of the abdomen.

These contractions come and go in a regular pattern, at first every 15 to 20 minutes but gradually becoming more frequent.

You should go to the hospital when the contractions are taking place every 8 to 10 minutes or when you begin to feel you need help and comfort.

Sometimes the first sign of labour is that ‘the waters break,’ indicating the membranes surrounding the unborn baby have ruptured. There may be either a gush or slow trickling of watery fluid from the vagina. If this happens, you should go to hospital even if you have had no contractions.

Passing a small amount of blood-tinged mucus – a ‘show’ – can also indicate labour has started. If there is definite bleeding from the vagina, you should go straight to the hospital.

What to Take

Find out beforehand from the hospital what clothing you will need while you are there and whether you need to take anything for the baby. Pack your suitcase or bag well in advance and have it ready, so you do not have to spend time packing at the last minute.



See that nighties you choose for your hospital stay have a front opening. This will make feeding your baby easier. Apart from this, you should need only your personal toilet articles, dressing gown and slippers. Do not take any unnecessary articles of clothing, money or jewellery.

Healthy eating during your pregnancy

ADVICE ON EATING FOR YOU AND YOUR BABY



WHAT ARE THE DIETARY GUIDELINES?

The *Australian Dietary Guidelines* provide up-to-date advice about the amount and kinds of foods that we need to eat for health and wellbeing. They are based on scientific evidence and research.

The *Australian Dietary Guidelines* of most relevance during pregnancy are included below:

GUIDELINE 1:

To achieve and maintain a healthy weight, be physically active and choose amounts of nutritious food and drinks to meet your energy needs.

GUIDELINE 2:

Enjoy a wide variety of nutritious foods from these five food groups every day:

- Plenty of vegetables of different types and colours, and legumes/beans
- Fruit
- Grain (cereal) foods, mostly wholegrain and/or high cereal fibre varieties, such as breads, cereals, rice, pasta, noodles, polenta, couscous, oats, quinoa and barley
- Lean meats and poultry, fish, eggs, tofu, nuts and seeds, and legumes/beans
- Milk, yoghurt, cheese and/or their alternatives, mostly reduced fat

And drink plenty of water.

GUIDELINE 3:

Limit intake of foods containing saturated fat, added salt, added sugars and alcohol.

- Limit intake of foods high in saturated fat such as many biscuits, cakes, pastries, pies, processed meats, commercial burgers, pizza, fried foods, potato chips, crisps and other savoury snacks.
 - Replace high fat foods which contain predominately saturated fats such as butter, cream, cooking margarine, coconut and palm oil with foods which contain predominately polyunsaturated and monounsaturated fats such as oils, spreads, nut butters/pastes and avocado.
- Limit intake of foods and drinks containing added salt.
 - Read labels to choose lower sodium options among similar foods.
 - Do not add salt to foods in cooking or at the table.
- Limit intake of foods and drinks containing added sugars such as confectionary, sugar-sweetened soft drinks and cordials, fruit drinks, vitamin waters, energy and sports drinks.
- For women who are pregnant, planning a pregnancy or breastfeeding, not drinking alcohol is the safest option.

GUIDELINE 4:

Encourage, support and promote breastfeeding.

GUIDELINE 5:

Care for your food; prepare and store it safely.



www.eatforhealth.gov.au

Want more information about healthy eating when you are pregnant?

www.eatforhealth.gov.au

WHICH FOODS SHOULD I AVOID?

PREGNANT WOMEN ARE AT GREATER RISK OF FOOD POISONING AND SHOULD PREPARE AND STORE FOOD CAREFULLY. THEY SHOULD ALSO AVOID ALCOHOL.

Pregnant women should avoid:

- Foods which may contain listeria bacteria like soft cheeses (brie, camembert, ricotta, feta and blue cheese), sandwich meats, bean sprouts, pre-prepared salads and pâté.
- Raw eggs as they may contain salmonella.
- Alcohol – not drinking is the safest option.
- Fish that may contain high levels of mercury – Food Standards Australia New Zealand recommend consuming no more than one serve (100g cooked) per fortnight of shark/flake, marlin or broadbill/swordfish, and no other fish that fortnight, or one serve (100g cooked) per week of orange roughy (deep sea perch) or catfish and no other fish that week.
- Foods such as nuts during pregnancy only if they are allergic to the foods themselves – avoiding these foods has no impact on the infant's risk of developing allergy symptoms.

Want more information?

www.eatforhealth.gov.au



HELPFUL HINTS

EATING WELL DURING YOUR PREGNANCY HELPS YOUR BABY DEVELOP AND HAS HEALTH BENEFITS FOR YOU TOO!

Both you and your growing baby need extra nutrients.

Steady weight gain during pregnancy is normal and important for the health of the mother and baby. However, it is also important not to gain too much weight.

So choose foods from the Five Food Groups and limit discretionary foods and drinks high in saturated fat, added sugars and added salt such as cakes, biscuits and potato chips.

You can eat well by:

- Enjoying a variety of fruits and vegetables of different types and colours.
- Increasing your grain consumption to 8–8½ serves a day – mostly wholegrain – in preference to discretionary choices.
- Choosing foods high in iron, such as lean red meat or tofu, which are important for pregnant women.
- Making a habit of drinking milk, eating hard cheese and yoghurt, or calcium enriched alternatives. Reduced fat varieties are best.
- Enjoying a wide variety of vegetables, legumes, fruit and wholegrains and drinking plenty of water every day can assist with constipation – a common occurrence during pregnancy.



The *Australian Dietary Guidelines* provide up-to-date advice about the amount and kinds of foods that we need to eat for health and wellbeing.

For more information visit:

www.eatforhealth.gov.au

or contact:

National Health and Medical Research Council
GPO Box 1421
Canberra ACT 2601
13 000 NHMRC (13 000 64672)

To order print copies contact:

National Mailing and Marketing
Email: health@nationalmailing.com.au
Phone: 02 6269 1080

Publication Reference: N55h



Australian Government

National Health and Medical Research Council
Department of Health and Ageing

www.eatforhealth.gov.au

SERVE SIZES



Vegetables and legumes/beans

Serves per day

	18 years or under	19-50 years
Women	5	5
Pregnant	5	5
Breastfeeding	5½	7½

A standard serve of vegetables is about 75g (100-350kJ) or:

- ½ cup cooked green or orange vegetables (for example, broccoli, spinach, carrots or pumpkin)
- ½ cup cooked, dried or canned beans, peas or lentils*
- 1 cup green leafy or raw salad vegetables
- ½ cup sweet corn
- ½ medium potato or other starchy vegetables (sweet potato, taro or cassava)
- 1 medium tomato

*preferably with no added salt



Fruit

Serves per day

	18 years or under	19-50 years
Women	2	2
Pregnant	2	2
Breastfeeding	2	2

A standard serve of fruit is about 150g (350kJ) or:

- 1 medium apple, banana, orange or pear
 - 2 small apricots, kiwi fruits or plums
 - 1 cup diced or canned fruit (with no added sugar)
- Or only occasionally:
- 125ml (½ cup) fruit juice (with no added sugar)
 - 30g dried fruit (for example, 4 dried apricot halves, 1½ tablespoons of sultanas)



Grain (cereal) foods, mostly wholegrain and/or high cereal fibre varieties

Serves per day

	18 years or under	19-50 years
Women	7	6
Pregnant	8	8½
Breastfeeding	9	9

A standard serve (500kJ) is:

- 1 slice (40g) bread
- ½ medium (40g) roll or flat bread
- ½ cup (75-120g) cooked rice, pasta, noodles, barley, buckwheat, semolina, polenta, bulgur or quinoa
- ½ cup (120g) cooked porridge
- ¾ cup (30g) wheat cereal flakes
- ¼ cup (30g) muesli
- 3 (35g) crispbreads
- 1 (60g) crumpet
- 1 small (35g) English muffin or scone



Lean meats and poultry, fish, eggs, tofu, nuts and seeds, and legumes/beans

Serves per day

	18 years or under	19-50 years
Women	2½	2½
Pregnant	3½	3½
Breastfeeding	2½	2½

A standard serve (500-600kJ) is:

- 65g cooked lean meats such as beef, lamb, veal, pork, goat or kangaroo (about 90-100g raw)*
- 80g cooked lean poultry such as chicken or turkey (100g raw)
- 100g cooked fish fillet (about 115g raw weight) or one small can of fish
- 2 large (120g) eggs
- 1 cup (150g) cooked or canned legumes/beans such as lentils, chick peas or split peas (preferably with no added salt)
- 170g tofu
- 30g nuts, seeds, peanut or almond butter or tahini or other nut or seed paste (no added salt)

*weekly limit of 455g



Milk, yoghurt, cheese and/or alternatives, mostly reduced fat

Serves per day

	18 years or under	19-50 years
Women	3½	2½
Pregnant	3½	2½
Breastfeeding	4	2½

A standard serve (500-600kJ) is:

- 1 cup (250ml) fresh, UHT long life, reconstituted powdered milk or buttermilk
- ½ cup (120ml) evaporated milk
- 2 slices (40g) or 4 x 3 x 2cm cube (40g) of hard cheese, such as cheddar
- ¾ cup (200g) yoghurt
- 1 cup (250ml) soy, rice or other cereal drink with at least 100mg of added calcium per 100ml

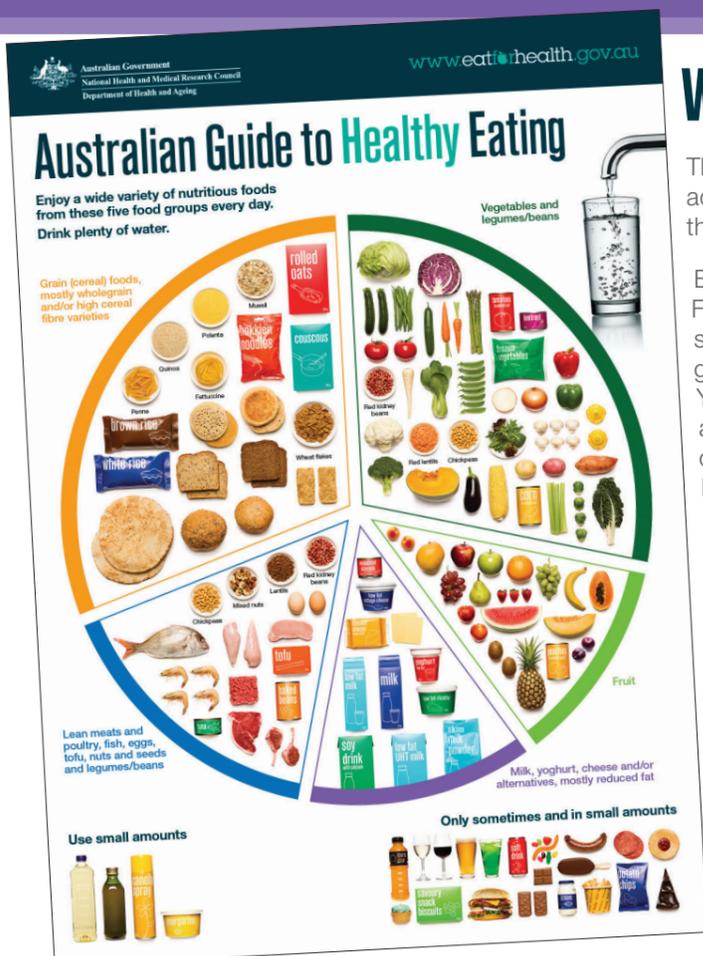
- To meet additional energy needs, extra serves from the Five Food Groups or unsaturated spreads and oils, or discretionary choices may be needed only by those women who are taller or more active, but not overweight.

- An allowance for unsaturated spreads and oils for cooking, or nuts and seeds can be included in the following quantities: 14-20g per day for pregnant and breastfeeding women.

- For meal ideas and advice on how to apply the serve sizes go to:

www.eatforhealth.gov.au

FOR FURTHER INFORMATION GO TO www.eatforhealth.gov.au



WHICH FOODS SHOULD I EAT AND HOW MUCH?

The *Australian Dietary Guidelines* provide up-to-date advice about the amount and kinds of foods and drinks that we need regularly, for health and well-being.

By eating the recommended amounts from the Five Food Groups and limiting the foods that are high in saturated fat, added sugars and added salt, you will get enough of the nutrients essential for good health. You may reduce your risk of chronic diseases such as heart disease, type 2 diabetes, obesity and some cancers. You may also feel better, look better, enjoy life more and live longer!

The amount of food you will need from the Five Food Groups depends on your age, height, weight and physical activity levels, and also whether you are pregnant or breastfeeding. For example, if you're pregnant you should aim to eat at least 8½ serves of grain (cereal) foods a day. You might notice that the number of serves you need from the Five Food Groups changes when you are pregnant or breastfeeding – this is due to changes in your nutrient requirements for your growing baby's needs and to support breastfeeding.

For further information go to www.eatforhealth.gov.au.

HOW MUCH IS A SERVE?

It's helpful to get to know the recommended serving sizes and serves per day so that you eat and drink the right amount of the nutritious foods you and your baby need for health – as shown in the tables above. We've given you the serve size in grams too, so you can weigh foods to get an idea of what a serve looks like.

The 'serve size' is a set amount that doesn't change. It is used along with the 'serves per day', to work out the total amount of food required from each of the Five Food Groups. 'Portion size' is the amount you actually eat and this will depend on what your energy needs are. Some people's portion sizes are smaller than the 'serve size' and some are larger. This means some people may need to eat from the Five Food Groups more often than others.

HOW MANY SERVES A DAY?

Few people eat exactly the same way each day and it is common to have a little more on some days than others. However, on average, the total of your portion sizes should end up being similar to the number of serves you need each day.

If you eat portions that are smaller than the 'serve size' you will need to eat from the Food Groups more often. If your portion size is larger than the 'serve size', then you will need to eat from the Food Groups less often.



Detecting a neural tube defect using prenatal tests

Testing is available to detect neural tube defects during pregnancy.

Two tests currently available:

- 1 Second trimester maternal serum screening – a test that gives information on the risk of a pregnancy being affected by a neural tube defect. A blood sample is taken from the mother between 14 and 17 weeks of pregnancy to measure the level of a hormone called alpha-fetoprotein. This test will classify your pregnancy as either:
 - not at increased risk – your risk of having a baby with a neural tube defect is very low
 - or
 - at increased risk – your risk of having a baby with a neural tube defect is higher: somewhere between 1 in 12 and 1 in 128.
- 2 Structural ultrasound – performed between 18 and 20 weeks of pregnancy and can be used to screen for spina bifida and other neural tube defects.

For more information contact: Your GP

Genetic Services of Western Australia
King Edward Memorial Hospital
374 Bagot Road, SUBIACO WA 6008

Tel: (08) 9340 1525

Fetal Medicine Service

King Edward Memorial Hospital
374 Bagot Road, SUBIACO WA 6008

Tel: (08) 9340 2700 or (08) 9340 2705

Produced with assistance from:

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Email: info@sbawa.asn.au

Web: www.sbawa.asn.au

To order this folate brochure visit:
www.health.wa.gov.au/ordering

This document can be made available
in alternative formats on request for
a person with a disability.



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association
western australia

Produced by Genomics
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HP9205 JULY'11

Folate

Reducing the risk of spina bifida and other neural tube defects



Folate

Folate or folic acid (which is the synthetic form of folate) is a B group vitamin that is vital for normal body cell growth and development. Everyone is encouraged to eat folate in their diet, but this is especially important for women of childbearing age.

Women are advised to take a supplement containing 0.5mg of folate/folic acid per day for at least one month before conception and for at least the first three months of pregnancy, in addition to a healthy diet.

Some women may need a higher intake of folate.

This includes women who have:

- spina bifida or epilepsy
- had a previous pregnancy affected by a neural tube defect or
- a family history of a neural tube defect.

Ask your doctor or pharmacist for more information on folate during pregnancy.

Folate is found naturally in green leafy vegetables, cereals, fruits, grains, legumes, wholegrain breads and orange juice. Folic acid dietary supplements, are recommended, and are available from health food stores and chemists.

A high folate intake can help to prevent up to 70% of neural tube defects. It is important to remember that folate cannot prevent all cases of neural tube defects.

Having enough folate in your diet – either from foods containing folate or by taking folic acid supplements – will improve your chances of having a healthy baby.

Neural tube defects

Neural tube defects occur when the spine, brain and skull of a baby do not develop completely. The neural tube is a hollow, tube-like structure that encases the brain and spinal cord. Many babies born with a neural tube defect have varying levels of disability; some may be stillborn or die shortly after birth.

Development of the neural tube is affected by both genetic and environmental factors. In Australia, around one in every 700 pregnancies is affected by a neural tube defect each year. Factors that increase the risk of developing a neural tube defect during pregnancy include the use of certain medications (e.g. drugs used to treat epilepsy), maternal diabetes, environmental factors, ethnicity and inadequate intake of folate.



Types of neural tube defects

There are three types of neural tube defects, these include:

- 1 Spina bifida (split spine)** – where the neural tube fails to close, leaving a hole that allows the spinal cord to ‘pop out’ through the spine. This can occur anywhere along the spine, but is more common toward the base of the spine. Babies born with spina bifida have varying degrees of disability. This can include paralysis, bowel and bladder problems, difficulty walking, scoliosis, hydrocephalus (a build up of fluid on the brain) and/or learning difficulties.
- 2 Anencephaly** – affects the skull rather than the spine. The upper end of the neural tube does not close which means the brain and skull do not form properly. Babies with anencephaly die soon after birth.
- 3 Encephalocele** – a rare condition in which the brain and covering tissue (meninges) poke through a gap in the skull. Babies with encephalocele have varying degrees of physical and intellectual disability.



Listeria infection

Cook foods thoroughly

- Listeria bacteria are killed by heating, so cook all foods thoroughly.
- Before eating, reheat high risk or leftover food until it is steaming hot all the way through.

Keep foods chilled

- Listeria bacteria can survive and grow at low temperatures. Keep your fridge as cold as possible (below 5 °C) without freezing the food.
- Refrigerate all food, including leftovers, as soon as the food is cool enough to touch.
- Throw out food left at room temperature for long periods (over four hours), especially in summer.
- Defrost frozen food in your fridge or microwave, rather than on a bench at room temperature.

What are high risk foods?

Many ready-to-eat foods are considered high risk foods for Listeria infection. This is because these foods are sometimes contaminated with Listeria bacteria during or after the manufacturing process and the bacteria can continue to grow at refrigerator temperatures.

People at risk of Listeria infection should avoid the following foods:

- paté
- cold ready-to-eat chicken
- manufactured ready-to-eat meats, including polony, ham and salami
- soft cheeses, including brie, camembert, fetta and ricotta
- pre-packed, pre-prepared or self-serve fruit or vegetable salads
- freshly squeezed fruit and vegetable juices

- ready-to-eat cold, smoked or raw seafood, including smoked salmon, oysters, sashimi and cooked prawns
- sushi
- soft serve ice cream and thick shakes
- tofu, both soft and hard types, and tempeh
- unpasteurised milk and unpasteurised milk products.

Further information

If you are unwell contact your doctor or *healthdirect Australia* on 1800 022 222 (24 hours a day, seven days a week).

For further information contact:

- your local government Environmental Health Officer
- Food Unit, Environmental Health Directorate, Department of Health
Phone: (08) 9388 4999
Facsimile: (08) 9382 8119
www.public.health.wa.gov.au

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ENV-006672 NOV'13



What is Listeria infection?

Listeria infection (also known as listeriosis) is a rare but potentially severe illness caused by Listeria monocytogenes bacteria.

How do you get Listeria infection?

Listeria infection is caused by eating food that contains Listeria monocytogenes bacteria. These bacteria are widespread in the environment and can sometimes contaminate certain high risk foods that have not been thoroughly cooked or properly prepared or stored (for more information see the list of high risk foods listed in this brochure). Listeria infection is not normally transmitted between people, although it can pass from a pregnant woman to her unborn baby.



Who is at risk?

Listeria infection is uncommon in healthy people. Those at greater risk of infection include:

- pregnant women and their unborn or newborn babies, and
- people whose immune system has been weakened due to chronic illness including cancer, diabetes, alcoholism, or medications that impair immunity such as steroids and anti-cancer drugs.

Ask your doctor for more information if you are concerned that you are at risk.

What are the symptoms and health impacts?

Symptoms vary but may include:

- fever and chills
- headache
- stiff neck and sensitivity to light
- confusion and drowsiness
- muscle aches and pains
- nausea
- diarrhoea.

Symptoms usually occur around three weeks after eating contaminated food but the interval can vary between a few days and two months.

Healthy people and pregnant women may have mild or no symptoms, but Listeria infection may still result in miscarriage, premature birth or stillbirth.

In people at risk, Listeria infection can result in serious illnesses including meningitis (infection of the membrane surrounding the brain and spinal cord) and septicaemia (blood infection that can spread through the body). Babies born with Listeria infection can develop septicaemia or meningitis.

If you are pregnant or have a weakened immune system and develop symptoms consistent with Listeria infection, see your doctor as soon as possible.

How do I get treated?

People with Listeria infection usually require hospitalisation and treatment with intravenous antibiotics.

How can I reduce the risk of Listeria infection?

You can reduce the risk of infection by avoiding high risk foods and preparing and storing food safely as follows:

Be clean

- Always wash your hands, knives and chopping boards with warm, soapy water before and after handling raw foods, and between handling different kinds of food.
- Keep your fridge clean and clean up any spills.
- Listeria bacteria can be found on fruit and vegetables grown in soil. Wash fruit and vegetables, including herbs, especially before eating them raw.

Keep foods separate

- Keep raw food separate from cooked and ready-to-eat food.
- Use separate cutting boards and knives for each type of food and especially for raw, cooked and ready-to-eat foods.
- Always wrap or cover food to prevent it being contaminated by bacteria.

Take care! These foods may upset your stomach:

- Fatty or fried foods
- Thick, creamy gravies or soups
- Overly sweet foods like chocolate, rich desserts, cakes and pastries
- Nuts, crisps
- Strong smelling vegetables
- Coffee, tea, cocoa, cola drinks
- Spicy or rich foods
- Wholemeal / high fibre bread

Some more helpful hints

- Eat small amounts often. Try five or six small meals a day.
- Do not skip meals - an empty stomach can make you nauseous.
- Take time over your meals.
- Practice relaxation techniques.
- Wear loose clothing.
- Get some fresh air, sit outside in the garden and eat.
- Sit upright during your meal.
- Rest after meals but avoid lying flat. Use pillows to raise your head and shoulders.
- Chew your foods well.
- Snack on something like dry toast or salty crackers, before rising if mornings are a problem.
- Cook and freeze on a good day ready for your 'off' days.
- If possible avoid the kitchen when food is being prepared.
- Vitamin B6 supplements (10 to 25 mg three times per day) can reduce symptoms of mild to moderate nausea. Ask your doctor or midwife.

- Acupuncture, Acupressure and Hypnosis have been found useful by some women. Ask your doctor or midwife for more information if you are looking at trying these options.
- Give up cigarettes and/or avoid cigarette smoke.
- Do not take iron tablets unless prescribed by your doctor.

KEMH has Nutrition and Dietetics Departments that can offer you further help and information if you have ongoing problems. Your GP can make a referral for you or ring the hospital on (08) 9340 2222.

WOMEN AND NEWBORN HEALTH SERVICE King Edward Memorial Hospital

374 Bagot Road Subiaco WA 6008

Telephone: (08) 9340 2222



This document can be made available in alternative formats on request for a person with a disability.

Produced by Women and Newborn Health Service
Web: www.wnhs.health.wa.gov.au
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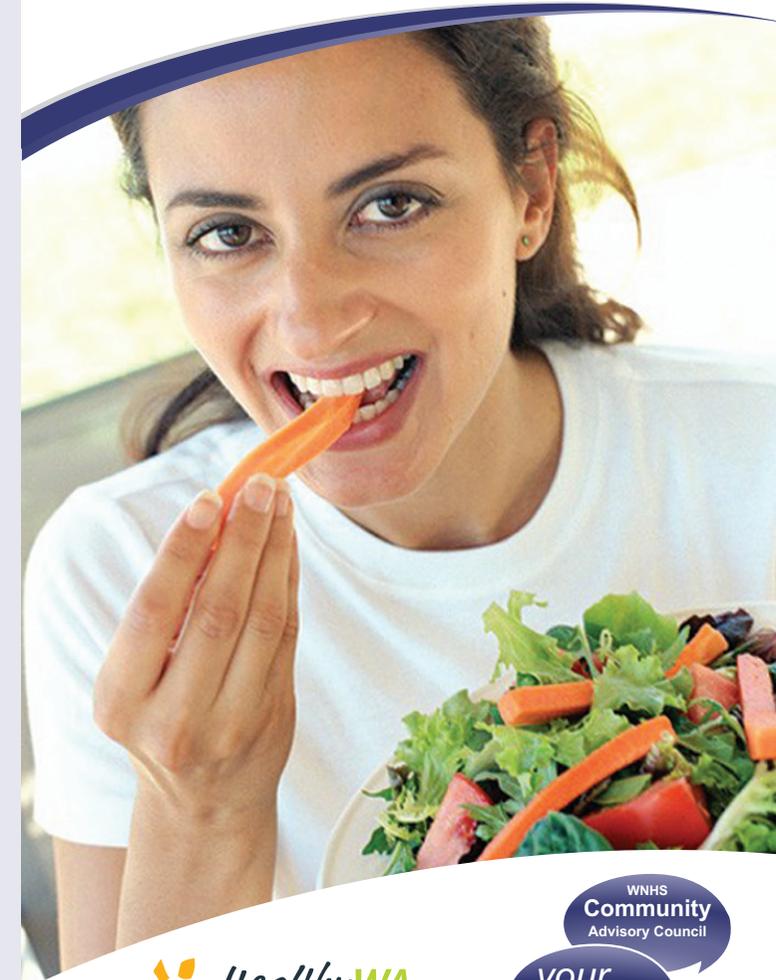
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Government of **Western Australia**
Department of **Health**
Women and Newborn Health Service

Morning Sickness

A Simple Guide to Ease Your Discomfort



 **HealthyWA**
healthywa.wa.gov.au

WNHS
Community
Advisory Council
your voice

Nausea and vomiting is common during pregnancy

Nausea and vomiting affects 70 - 85 per cent of all pregnancies and often develops by week five or six. The symptoms can be worst at around nine weeks and typically improve by 16 - 18 weeks of pregnancy. However, symptoms can continue until the third trimester in 15 - 20 per cent of women and until delivery in 5 percent of women.

Is this Morning Sickness?

Although mild pregnancy-related nausea and vomiting is often called 'morning sickness' you may feel sick at any time of day and many women (80 per cent) feel sick throughout the day. This is associated with changes in the level of hormones during pregnancy. Some women are lucky enough to not be affected by morning sickness and in others it can be severe enough to need hospitalisation.

Will it harm my baby?

Nausea and vomiting does not impact on your chances of having a healthy pregnancy. Interestingly, women with mild nausea and vomiting during pregnancy experience fewer miscarriages and stillbirths than women without these symptoms.

A small number of women may experience more severe nausea and prolonged vomiting that requires medical attention. Please contact your midwife or doctor if you experience signs of dehydration (dark coloured urine or dizziness with standing), repeated vomiting throughout the day (especially if you see blood in the vomit), pain or cramping or weight loss over 2-3kg.

Eating and drinking - nothing will stay down!

Although we are uncertain about the cause of nausea and vomiting in pregnancy, we do know that changing your diet may relieve your discomfort.

If you are vomiting continuously, it is very important to drink fluids, so that you do not dehydrate. Drinks that contain some sugar are better tolerated. Sip a little bit every 15 minutes.

- Try sipping lemonade, cordial, electrolyte or glucose drinks, ginger beer, mineral or soda waters.
- Suck on icy poles, frozen fruit juice, iceblocks, frozen yoghurt or frozen flavoured milks.
- Jelly may be easier to keep down.
- Avoid high acid drinks like orange juice as they can irritate your stomach.

Using ginger to help ease nausea

There is some evidence that ginger settles the nausea associated with pregnancy. Ginger has been used in many cultures to relieve indigestion. Ginger can be taken as:

- A drink made from half a teaspoon of powdered ginger dissolved in tea.
- A warm drink made from grated ginger root in a cup of hot water.
- Ginger beer (non alcoholic).
- Crystallised or glace ginger.
- Ginger flavoured biscuit.
- Cordial: simmer a large crushed ginger root and two cups of water for 20 minutes, strain, add one tablespoon of honey, refrigerate and use this as a cordial with mineral water.

What can I eat that will stay down?

As your vomiting lessens, try introducing drinks that are more nourishing, such as:

- Full cream or fat reduced milk (can be) mixed with soda water
- Fruit juices, vegetable juices, nectars (dilute with water if needed)
- Nutritional supplement drinks, e.g. Sustagen
- Milkshakes or fruit smoothies
- Soups - these may be better tolerated at room temperature, rather than very hot or very cold.

Tips to help with nausea

- Eat a very small amount of carbohydrate every 30 minutes e.g.
 - small cracker biscuit
 - one tablespoon of rice, pasta or breakfast cereal
 - one teaspoon of banana or other fruit.
- Eat a small amount of carbohydrate 10 minutes before meals.
- Keep your meals small but eat more often.
- Avoid drinking during meals.

Now I can eat small amounts

Foods low in fat may be better tolerated, as they will not remain in your stomach long enough to cause discomfort from overfilling. Try adding the following to your diet:

- Dry toast with honey/jam/vegemite
- Plain salty crackers and cheese
- Jelly and custard
- Popcorn, dry breakfast cereal
- Stewed/canned/fresh/dried fruits
- Rice/pasta/noodles
- Steamed/boiled/fresh vegetables
- Soups



Government of **Western Australia**
Department of **Health**

Prenatal screening and diagnostic tests



Delivering a **Healthy WA**

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Introduction

This booklet describes the different tests you may be offered during pregnancy:

- tests for infections in the mother
- prenatal screening tests of the baby
- diagnostic tests of the baby.

A diagram at the back of the pamphlet outlines all of the tests and when they will be offered during your pregnancy.

First trimester routine tests in the mother

During your first trimester of pregnancy you may be offered tests¹ for:

- full blood count
- glucose challenges for diabetes
- ultrasound to check for dates, number of fetuses and development
- blood group and antibodies
- midstream urine
- random blood glucose
- syphilis
- rubella
- hepatitis B
- hepatitis C
- HIV antibodies
- chlamydia screening
- sickle cell and Thalassaemia (Haemoglobinopathy) screening for at risk women (Ethnic groups at high risk – Mediterranean, Middle Eastern, African, Asian, Pacific Islander, South American, New Zealand Maori)

¹ King Edward Memorial Hospital. Antenatal Shared Care

A number of these tests will be performed on one sample of your blood. It is best to have the tests as early as possible in your pregnancy.

Your doctor will explain the meaning of your test results.

Testing for health conditions in the baby

Prenatal tests are also available to check the health of your baby.

What conditions can be found?

- Chromosome conditions such as Down syndrome, Trisomy 13 and Trisomy 18.
- Neural tube defects such as spina bifida and anencephaly.
- Some birth defects such as congenital heart conditions and malformed kidneys.

About 5% of babies born in Western Australia have a birth defect. Prenatal tests cannot detect all possible conditions.

Down syndrome

Down syndrome is a condition that results in a range of physical and intellectual disabilities. It is caused by an extra copy of chromosome 21. Down syndrome is also known as Trisomy 21.

Down syndrome occurs in about one in 380 pregnancies. Women of **any age** can have a baby with Down syndrome; however this risk rises for every year over 35 years of age.

Trisomy 13 and Trisomy 18

Trisomy 18 is also a chromosome condition associated with intellectual disability and physical abnormalities in many parts of the body. It is known as Trisomy 18 because most babies born with this condition have three copies of chromosome 18 instead of the usual two copies. Trisomy 18 occurs in about one in 2,000 pregnancies.

Trisomy 13 is associated with intellectual disability and physical abnormalities in many parts of the body. It is known as Trisomy 13 because babies born with this condition have three copies of chromosome 13 instead of the usual two copies. Trisomy 13 occurs in about one in 4,800 pregnancies.

Babies with either Trisomy 13 or Trisomy 18 usually miscarry and if liveborn, rarely live longer than the first month.

Please ask your doctor if you have any questions about Down syndrome, Trisomy 13 or Trisomy 18.

Neural tube defect

A baby's brain and spine develop from the neural tube in the first four weeks of pregnancy. A neural tube defect occurs when the tube does not fully develop.

Spina bifida occurs when the tube does not completely close along the spine. Other neural tube defects include **anencephaly** and **encephalocele** in which the brain and skull do not develop properly.

About one in every 700 pregnancies is affected by a neural tube defect. This defect often causes the baby to be stillborn or die shortly after birth.

How to reduce the risk of neural tube defects

The vitamin folic acid (folate) is important for the healthy development of a baby. Most neural tube defects can be prevented by taking a supplement containing 0.5 mg of folic acid every day for at least one month before pregnancy and for the first three months of pregnancy.

A folate rich diet is also advised. Bread is now fortified with folic acid, but you should still take folate supplements to prevent neural tube defects.

Some women may also need to take a higher dose of folic acid if they have spina bifida or epilepsy, a previous pregnancy affected by a neural tube defect, or a family history of a neural tube defect.

Please ask your doctor or pharmacist for more information on folic acid during pregnancy.

Why would you have a prenatal test?

It is important you are aware of the choices available. Having a prenatal test is a decision for you and your family. It can be helpful to discuss these choices with your doctor or genetic counsellor.

Even if you would not terminate a pregnancy, knowing whether your baby has special needs could help you to prepare. You may require specialist antenatal care or to book into a tertiary hospital for the birth.

What are the prenatal tests?

Different types of tests are available during pregnancy. A **screening test** shows if a pregnancy is at 'increased risk' of a birth defect. Different screening tests are available in the first or the second trimester of pregnancy. These results indicate the risk of the baby having Down syndrome.

A screening test does not give a definite answer, but it does tell us which babies have an increased risk of having Down syndrome. The results may then help you decide if you want to have a diagnostic test.

A **diagnostic test** can identify a condition, and is very accurate. Diagnostic **invasive** tests (e.g. Chorionic Villus Sampling and Amniocentesis) however, increase the risk of miscarriage. This is why diagnostic tests are not routinely offered to all women. Instead, tests are offered in two stages. All women should be offered a screening test which carries no risk of miscarriage or harm to the baby. These tests identify most babies that have an increased risk of having Down syndrome. Diagnostic tests are then offered to women at increased risk.

Ultrasounds are also diagnostic tests but they are not invasive. This means there is no risk to you or your baby.

You may be offered an ultrasound to diagnose conditions, such as cardiac problems in your baby.

It is your choice to decide whether or not to have the screening and/or diagnostic tests. If you decide to have a screening test and you are later offered a diagnostic test, it is your choice whether or not to have the diagnostic test.

What are the screening tests?

There are two different screening options:

- First trimester screening – 9 weeks to 13 weeks six days of pregnancy.
- Second trimester screening – 14 to 18 weeks of pregnancy.

Many women choose to have a first trimester screening test to find out early in their pregnancy if there could be a problem. Second trimester screening is valuable for women who are too late for the first trimester screening test or if the first trimester screening test is not available where you live. A first or second trimester screening test can help you decide if you want a diagnostic test. Having both a first and second trimester screening test is not recommended.

What is first trimester screening?

9 weeks to 13 weeks 6 days

A first trimester screening test combines results from a blood test and an ultrasound to provide information on the risk of having a baby with Down syndrome. This test can

detect some other abnormalities. It may also tell you if you have a multiple pregnancy (e.g. twins). The screen does not usually detect spina bifida.

When is it done?

The first trimester test involves two measurements:

- Blood can be taken for testing between 9 weeks to 13 weeks 6 days of pregnancy, ideally 9-12 weeks.
- The ultrasound is done between 11 weeks to 13 weeks 6 days of pregnancy, ideally 12-13 weeks.

How is it done?

The blood test: The mother has a sample of blood taken at any Pathology collection centre. The blood is tested for the concentration of two hormones (free B-hCG and PAPP-A) that change during pregnancy. The amounts of these hormones are often changed when the baby has a serious chromosome problem.

The ultrasound: An ultrasound should be performed by an operator credentialled by the Fetal Medicine Foundation or the Nuchal Translucency Education and Monitoring Programme of The Royal Australian and New Zealand College of Obstetricians and Gynaecologists. The ultrasound allows a measurement to be taken of the thickness of fluid in an area behind the baby's neck. This area, known as nuchal

translucency (NT) is often larger in babies with Down syndrome. The ultrasonographer will also take some measurements of the crown-rump length or biparietal diameter of the baby to calculate the gestational age.

A computer program then uses the results of the blood test and ultrasound NT measurement, together with the mother's exact age, weight and correct gestation of pregnancy, to provide risk assessments for Down syndrome and Trisomy 13 and Trisomy 18. The results of the risk assessment will be given to you by your doctor. Your doctor will also tell you if a physical abnormality has been found during the ultrasound examination.

Results should be available within five days.

What do the results mean?

Results are given as a risk or chance that the baby will be affected.

'Not at increased risk' means the risk of having a baby with Down syndrome is very low (the risk is less than one in 300).

A different birth defect could still be present but this risk is also low.

'At increased risk' means the risk of having a baby with Down syndrome is greater than 1 in 300 (the risk lies between 1 in 2 and 1 in 300). If a pregnancy is at increased risk, a diagnostic test will be recommended to confirm whether or not the baby has Down syndrome. Please discuss these results with your doctor.

What are the limitations?

One in every 25 women tested will be told they are at increased risk. This does not mean there is definitely something wrong but you might consider further diagnostic tests.

What are the costs for screening tests?

There may be a cost for the screening tests. You may be able to claim part of this cost from Medicare. Please ask when you book your appointment, for the costs involved.

What is an ultrasound?

An ultrasound provides an image of the baby in the womb. It can be done at any stage in your pregnancy.

- A gel is applied to your abdomen to allow sound waves to pass from the ultrasound probe into the uterus.
- The ultrasound probe is moved over your abdomen and an ultrasound image is produced by the reflection of the sound waves off the baby.
- Your bladder should be comfortably full to get a clear image.
- Sometimes, in the first trimester of pregnancy, a vaginal ultrasound is performed rather than an abdominal ultrasound.

The person performing the ultrasound will advise which procedure is appropriate for you.

Why would you have an ultrasound?

An ultrasound is an important part of first trimester screening. An ultrasound is also recommended at 18–20 weeks. (see page 18)

Some women may be offered an ultrasound at 6–8 weeks of pregnancy to confirm the baby's gestational age, show if you are carrying twins, and check the baby's growth.

An ultrasound may also be done if there are unusual symptoms, such as bleeding.

What are the risks?

An ultrasound is safe for you and the baby.

What is second trimester screening? 14 to 18 weeks

A second trimester screening test is a blood test of the mother that provides information on the risk of having a baby with Down syndrome or a neural tube defect like spina bifida. This test is sometimes called a maternal serum screen (MSS) or the triple test.

When is it done?

Blood for the second trimester screening test can be taken for testing between 14 weeks to 18 weeks of pregnancy, but is ideally done between 15 to 17 weeks.

How is it done?

A blood sample is taken from the mother and tested in a laboratory. The mother's blood is tested for three hormones (estriol, free B-hCG and alpha fetoprotein).

The results of the second trimester screening will be given to you by your doctor.

Results should be available within five days.

What do the results means?

‘Not at increased risk’ means... The chance of the baby having Down syndrome or a neural tube defect is very low (less than one in 300). A different birth defect may still be present but this risk is also low.

‘At increased risk’ means... the chance of the baby having Down syndrome or another chromosome abnormality is greater than 1 in 300 (between 1 in 10 and 1 in 300). Alternatively, the risk of the baby having a neural tube defect lies between one in 12, and 1 in 128. A diagnostic test will be recommended to confirm whether or not the baby has Down syndrome (chorionic villus sampling or amniocentesis) or spina bifida (ultrasound). Please discuss these results with your doctor.

What are the limitations?

One in every twenty women tested will be told they are at increased risk. This does not mean there is definitely something wrong but you might consider having further diagnostic tests.

What are the costs?

There may be costs for having the screening tests. You may be able to claim part of this cost from Medicare. Please ask when you book your appointment, for the costs and any rebates available for the screening tests.

What is a diagnostic test?

A diagnostic test is used to confirm a chromosome abnormality such as Down syndrome or an inherited condition in the baby.

You may choose to have a diagnostic test if you have:

- had a previous pregnancy with Down syndrome or other birth defect.
- been given an 'at increased risk' result from a first or second trimester screening test.
- a family history of a genetic condition.

What are the different diagnostic tests?

The types of diagnostic tests are Chorionic Villus Sampling, Amniocentesis and ultrasound.

Chorionic Villus Sampling (CVS)

11 to 14 weeks of pregnancy

A needle, guided by ultrasound to avoid damage to the fetus, is inserted through the abdomen to take a sample of chorionic villus cells from the placenta. This sample is tested for missing, extra or abnormal chromosomes.

CVS is an outpatient procedure that takes about 20 minutes. You will be awake during the procedure but should experience little or no pain. It is suggested you rest for about 20 minutes after the procedure.

The risk of miscarriage is less than 1 in 100 (less than 1%).

Figure 1: Chorionic Villus Sampling - through the abdomen

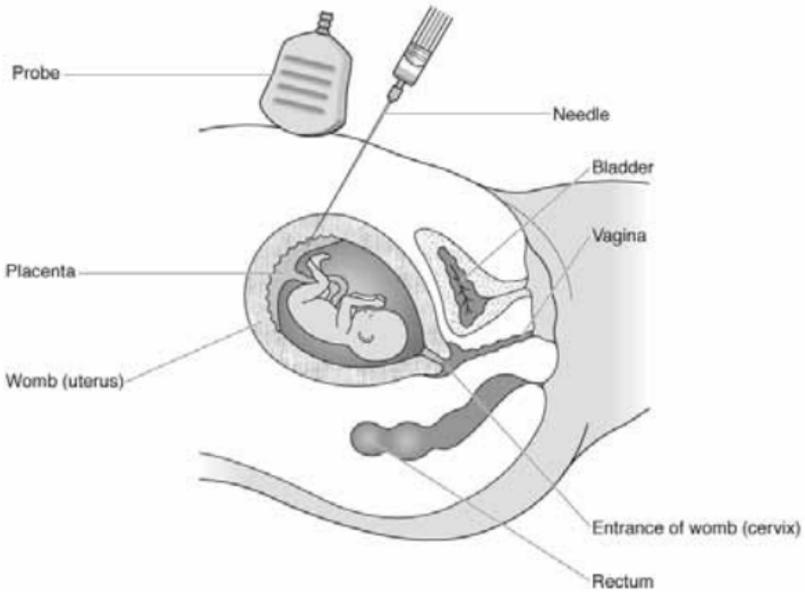
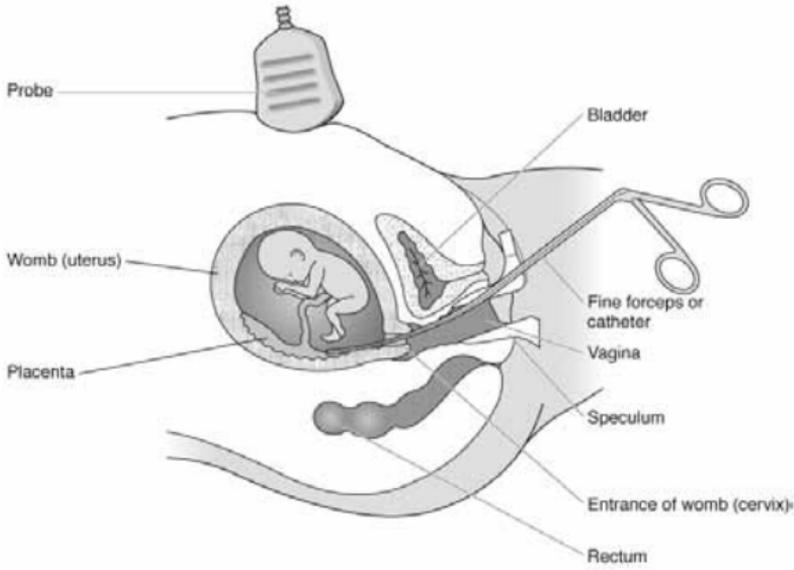


Figure 2: Chorionic Villus Sampling - through the cervix (entrance to the womb)



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Amniocentesis

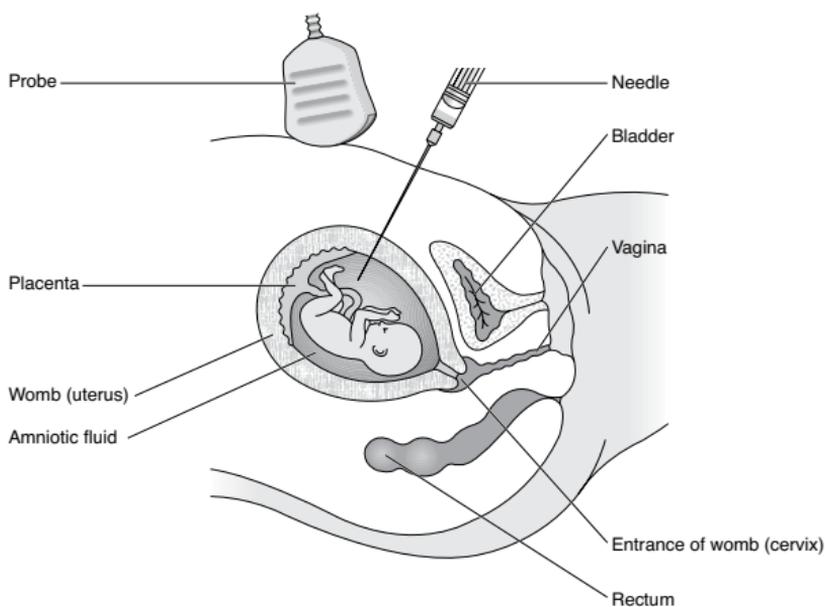
15 to 18 weeks of pregnancy

A needle, guided by ultrasound to avoid damage to the fetus, is inserted through the abdomen to take a small sample of amniotic fluid around the baby. This sample is tested for missing, extra or abnormal chromosomes.

Amniocentesis is an outpatient procedure that takes about 20 minutes. You will be awake during the procedure but should experience little or no pain. It is suggested you rest for about 20 minutes after the procedure.

The risk of miscarriage is less than 1 in 100 (less than 1%).

Figure 3: Amniocentesis



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Are the tests painful?

Many women find the diagnostic tests uncomfortable, and they are often managed by local anaesthetic. You should take things easy for one to two days after the tests.

When should I receive the results?

The samples collected by chorionic villus sampling or amniocentesis are tested in a laboratory. Depending on the test, results may be available within 24 hours, but it may take up to 14 days.

Your doctor will explain the test result and any implications. If a condition is found, counselling with Genetic Services of Western Australia may be recommended.

If the testing confirms your baby has Down syndrome, Trisomy 13 or Trisomy 18, your doctor and/or genetic counsellor will discuss your choices with you, but allow you to make a decision that is right for you. Your choices include ending the pregnancy, continuing the pregnancy, or placing the baby for adoption.

What are the limitations?

These diagnostic tests will detect practically all chromosomal abnormalities associated with Down syndrome, Trisomy 13 and Trisomy 18.

A normal result means the baby does not have Down syndrome or other common chromosomal conditions but does not rule out all birth defects.

What are the costs?

There may be costs for having the diagnostic tests. You may be able to claim part of this cost from Medicare. Please ask when you book your appointment, for the costs and any rebates available for the diagnostic tests.

What is a routine structural ultrasound? 18-20 weeks

An 18 to 20 week ultrasound is recommended to:

- Check the position of the placenta.
- Check the amount of amniotic fluid.
- Check the baby's growth.
- To detect structural abnormalities in the fetus – such as heart, limbs, abdomen, bones, brain, spine and kidneys.

How is it done?

See 'What is an ultrasound' on page 11 for this information.

When should I receive the results

Ultrasound results may be available immediately or may be sent to your doctor. If a physical abnormality is found your doctor will explain what this means and refer you to specialists where appropriate.

What are the limitations?

The accuracy of the ultrasound depends on the equipment used, the mother's weight, the developmental stage of the baby and its position in the uterus, the visibility of the abnormality and other factors.

What is the cost?

There may be a charge for having a routine structural ultrasound. You may be able to claim part of this cost from Medicare. Please ask when you book your appointment, for the costs and any rebates available for the ultrasound.

Frequently asked questions

What does prenatal mean?

Prenatal refers to any time during pregnancy.

Prenatal tests check the health of the baby during pregnancy. Some conditions cannot be detected with a prenatal test. Please discuss this with your doctor.

What does antenatal mean?

Antenatal also refers to any time during the pregnancy.

What does maternal mean?

Maternal is another word for mother. A maternal serum screen means a test of the mother's blood.

How do I know if I have a family history of a condition?

It is important to find out if there are any conditions that run in your family that may affect the health of the baby. You may have to ask your family members if they know of any conditions. It is best to do this before you get pregnant.

If you are concerned about a particular genetic disorder in your family please talk to your doctor or contact Genetic Services of Western Australia.

How is my due date estimated (EDD)?

An ultrasound can be used to estimate your due date. You can also estimate it based on your last menstrual period. Your due date is calculated by adding 40 weeks (280 days) to the first day of your last menstrual cycle.

Who should I ask for more information about these tests?

You may be unsure whether or not to have prenatal screening. Some questions which you may consider to help you decide include:

- Do I want to know if my baby has Down syndrome, Trisomy 13, Trisomy 18 or a neural tube defect before he/she is born?
- What would I do if my diagnostic test showed my baby has one of these conditions? Would I end the pregnancy? Would I want to know so I could prepare for a child with special needs?
- How will this information affect my feelings and the father of the baby's feelings throughout the pregnancy?

Talk to your doctor before you decide which, if any, of these tests are appropriate for you.

For more information, please contact:

Your doctor

or

Genetic Services of Western Australia

King Edward Memorial Hospital

374 Bagot Road, SUBIACO WA 6008

Phone: (08) 9340 1525

Fetal Medicine Service

King Edward Memorial Hospital

374 Bagot Road, SUBIACO WA 6008

Phone: (08) 9340 2700

**The Down Syndrome Association
of WA (Inc)**

Phone: (08) 9368 4002

Web: www.dsawa.asn.au

The Spina Bifida Association of WA (Inc)

Phone: (08) 9346 7520

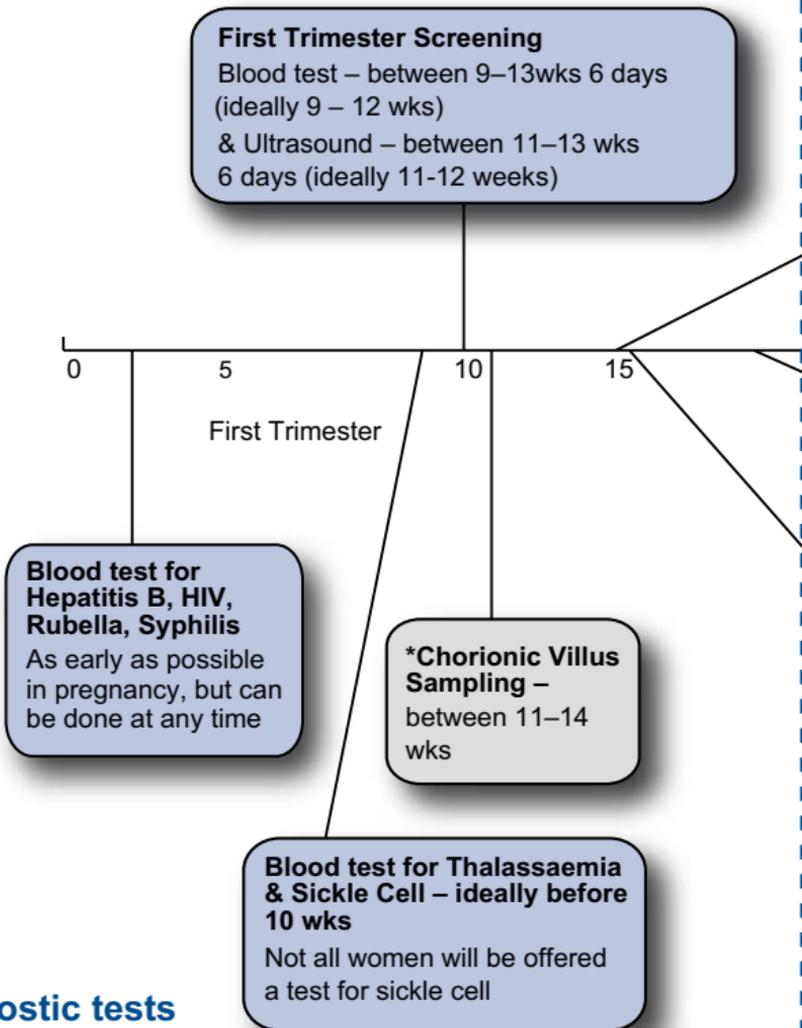
Web: www.sbawa.asn.au

To improve the accuracy of the screening program, results and outcomes of pregnancies will be monitored.

Your privacy will be respected and your personal details will remain confidential.

Screening and diagnostic test options

Screening tests



Diagnostic tests

Second Trimester Screening

Blood test (Maternal Serum Screen) –
between 14-18 wks
(ideally 15–17 wks)

You may choose whether or not to have the screening
and/or diagnostic tests.

20 25 30 35 40

Second
Trimester

Third Trimester

***Amniocentesis –**
between 15–18 wks

**Routine structural
ultrasound – 18–20 wks**

*In consultation with health professionals, you may choose whether or not to have diagnostic testing. Diagnostic testing involves either chorionic villus sampling or amniocentesis.



To order more copies of this brochure,
please go to the online publication order
system at: **www.health.wa.gov.au/ordering**

To download an A4 version of this brochure,
please go the Office of Population Health
Genomics website at:
www.genomics.health.wa.gov.au/publications

This document can be made available
in alternative formats on request for
a person with a disability.



General Practitioner's antenatal timeline for imaging investigations

Gestational Age	Examination/Investigation
7 - 8 weeks	Dating ultrasound scan to confirm gestational age
10 - 13 weeks Ideally at 10 weeks	Biochemistry for First Trimester Screen (FTS)
12 - 13 weeks	Nuchal translucency ultrasound. Based on FTS program fetus must have a crown rump length between 45-84 mm*
17 - 22 weeks [‡] Ideally at 19 weeks	Anatomy scan
>22 weeks [‡]	Ultrasound scan for pregnancy complication over 22 weeks gestation (one per pregnancy is covered by Medicare)*

* See over for Medicare eligible criteria for nuchal translucency ultrasound and ultrasound >22 weeks gestation.

‡ One per pregnancy is covered by Medicare. Additional scans required will only be covered by Medicare if the referrer is a Specialist Obstetrician or holds the Diploma of Obstetrics.

For more information about this or any of our services please visit our website or email info@perthradclinic.com.au



A nuchal translucency measurement is performed to assess the risk of fetal abnormality. Ultrasound after 22 weeks gestation can be requested to investigate potential complications of pregnancy. Please choose from the appropriate table below the clinical condition(s) that applies to the relevant developmental stage. This must be written on the referral to be eligible for a Medicare rebate.

Medicare indications that apply to < 12 weeks gestation and nuchal translucency

Poor obstetric history	Risk of fetal abnormality	Risk of miscarriage
Diminished symptoms of pregnancy	High risk pregnancy	Suspected or known uterine abnormality
Hyperemesis gravidarum	Previous post dates delivery	Previous caesarean section
Suspicion of ectopic pregnancy	Uncertain dates (if dating scan not performed previously)	Suspected or known cervical incompetence
Advanced maternal age	Significant maternal obesity	Maternal infection
Inflammatory bowel disease	Bowel stoma	Abdominal wall scarring
Previous spinal or pelvic trauma/disease	Drug dependency	Thrombophilia
Cardiac disease	Abdominal pain or mass	Liver or renal disease
Autoimmune disease	Diabetes mellitus	Toxaemia of pregnancy
Alloimmunisation	Hypertension	Pregnancy after assisted reproduction

Medicare indications that apply to >22 weeks gestation

Advanced maternal age	Significant maternal obesity	Maternal infection
Inflammatory bowel disease	Bowel stoma	Abdominal wall scarring
Previous spinal or pelvic trauma/disease	Drug dependency	Thrombophilia
Cardiac disease	Abdominal pain or mass	Liver or renal disease
Autoimmune disease	Diabetes mellitus	Toxaemia of pregnancy
Alloimmunisation	Hypertension	Pregnancy after assisted reproduction
Known or suspected fetal abnormality or fetal cardiac arrhythmia	Fetal anatomy (late booking or incomplete mid-trimester scan)	Malpresentation
Cervical assessment	Clinical suspicion of amniotic fluid abnormality	Clinical suspicion of placental or umbilical cord abnormality
Previous complicated delivery	Uterine scar assessment	Uterine fibroid
Previous fetal death in utero or neonatal death	Antepartum haemorrhage	Clinical suspicion of intrauterine growth retardation
Clinical suspicion of macrosomia	Reduced fetal movements	Suspected fetal death
Abnormal cardiotocography	Prolonged pregnancy	Premature labour
Fetal infection	Trauma	



Before the newborn screening test

This pamphlet is essential reading for all parents before your baby has the newborn screening test.

The pamphlet should be provided to you prior to collection of the sample to allow discussion and to obtain your consent for collection and testing.

The newborn screening test is highly recommended for all babies; however, if you choose not to have your baby tested, you should advise your doctor.

What happens to the sample cards after testing?

The newborn screening laboratory is located at Princess Margaret Hospital for Children. When testing is completed, the cards are stored securely for two years and then destroyed. The cards are sometimes used to help develop or improve new screening tests. If this happens, your baby's personal information will be removed prior to use.

The confidentiality of all information regarding babies and their test results is protected by Commonwealth Privacy Legislation and Hospital policies.

The limitations of screening

The Screening Program has quality assurance mechanisms in place to assure that all infants are screened and that the results are valid. While newborn screening has been proved reliable, as with any laboratory tests, false positive and false negative results are possible. For this reason, the possibility of a disorder should never be ruled out solely on the basis of the screening results. Any signs or symptoms of a disorder should be followed up immediately. The screening test for cystic fibrosis will detect only 95% of babies with the disorder. The test may also detect a small number of healthy babies who are carriers of the gene for cystic fibrosis.

For more information about the screening program and the blood tests please contact:

Your doctor/midwife or

WA Newborn Screening Program

Department of Clinical Biochemistry
Princess Margaret Hospital for Children
GPO Box D184
PERTH WA 6840

Telephone: 9340 8574

Fax: 9340 8420

www.pmh.health.wa.gov.au/services/newborn



WA Newborn Screening Program

To order more copies of the **Your Newborn Baby's Screening Test** brochure please go to the online publication order system at www.health.wa.gov.au/ordering

This document can be made available in alternative formats on request for a person with a disability.

Produced by the WA Newborn Screening Program
with the assistance from the
Office of Population Health Genomics
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WA Newborn Screening Program Your newborn baby's screening test

A blood test to screen for genetic conditions



Frequently asked questions

What is the newborn screening test?

This test is often called the “Guthrie test”. It tests babies for serious disorders and is usually done when your baby is between 48 and 72 hours old. In Australia, the “Guthrie test” has been part of the routine care for all newborn babies for over 40 years. The testing is provided free of charge.

Why is the test done?

The test is done to find out if your baby has a disease or condition for which early treatment can prevent mental retardation, physical disability, or death. About one in every thousand babies born in Australia will have one of these treatable disorders.

How is the test done?

A midwife or nurse will perform the test by pricking your baby’s heel and putting a few drops of blood on a special filter paper.

Some babies cry when their heel is pricked but the discomfort lasts only a short time. The filter paper is allowed to dry and is then sent to the newborn screening laboratory where several different tests will be performed. Make sure that your baby has this important test. If you have a home birth, check with your midwife.

What if we have no family history of the disorders?

Parents who have no family history of these problems or who have already had healthy children can still have children with these disorders. In fact, most children with these disorders come from families with no previous history of the condition.

But my baby looks healthy...

Most babies with these disorders look and act normally and seem healthy at first. The screening test helps your doctor find a problem with your baby before it makes him or her sick. Most babies who are diagnosed and treated early do well.

Why is a repeat test sometimes needed?

A few babies will need to have a repeat screening test. This is usually because there was a problem with the first sample or its collection or the test did not give a clear result. A request for a repeat test does not necessarily mean your child has a disorder. However, if you are asked for a repeat test, it is important that you take your baby for the test as soon as possible.

How will I know the results of my baby’s test?

Parents are usually told of the test results only if there is a problem. If the results of your baby’s test are normal, they will be mailed to the centre where your baby was born, or your midwife, about two weeks after the test. If your child’s test shows an abnormal result, you will be told immediately and given instructions about what to do next.

Does an abnormal screen mean that my baby has a disorder?

Not always. Because this is a “screening test”, it finds babies at increased risk for a disorder.

Your baby will need to have further testing and examination by a specialist to find out if he or she has the disorder.

The extra testing is important because early diagnosis and treatment can prevent many health-related problems.

What disorders can be detected by the newborn screen?

Phenylketonuria: caused when a baby is unable to break down the amino acid phenylalanine, which is found in the protein of foods. If detected early and the baby is started on a special low-phenylalanine diet, mental retardation is prevented.

Congenital Hypothyroidism: caused by the lack of thyroid hormone, which can lead to poor growth and mental retardation. If found early and treated with thyroid medication, the child will grow and develop normally.

Galactosaemia: occurs when a baby cannot break down the galactose part of milk sugar. In some cases, life-threatening damage to the brain and liver can occur as early as one week after birth. When started early, a special milk-free diet prevents these problems.

Cystic Fibrosis: caused by sticky secretions in the lung and gut. It is treated with dietary supplements, antibiotics and physiotherapy to help prevent poor growth, chest infections and shortened lifespan.

Amino Acid Disorders: these are caused when a baby is unable to break down certain amino acids in the blood. Treatment with special diets and supplements can help prevent mental retardation, seizures, organ damage and death.

Fatty Acid Oxidation Disorders: these are caused when a baby is unable to convert fat into energy. Treatment with a low-fat diet, dietary supplements, and avoidance of fasting can help prevent low blood sugar, coma and death.

Organic Acid Disorders: these are caused when a baby is unable to convert amino acids into energy. Treatment with a low-protein diet and supplements can help prevent vomiting, seizures, coma and death.

What does a Low-risk result mean?

One in three hundred is the dividing line between high and low risk. Low-risk means a chance of less than 1 in 300 of a foetus with Down syndrome. A low-risk result does not rule out the possibility of Down's, but the risk for this group is small. Only one woman in over ~3,000 screened as low-risk will have a Down syndrome foetus.

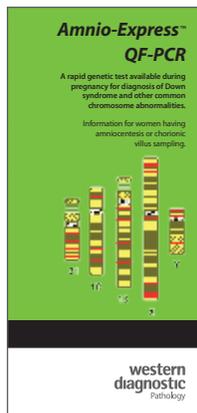
What does a High-risk result mean?

It means a chance for Down syndrome in the pregnancy of 1 in 300 or more. A high-risk result does not mean that the pregnancy is definitely abnormal. It only means that further tests should be offered to determine whether there is an abnormality or not. Approximately 1 in 20 women will have an increased risk result.

Further testing is offered to determine which women in the high-risk group really have an abnormality. This testing will usually involve amniocentesis or chorionic villus sampling, which take a small amount of fluid or tissue from around the baby for chromosomal analysis.

Both tests have a small risk of miscarriage. Final results from the chromosomal analysis may take 2-3 weeks. Sometimes an interim result may be available in a few days if specialised 'AmnioExpress QF-PCR'* testing is requested.

**see our pamphlet on Amnio Express - QF-PCR*



Conclusion

The First Trimester Screening test is, as its name implies, only a screening test. However it does detect significantly more Down pregnancies than the older triple test/maternal serum screen and it is able to achieve this at a much earlier stage of pregnancy. This test will classify patients into high and low risk groups. Patients at higher risk are offered further investigations to determine whether abnormalities are present or not. Those at low risk can be reassured earlier that these adverse outcomes are unlikely.

Why will I receive an account?

There will be an out-of-pocket charge (For details of the exact cost, see our Billing Guide for Out Patients, **My Pathology Test - What will it cost?**) for this test for all patients. You will receive an account. Medicare will reimburse a percentage of this and you will be responsible for the out-of-pocket expense. In line with our normal billing policy, current Health Care Cardholders, Pension Cardholders, Veterans with Gold Cards and residents of Nursing Homes will be exempt from this out-of-pocket charge.

The information in this pamphlet is designed to help you answer questions regarding screening for Down Syndrome. Should you have further questions talk to your doctor. Further information can be provided by your obstetrician, your ultrasonologist, the Western Australia Health Department, Genetic Services of Western Australia and King Edward Memorial Hospital.

MANARK_9_2008

Understanding First Trimester Pregnancy Screening

Information for Patients



**western
diagnostic**
Pathology

74 McCoy Street, Myaree
Telephone 08 9317 0999

**western
diagnostic**
Pathology

The First Trimester Screening (FTS) test has important implications for you and your family. This brochure explains how First Trimester Screening is performed and what the results mean. Before undergoing this test it is very important you have discussed this testing procedure with your doctor.



What is First Trimester Screening?

First Trimester Screening is a test to detect women at risk for Down syndrome and some other problems during the early part of pregnancy. It involves two tests, a blood test and an ultrasound.

Down's screening tests do not provide a diagnosis, but instead group women as low risk or high risk. Women at high risk are offered further tests. It is important to remember that most women will have normal babies, even if they are grouped as high risk.

Down Syndrome

Down syndrome occurs in about 1 in every 700 pregnancies and is a chromosomal abnormality which is an important cause of congenital intellectual disability. Chromosomes contain the genetic information we require to grow and develop normally. Each cell contains 23 pairs of chromosomes. Down syndrome usually occurs by having 3 copies of chromosome 21. What causes this replication is still unknown, no racial, geographical, social, economic or environmental factors have been identified.

Chances of having a baby with Down syndrome increase as a woman gets older, but a child with Down Syndrome can be born to a mother of any age.

The First Trimester Screening Test

First Trimester Screening requires a blood test and an ultrasound scan which are performed early in pregnancy. A specialised ultrasound measurement is taken of the thickness (translucency) of the baby's neck and this reading is combined with the blood test results and the woman's age to give an assessment of the risk of Down Syndrome.

The First Trimester Screening Detection Rate

The FTS detects between 85%-90% of Down (Trisomy 21) pregnancies. As it is only a screening test and not a diagnostic test, a small proportion of fetuses with Down syndrome (approximately 10%) will not be detected as "increased risk".

When is the Test Performed?

Blood Test - We recommend women have the blood test at week 10 of pregnancy. However, the blood test can be performed up until 13 weeks and 6 days of pregnancy.

Ultrasound - We recommend the ultrasound is performed at week 12 of pregnancy. However, the ultrasound can be performed from 11 weeks through to 13 weeks and 6 days of pregnancy.

How do I arrange the testing?

1. *Make an appointment with your doctor and discuss the test fully. You need two referrals, one for the blood test (Western Diagnostic Pathology) and one for the ultrasound.*
2. *Have your blood test at week 10 of pregnancy*
3. *Book your ultrasound for week 12 of your pregnancy*
4. *The report of your risk assessment may be given to you at the time of the ultrasound or mailed to your doctor.*

What does the lab test?

The laboratory will measure PAPP-A (Pregnancy Associated Plasma Protein-A) and f β hCG (free beta hCG) hormones. We will send a copy of these results to your ultrasound clinic to include in your risk assessment and a copy to your doctor so that they know the blood test component of the test has been done.

What do my verifi™ prenatal test results mean?

Your results will tell your doctor whether or not trisomies 21, 18, 13 or sex chromosome abnormalities (if these were ordered) are highly suspected in this pregnancy. In the case of a positive result, your healthcare provider may discuss what the results mean to you and your fetus as well as further testing options for your pregnancy.

How quickly will I get my results?

Your results will be sent to your healthcare provider, who will usually receive them within 10 working days.

How much does the verifi™ prenatal test cost?

The verifi™ prenatal test does not qualify for a Medicare rebate. The total out-of-pocket cost to the patient is \$900*, which is payable via credit card at the time of testing.

How do I organise a verifi™ prenatal test?

The verifi™ prenatal test is only available at specific Clinipath Pathology collection centres. Requests for tests must be made on a special request form and can only be ordered by obstetricians.

All collections must be pre-booked on 08 9476 5257 or 1800 010 447 to enable prompt sample transfer to the US where all initial testing will be conducted.

* Details correct as of July 2013. Prices may be subject to change without notice.

The verifi™ prenatal test is available exclusively through Clinipath Pathology and other Sonic Healthcare Australia subsidiaries.

About Sonic Healthcare

Clinipath Pathology is a subsidiary of Sonic Healthcare Limited, Australia's largest pathology provider. We understand that pathology is the foundation of modern medicine, providing 70% of all medical diagnoses and every single cancer diagnosis.

We are committed to providing quality pathology to doctors and their patients by employing world renowned pathologists, highly trained scientists, and through the continual investment in state-of-the-art technology and medical innovations.

At Clinipath Pathology, quality is in our DNA.

About Verinata

Verinata Health, Inc is a US company that is at the forefront of improving prenatal testing options, and is committed to helping clinicians offer the latest in prenatal care to patients. Their initial focus is to develop and offer non-invasive tests for early identification of fetal chromosomal abnormalities through their proprietary technologies.

For further information please call 08 9476 5257 or 1800 010 447
www.clinipathpathology.com.au



SONIC
GENETICS
Quality is in our DNA

verifi™
prenatal test



A new innovation in non-invasive prenatal testing

A new prenatal blood test is now available for women with high-risk pregnancies before needing to proceed to amniocentesis or Chorionic villus sampling (CVS).



The veriFi™ prenatal test is a non-invasive test that detects three primary chromosomal abnormalities – trisomies 21, 18 and 13 – from a single blood test. This non-invasive test has been available in the US for more than a year, where thousands of women have been tested.

What is the veriFi™ prenatal test?

The veriFi™ prenatal test measures genetic material (or DNA) from a pregnant woman's blood to look for too few or too many copies of chromosomes in the mother and baby. Missing or extra copies of chromosomes are referred to as "aneuploidies" and may be related to conditions in pregnancy such as trisomy 21 (Down syndrome), trisomy 18 (Edwards syndrome), or trisomy 13 (Patau syndrome). The test can also look for other conditions caused by missing and extra copies of other types of chromosomes, called sex chromosomes (X and Y).

How do I know if this test is right for me?

This test is usually offered to pregnant women identified by their doctor to have a chance of fetal aneuploidy. The veriFi™ test offers a new choice to women to have information about their pregnancy, as accurately as possible from a simple blood test, with little or no risk to their pregnancy.

The test may be an option for you to consider if:

- Your ultrasound shows concerns with the fetal growth and/or development
- You have an abnormal or 'positive' first trimester and/or second trimester serum screen (blood test) result
- You have a personal or family history of a chromosomal condition
- You are considered of advanced maternal age
- You have a confirmed singleton pregnancy of at least 10 weeks gestational age

What are my current testing options?

There are various screening and diagnostic options available for the common chromosomal conditions. Current screening options can tell you the chance (for example, 1 in 50 or 1 in 5000) of your pregnancy having a certain chromosome problem, but they do not provide a definitive answer. Current invasive procedures (such as a CVS or amniocentesis) can provide a more definitive answer, but they have a small risk of complications, including miscarriage.

What are the advantages of the veriFi™ prenatal test over my current options?

In comparison to other testing options, the veriFi™ prenatal test provides more accurate information than calculating chances (risk scores), and does not carry the risk of complications that an invasive procedure can have.

It also:

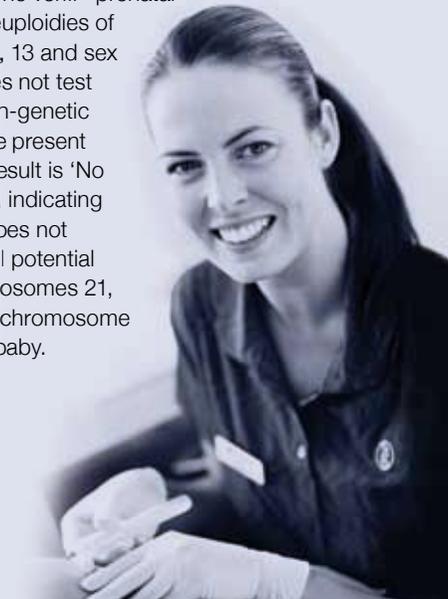
- Uses just a simple, single blood test from your arm
- Can be performed as early as 10 weeks
- Tests for trisomies 21, 18, and 13
- Tests for sex chromosome conditions (if this option is ordered by your healthcare provider)

How do I know the veriFi™ prenatal test is effective?

A major scientific study with more than 60 leading US medical research and teaching institutions has been undertaken in the US. The clinical information presented in this study has been reviewed and published in the leading journal read by obstetricians and gynaecologists.

Do normal veriFi™ prenatal test results mean that my baby will be perfectly healthy?

No test can guarantee a baby will not have any medical issues. The veriFi™ prenatal test only tests for aneuploidies of chromosomes 21, 18, 13 and sex chromosomes. It does not test for all genetic and non-genetic problems that may be present in a baby. If the test result is 'No aneuploidy detected', indicating a negative result, it does not completely rule out all potential problems with chromosomes 21, 18, and 13, or all sex chromosome aneuploidies in your baby.





Government of Western Australia
Department of Health

Finding help before and after baby arrives



Delivering a **Healthy WA**

This booklet provides a list of general and mental health resources for families during pregnancy and after the birth of a baby.

For free* telephone support, contact the **Pregnancy, Birth and Baby Helpline** on **1800 882 436**. This service is available 24 hours a day, 7 days a week. It provides high-quality information and can redirect you to other services if appropriate.

* Calls from landlines are free. Mobile charges may apply.

For all emergencies, please call 000.

Phone numbers and websites contained in this booklet were correct at the time of printing.

Good sources of information and help include:

- **healthdirect Australia** – for 24 hour telephone health advice staffed by Registered Nurses call 1800 022 222 (calls from landlines are free, mobile charges may apply)
- **General practitioners** – find your local GP by calling *healthdirect Australia* on 1800 022 222
- **Child health nurses** – find your local child and community health centre by calling the Pregnancy, Birth and Baby Helpline on 1800 882 436

For information about **emotional wellbeing for parents**, go to: www.wnhs.health.wa.gov.au/emotionalhealth.php

For a list of **mental health services** in WA, go to: www.mentalhealth.wa.gov.au/getting_help

Aboriginal resources

Aboriginal Alcohol and Drug Service (AADS) 9221 1411
Aboriginal Hostel 9349 2548
Aboriginal Legal Service 9265 6666 1800 019 900 (free call)
Anawim Aboriginal Women's Service 9328 7562
Yorgum Aboriginal Family Counselling Services 9218 9477
Department of Indigenous Affairs 1300 651 077 (free call)
Derbarl Yerrigan Health Service 9421 3888
RUAH Community Services 9485 3939
Ngunytju Tjitji Pirni (Kalgoorlie) 9091 7862
Babbingur Mia Health Service (Rockingham) 9591 2025
Meerilinga Aboriginal Parent Support Service Beechboro 9377 4749
Parenting WA (24hr) 6279 1200, 1800 654 432 (free call)

Accommodation

Crisis Care (24hr) 9223 1111 1800 199 008 (free call)
Women's Council for Domestic and Family Violence Services 9420 7264
Women's Domestic Violence Helpline 9223 1188, 1800 007 339 (rural free call)
Uniting Care West 1300 663 298
Homeless Advisory Service 1800 065 892 (freecall)
Alcohol and drugs
Alcohol and Drug Information Service 9442 5000, 1800 198 024 (rural free call)
Alcoholics Anonymous (AA) (24hr) 9325 3566
Holyoake – The Australian Institute of Alcohol and Drug Addiction Resolutions 9416 4444
Next Step 9219 1919
Parent Drug Information Service (24hr) 9442 5050, 1800 653 203 (free call)

Alcohol and drugs (cont.)

Women's Health and Family Services 6330 5400 1800 246 655 (rural free call)
Drug & Alcohol Office www.dao.health.wa.gov.au
Complaints
Health Consumer's Council 9221 3422 1800 620 780 (free call)
Consumer Protection 1300 304 054
Counselling services: metro
Anglicare 9325 7033 1800 812 511 (free call)
Atwell Family Support Service 9414 6011
Centrecare 9325 6644 Esperance 9083 2600
The Compassionate Friends 9486 8711
Gay and Lesbian Community Services 9420 7201

Counselling services: metro (cont.)

Anglicare Kinway	9263 2050 1800 812 511 (free call)
Relationships Australia	1300 364 277
Women's Health and Wellbeing Services	9490 2258
Women's Health and Family Services	6330 5400 1800 246 655 (rural free call)

Counselling services: country

South West Women's Health and Information Centre	9791 3350 1800 673 350 (free call)
Women's Health Resource Centre (Geraldton)	9964 2742 1800 196 688 (free call)
Hedland Well Women's Centre	9140 1124
South West Counselling	9754 2052
Relationships Australia	1300 364 277
Anglicare Kinway	1800 812 511 (free call)

Counselling services: country

Centrecare	Bunbury 9721 5177 Esperance 9083 2600 Goldfields 9080 0333
Goldfields Women's Health Care Centre	9021 8266
Drought Assistance Hotline	13 23 16

Crisis/emergency

Crisis Care (24hr)	9223 1111 1800 199 008 (free call)
Kids Helpline (24hr)	1800 551 800 (free call)
Lifeline (24hr)	13 11 14
Mental Health Emergency Response Line-	Metro 1300 555 788 Peel 1800 676 822
Rurallink (local mental health clinic)	1800 552 002 (after hours, rural and remote)
The Samaritans	9381 5555 1800 198 313 (rural free call)

Crisis/emergency (cont.)

St Vincent De Paul Society	9475 5400 1300 794 054
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Cultural resources

ASeTTS (Association for Services to Torture and Trauma Survivors)	9227 2700
Australian Asian Association	9328 6202
Centrecare Migrant Services	9451 1100
Ethnic Disability Advocacy Centre	9388 7455 1800 659 921 (free call)
Ishar Multicultural Women's Health Centre	9345 5335
Migrant and Refugee Services (Mental Health Access Service, Accommodation)	East Perth 9221 7849 Fremantle 9336 8282 Mirrabooka 9207 1527 Rockingham 9528 4208

Cultural resources (cont.)

Multicultural Services Centre 9328 2699

Multicultural Women's Advocacy Service

Fremantle 9336 8282

Gosnells 9490 4988

Mirrabooka 9344 8988

Northbridge 9227 8122

Rockingham 0430 515 261

Muslim Women's Support Centre 9451 5696

Transcultural Mental Health Centre
9224 1760

Disabilities

ACROD 9242 5544

Emmanuel Centre 9328 8113
TTY 9328 9571

People Who Care 9379 1944
Mandurah 9535 3433
Warwick 9447 0810

People with Disabilities WA 9485 8900
1800 193 331 (rural free call)
TTY 9386 6451

Domestic violence

Crisis Care (24hr) 9223 1111
1800 199 008 (free call)

Domestic Violence Advocacy and Support Central 9226 2370

Family Helpline (24hr) 9223 1100
1800 643 000 (free call)

Men's Domestic Violence Helpline (24hr)
9223 1199, 1800 000 599 (free call)

Women's Council for Domestic and Family Violence Services 9420 7264

Women's Domestic Violence Helpline (24hr)
9223 1188, 1800 007 339 (rural free call)

Family services/resources

Australian Breastfeeding Association
9340 1844, 1800 686 268 (free call)

CLAN WA 9228 9006

Family Helpline (24hr) 9223 1100
1800 643 000 (free call)

Perth and Districts Multiple Birth Association
9340 1536

Family services/resources (cont)

Ngala	9368 9368, 1800 111 546 (rural freecall)
Parenting WA (24hr)	6279 1200 1800 654 432 (free call)
Red Cross Family Support Service	9225 8888 1800 810 710 (free call)
RUAH Community Services	9485 3939
SIDS and Kids WA	9474 3544 1800 199 466 (rural free call)
Wanslea Family Support Service	9245 2441
Playgroup WA	1800 171 882 (free call)
From the Heart WA – Supporting Perinatal Mental Health	9340 1622
Meerilinga Parent Link	Fremantle 9331 5655 Midland 9377 6724
Pregnancy, Birth and Baby Helpline	1800 882 436
St John of God Health Care Raphael Centre	1300 306 828

Father's resources

Dads WA - Ngala	9368 9379, 1800 111 546 (rural free call)
	www.wnhs.health.wa.gov.au/ emotionalhealth.php www.thefatheringproject.org
Mensline (24hr)	1300 78 99 78
Meerilinga – Dads in the Early Years	9309 2377
Financial	
Uniting Care West CreditCare	9220 1288
Health	
Health Direct (24hr health advice)	1800 022 222
Women's Information Service WA	6217 8230 1800 199 174 (free call)
Women and Newborn Health Library	9340 1100

Legal resources/services

Citizens Advice Bureau	9221 5711
Legal Aid – Child Support Legal Unit	1300 650 579
Mental Health Law Centre	9328 8266 1800 620 285 (free call)
Gosnells Community Legal Centre	9398 1455

Parenting/infant websites

www.breastfeeding.asn.au
www.chw.edu.au/parents//factsheets
www.raisingchildren.net.au
www.reflux.org
www.ngala.com.au
www.whatwerewethinking.org.au
www.aaimhi.org
[www.caahs.health.wa.gov.au/general/
contact_cach.php](http://www.caahs.health.wa.gov.au/general/contact_cach.php)
www.health.wa.gov.au/havingababy

Emotional health websites

www.beyondblue.org.au
www.wnhs.health.wa.gov.au/
emotionalhealth.php
www.fromtheheartwa.org.au
www.panda.org.au
www.mothersmatter.co.nz
www.actbelongcommit.org.au
www.mentalhealth.wa.gov.au
www.ruahmentalhealth.com.au

Sexual assault/abuse

Crisis Care (24hr) 9223 1111
1800 199 008 (free call)

Sexual Assault Resource Centre
Emergency (24hr) 9340 1828
1800 199 888 (free call)
(Sarc Goldfields) 1800 688 922 (free call)

Acacia Sexual Assault Referral Service
(South Hedland) (24hr) 9172 5022
1800 746 487

Sexual assault/abuse (cont.)

Allambee Counselling Inc. (Mandurah)
9535 8263

SARC Goldfields 9091 1922, 1800 688 922
(free call)

Waratah Support Centre (Bunbury)
9791 2884, 1800 017 303 (free call)

Chrysalis Support Services (Geraldton)
9938 0750, 1800 016 789 (free call)

Women's Refuge (Geraldton) 9964 2173

Useful phone numbers/websites

Ambulance/Fire/Police 000
(from mobiles, 000 or 112)

Department of Sport and Recreation
9492 9700

Directory Assistance 1223 (free)
12456 (charges apply)

Health Direct (Registered Nurses)
1800 022 222

Royal Flying Doctor Service (24hr)
1800 625 800

Useful phone numbers/websites

King Edward Memorial Hospital for Women
9340 2222

Mental Health Emergency Response Line
9224 8888, 1300 555 788 (metro area)
1800 676 822 (Peel area)

Poisons Information Centre (24hr) 13 11 26

Police (24hr non-emergency) 13 14 44

Princess Margaret Hospital for Children
9340 8222

Rurallink (local mental health clinic)
1800 552 002 (after hours, rural and remote)

Translating and Interpreting Service (TIS)
(24hr) 13 14 50

Transperth Infoline 13 62 13

Carers Australia www.carersaustralia.com.au

Children of Parents with a Mental Illness
www.copmi.net.au

**Association of Relatives and Friends
of the Mentally Ill** www.arafmi.asn.au

Pregnancy, Birth and Baby Helpline
1800 882 436

Women's resources

FPWA (formerly Family Planning)	9227 6177
Sexual Health Helpline	9227 6178 1800 198 205 (rural free call)
Women's Information Service WA	6217 8230, 1800 199 174 (free call)
Women's Health and Family Services	6330 5400, 1800 998 399 (rural free call)
Community Midwifery WA	9430 6882
Obstetric Drug Information Service	9340 2723
Fremantle Women's Health Centre	9431 0500
Goldfields Women's Health Centre	9021 8266
Women's Health and Wellbeing Service	9490 2258
Hedland Well Women's Centre	9140 1124
Ishar Multicultural Women's Health Centre	9345 5335

Women's resources (cont.)

Mother and Baby Unit	1800 422 588 (free call)
Midland Women's Health Care Place	9250 2221
Nintirri Neighbourhood Centre (Tom Price)	9188 1224
South Coastal Women's Health Services (Rockingham)	9550 0900
South West Women's Health and Information Centre	9791 3350, 1800 673 350 (free call)
Women's Health Resource Centre (Geraldton)	9964 2742 1800 196 688 (free call)
Women's Healthworks – Health, Education and Resource Centre (Joondalup)	9300 1566

This document can be made available in alternative formats on request for a person with a disability.

Youth

Centrelink:	
Family Assistance Youth and Students	13 61 50 13 24 90
Samaritans Youthline (24hr)	9388 2500, 1800 198 313 (rural free call)
Youth Focus	6266 4333
Youthlink	9227 4300, 1800 803 356 (free call)
Adolescent Clinic, KEMH	9340 1379 (ask for an adolescent clinic midwife)
Kids Helpline (24hr)	1800 551 800 (free call)
Youth Reach South (Success)	9499 4274
YPAVE (Young Parenting and Very Excited)	0412 181 926



Australian Government
Department of Health and Ageing

Produced by the WA Perinatal Mental Health Unit
Women and Newborn Health Service.
Funded by Department of Health and Ageing.