



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:

The Spina Bifida Association of WA (Inc)

The Niche Suite B
11 Aberdare Road, NEDLANDS WA 6009

Tel: (08) 9346 7520

Email: info@sbawa.asn.au

Web: www.sbawa.asn.au

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

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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 0.5 mg 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.