

FACT SHEET

Microcephaly

What is Microcephaly?

Microcephaly is a medical condition in which the circumference of the head is smaller than normal because the brain has not developed properly or has stopped growing. Microcephaly can be present at birth or it may develop in the first few years of life. It is most often caused by genetic abnormalities that interfere with the growth of the cerebral cortex during the early months of fetal development. It is associated with Down Syndrome, chromosomal syndromes, and neurometabolic syndromes. Babies may also be born with Microcephaly if, during pregnancy, their mother abused drugs or alcohol, became infected with a cytomegalovirus, rubella (German measles), or varicella (chicken pox) virus, was exposed to certain toxic chemicals, or had untreated phenylketonuria (PKU). Babies born with Microcephaly will have a smaller than normal head that will fail to grow as they progress through infancy.

How is it manifested?

- baby's head is very small
- high-pitched cry
- poor feeding
- seizures
- increased movement of the arms and legs (spasticity)
- developmental delays

Who is affected?

In the general population, Microcephaly due to genetic factors occurs in 1 in 30,000 to 50,000 live births, and in 1 per 10,000 births due to other causes. In some populations, frequency may be as high as 1 in 2,000 births.

How is it diagnosed or detected?

Microcephaly may be diagnosed before birth by prenatal ultrasound (a diagnostic imaging technique which uses high-frequency sound waves and a computer to create images of blood vessels, tissues, and organs). Ultrasounds are used to view internal organs as they function, and to assess blood flow through various vessels.

Diagnostic tests that may be performed to confirm the diagnosis of Microcephaly and identify abnormalities in the brain include:

- Head circumference - this measurement is compared with a scale for normal growth and size.
- X-ray - a diagnostic test which uses invisible electromagnetic energy beams to produce images of internal tissues, bones, and organs onto film.
- Computed Tomography Scan (CT or a CAT scan) - a diagnostic imaging procedure that uses a combination of X-rays and computer technology to produce cross-sectional images (often called "slices"), both horizontally and vertically, of the body. A CT scan shows detailed images of any part of the body, including bones, muscles, fat, and organs. CT scans are more detailed than general X-rays.
- Magnetic Resonance Imaging (MRI) - a diagnostic procedure that uses a combination of large magnets, radiofrequencies, and a computer to produce detailed images of organs and structures within the body.
- Blood tests
- Urine tests

Microcephaly, continued

Additional Resources:

MICROCEPHALY SUPPORT GROUP

– www.microcephaly.org.uk

This is a small parent support group re-established in 2002. The group offers support and information by letter, telephone and email. It publishes a quarterly newsletter 'Connections' and is in touch with approximately 150 families.

THE ARC OF THE UNITED STATES

– www.thearc.org

The Arc is the national organization of and for people with developmental disabilities and their families. It is devoted to promoting and improving supports and services, and fosters research and education.

The content contained in this document is for general information purposes. It is not the intention to diagnose or treat a child.