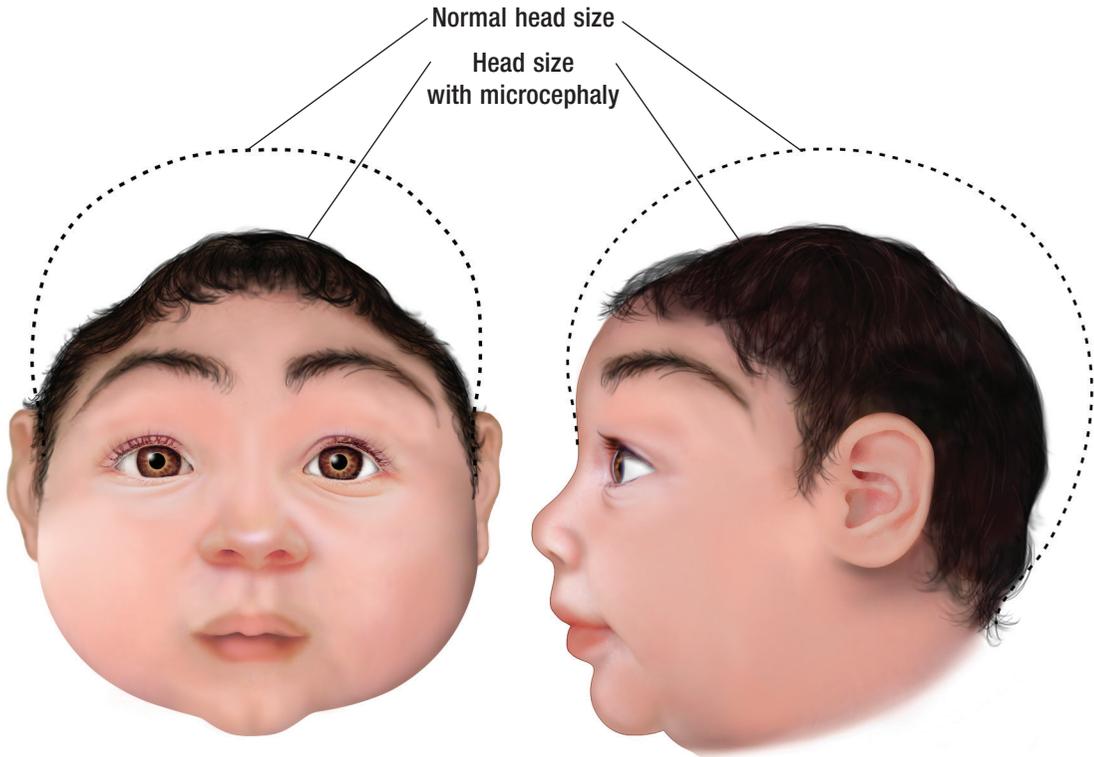


# Microcephaly



## Symptoms of Microcephaly

- Backward-sloping forehead
- Small head circumference
- Hearing or vision problems
- Seizures
- Coordination difficulties
- Speech and movement delays
- Short stature or dwarfism
- Underweight

## Abnormally Small Head

*Microcephaly is a rare condition in which an infant is born with a smaller-than-normal head circumference owing to a defect in brain development. This condition can be mild, with little effect on a child's appearance or development. In severe cases, however, it can lead to learning disabilities, cerebral palsy, hearing and vision problems, or seizures. Microcephaly has recently been in the spotlight because of a dramatic increase in the number of babies in South American countries being born with microcephaly, likely because their mothers were exposed to the Zika virus during pregnancy.*

## Treatment Focuses on Developmental Problems That Can Be Improved

Microcephaly occurs in approximately 2 to 12 of every 10,000 babies born in the United States. Scientists have positively connected the dramatic increase in microcephaly cases around the globe to the Zika virus.

### Zika Virus and Other Causes of Microcephaly

There are many reasons for the occurrence of microcephaly in an infant. If a pregnant woman is exposed to a toxin, alcohol, or cigarette smoke, her baby has an increased risk of abnormal brain development. The risk is also higher in children who are severely malnourished or have an inherited gene for microcephaly. Another risk factor is the pregnant woman's exposure to certain viruses or other infectious agents, including rubella virus, varicella-zoster virus, cytomegalovirus, and the organism that causes toxoplasmosis. Recently, another virus—Zika—was identified as causing microcephaly upon prenatal exposure.

The Zika virus, which is found in tropical climates such as Africa, Southeast Asia, the Pacific Islands, and South America, is spread by a type of mosquito that is also found in parts of the U.S. People infected with the Zika virus have traveled to or returned to the U.S. while still contagious. The virus can be transmitted to a mosquito when the insect bites an infected person; in turn, the mosquito can spread the virus by biting a healthy person. It is likely that the virus is also spread from human to human through sexual contact. The Zika virus may remain in the blood for only a week, but it remains in the semen for much longer. The use of condoms is recommended if a male partner has recently been infected with the Zika virus. Pregnant women should avoid traveling to areas where the virus is actively spreading.

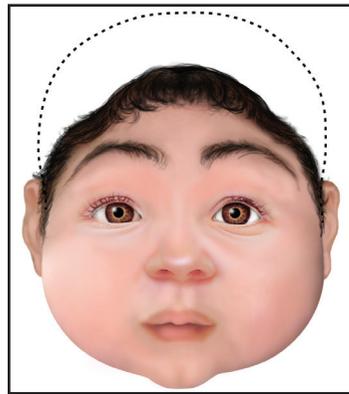
### Abnormal Brain Development

Microcephaly may be present at birth or may occur during infancy or early childhood. The most serious damage to brain development likely takes place when an infection is present during the first trimester of pregnancy, an important time for brain growth. As a result of poor brain development, the child's head circumference (measured around the top of the head) is much smaller than normal. Depending on the severity of the brain abnormality, the child may be underweight or experience seizures or spastic movements. Normal childhood development (sitting up, standing, walking, and speaking) may be slow or abnormal, and problems with vision or hearing can develop. The child's stature may be abnormally short.

### Diagnosis and Treatment

A diagnosis of microcephaly may be made when an ultrasound shows a smaller-than-normal fetal head circumference in the 6th or 7th month of pregnancy. Diagnosis also may be made when a newborn is measured (within 24 hours of birth). During infancy and early childhood, the head circumference is checked at regular intervals and the measurement is compared with growth standards.

There is no procedure or treatment that will change the shape or size of the head in a child with microcephaly. The goal of treatment is to optimize the child's physical and intellectual development by focusing on specific problems that can be corrected or improved. Often, this means support in the form of physical therapy, speech therapy, hearing and vision correction, special education in school, and similar care. If medical problems such as epilepsy develop, drug therapy is appropriate for seizure control.



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*If microcephaly is mild, the effects on the child's development are few; in severe cases, however, the condition can result in learning difficulties, cerebral palsy, and other problems.*