Zika’s Effects on the Developing Brain

Infants exposed to Zika in the womb can be born with a small head, a condition called microcephaly. But a small head is only the most visible result. Researchers are finding that Zika also can affect the structure and function of a baby’s brain, regardless of head size.

- **Healthy brain**
- **Microcephaly**: Zika disrupts cells in the developing brain so that the brain and head do not reach full size.
- **Brain calcifications**: Calcium builds up in brain tissue and interferes with brain function.
- **Enlarged ventricles**: Spaces inside the brain, called ventricles, are too big, leading to fluid buildup (hydrocephalus) and pressure.

Other Zika-associated brain abnormalities include a smooth brain with no or few folds (lissencephaly), the collapse of the skull (fetal brain disruption sequence), an asymmetrical brain, and the absence of some normal brain structures.

The long-term consequences of exposure to Zika in the womb are still unclear. Based on what is known about fetal exposure to Zika and other infections, problems may include:

- Hearing problems
- Vision problems
- Balance issues
- Developmental and learning delays
- Problems swallowing
- Seizures
- Stiffness and impaired movement
- Low birth weight
- Behavioral issues

NICHD investigates development throughout the entire life process, including fetal development and early childhood.

Studying Zika and its effects will help us care for children—both now and as they grow—so they can reach their potential for healthy lives. Learn more about NICHD-supported research on Zika virus at [www.nichd.nih.gov/zikaresearch](http://www.nichd.nih.gov/zikaresearch).