

Zika spotlights rare birth defect with a variety of causes

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In this Jan. 30, 2016 file photo, Jose Wesley, who was born with microcephaly and screams uncontrollably for long stretches, is attended to in Bonito, Pernambuco state, Brazil. The Zika virus is drawing worldwide attention to a devastating birth defect that until now has gotten little public notice. Regardless of whether the mosquito-borne virus really causes babies to be born with abnormally small heads, a variety of other conditions can trigger it. (AP Photo/Felipe Dana, File)

The Zika virus is putting a spotlight on a potentially devastating birth

defect that until now has gotten little public attention.

Regardless of whether the mosquito-borne virus really causes babies to be born with abnormally small heads, a variety of other conditions trigger microcephaly. And, frustratingly, often there's little way to predict what this condition will mean for children's lives. Occasionally, babies just have smaller heads and otherwise are normal. When it is a true [birth defect](#), some have mild disabilities and others are severely disabled.

"It's important for people to be aware of it, but also to be aware that there's a full spectrum of function that occurs among people with microcephaly," said Dr. Edward McCabe of the March of Dimes.

Here are some things to know about microcephaly.

WHAT IS MICROCEPHALY?

The word simply means a small head, much smaller than is normal for a baby that size, age and gender. It often indicates that the baby's brain didn't develop properly during pregnancy or actually stopped growing. And it sometimes occurs after birth, when either the skull or the brain doesn't continue to grow properly.

How small is too small? That depends. There's a range of normal, and doctors use growth charts to tell when babies have fallen enough below average to signal concern.

About 10 percent to 15 percent of babies whose head measurements indicate microcephaly don't have a birth defect but are just small, something that requires testing to help determine underlying causes, McCabe said.

WHAT CAUSES IT?

The list is long: Genetic defects; chromosomal abnormalities such as Down syndrome; too little oxygen reaching the fetal brain.

Infections that spread to the fetus during pregnancy can lead to microcephaly, including toxoplasmosis, cytomegalovirus and rubella. Other causes include use of alcohol or drugs during pregnancy. And after birth, sometimes the joints in a baby's skull fuse too early, one of the few times doctors can intervene, through surgery.

WHAT'S THE IMPACT?

"It can be very serious, it can require long-term care," said Dr. Anthony Costello, the World Health Organization's director of maternal, child and adolescent health. But, he added, "there are occasional reports of people with confirmed microcephaly who actually have normal development, so we also have to be a little bit careful about what the functional outcomes for children will be."

Consequences can include seizures, hearing loss or vision problems, intellectual disability and developmental delays with speech and motor function.

There's a range, from mild to severe problems that depend on how the brain is affected and what caused the condition. That can be difficult to predict, requiring frequent check-ups to track how the baby is developing.

HOW OFTEN DOES MICROCEPHALY OCCUR?

That's not clear, either, since microcephaly isn't closely tracked. But the Centers for Disease Control and Prevention estimates that in the U.S.,

anywhere from two to 12 babies per 10,000 live births are affected. Worldwide, the WHO puts the figures at somewhere between one in 3,000 and one in 5,000.

THE LINK WITH ZIKA VIRUS

The Zika virus, first discovered decades ago in Africa, was long thought to be mostly a nuisance illness, with mild symptoms such as fever and a rash. A particular species of mosquito is now spreading Zika rapidly through Latin America, where Brazil has reported a surge in suspected cases of microcephaly.

That's circumstantial evidence, and Brazil is trying to sort out just how many babies have microcephaly and how many of their mothers had Zika during pregnancy, itself hard to diagnose. But, the CDC did find evidence of Zika virus in the brains of two Brazilian newborns who died and the placentas from two women who miscarried. That prompted calls for pregnant women to avoid travel to areas where Zika is spreading.

HOW MIGHT A LINK BE PROVEN?

First, better tests to diagnose Zika itself will be important. Then, more testing of possibly affected babies. Another key is what's called a case-control study, where scientists closely compare different groups of people to tell if there's a higher rate of microcephaly in those who had Zika than those who didn't. U.S. officials are working with Brazil to do such a study.

WHAT IF A WOMAN'S PREGNANT?

Ultrasound scans, routine in the U.S. but harder to come by in parts of the world, sometimes can detect microcephaly before birth. One study, published in 2000, found it was diagnosed by ultrasound on average at

28 weeks.

In the U.S., the American College of Obstetricians and Gynecologists is recommending repeat ultrasounds, every three to four weeks, if there's concern that a pregnant woman may have been infected by Zika while traveling abroad.

Doctors would compare the scans to see if the head is growing within the normal range, as well as looking at the slope of the forehead. If an ultrasound spots something suspicious, ACOG says doctors may consider amniocentesis to look for Zika virus in the amniotic fluid. But that test isn't recommended as a starting point. It is not risk-free, and it's not clear what finding Zika in the fluid means for risk to the pregnancy.

More information: Examples of growth charts:
www.cdc.gov/growthcharts/

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