Chickenpox in Pregnancy

Chickenpox is a childhood illness that can pose risks to the fetus if a mother contracts it during pregnancy.

More than 90 percent of pregnant women are immune to chickenpox because they either had chickenpox before pregnancy or were vaccinated as children (1, 2). Women who are immune to chickenpox cannot become infected and do not need to be concerned about it during pregnancy.

However, many women do not know whether they had chickenpox in the past. Pregnant women should discuss this illness with their health care provider during their first prenatal visit.

**What is chickenpox?**
Chickenpox (varicella) is a usually mild viral infection, characterized by an itchy, blistering rash and fever. Symptoms typically appear 14 to 16 days after exposure. Although serious complications are uncommon in children, about 15 percent of infected adults develop a dangerous form of pneumonia (3).

Chickenpox is spread through the air from an infected person’s cough or sneeze and by direct contact with an infected individual’s rash. An infected person can pass on chickenpox from one to two days before the rash develops until the rash stops spreading and is covered by dry scabs (generally about five days after the onset of the rash).

The closer the contact of a susceptible pregnant woman with an infected person, the greater her chances of contracting chickenpox. If the source is a household member, there is a 90 percent chance of contracting chickenpox (3). If the source is an infected person outside her home, the risk is lower. In the case of any exposure to chickenpox, a woman should consult her health care provider right away. A pregnant woman also can contract chickenpox through contact with a person with shingles, which is caused by the same virus.

**How is chickenpox diagnosed?**
Chickenpox is usually diagnosed by physical examination, although sometimes there may be a need to confirm it with a laboratory test.

**How common is chickenpox during pregnancy?**
Currently, about 1 in 2,000 pregnant women in the United States contract the illness (3, 4). However, as immunization against chickenpox becomes universal, this frequency should become even lower.

**What risks does chickenpox pose for the fetus?**
Chickenpox in pregnancy can cause congenital varicella syndrome, a group of birth defects that can include:

- Scars
- Defects of muscle and bone
- Malformed and paralyzed limbs
- A smaller-than-normal head
- Blindness
- Seizures
- Mental retardation

This syndrome affects only about 1 to 2 percent of babies whose mothers were infected with chickenpox during the first 20 weeks (first half) of pregnancy (2).

Birth defects are very rare when infection occurs after 20 weeks, but defects involving the central nervous system occasionally occur following maternal infection in the third trimester (1). An ultrasound examination can detect some chickenpox-related birth defects before birth.

**What risks does chickenpox pose for the newborn?**
When the mother develops a chickenpox rash between five days before delivery and two days after delivery, between 25 and 50 percent of newborns become infected (3). They develop a rash between 5 and 10 days after birth. This is a very serious, even fatal, form of the disease. It requires immediate treatment consisting of an injection of varicella-zoster immune globulin that neutralizes the virus. This treatment reduces the infection to a mild form.

The only version of this product currently available in the United States is an investigational new drug (not yet approved by the Food and Drug Administration) manufactured in Canada called VariZIG. Doctors and pharmacists can obtain VariZIG by calling FFF Enterprises at (800) 843-7477. If VariZIG is not available in time, doctors can treat infected babies with immune globulin, which contains a variety of disease-fighting antibodies, including varicella antibodies (5).

If serious symptoms develop in spite of treatment, antiviral drugs (such as acyclovir) can help.

If the mother develops the rash 6-21 days before delivery, the baby faces some risk of infection, but if chickenpox does develop, it tends to be mild.

How can chickenpox be prevented in susceptible (not immune) pregnant women and their babies?
A pregnant woman can have a blood test to find out if she's immune to chickenpox. A woman who is planning pregnancy should be tested; if she is not immune, she should be vaccinated. Although no case of congenital varicella caused by vaccination has been reported, women should postpone pregnancy for one month after vaccination. Women who are already pregnant should not be vaccinated.

Pregnant women who are exposed to someone with chickenpox, and whose blood test shows they are susceptible to the infection, should be treated with VariZIG within 96 hours after exposure (2, 5). This can prevent the illness or lessen its severity. If VarZIG is not available, providers can use immune globulin. It is not yet known whether giving varicella-zoster immune globulin to a pregnant woman helps to protect the fetus from infection (2).

How is chickenpox treated during pregnancy?
When a pregnant woman comes down with chickenpox, she can be treated with the oral antiviral drug acyclovir to help ease symptoms (3, 4). Studies suggest that this drug is safe during pregnancy (3). If a pregnant woman develops any symptoms of pneumonia, she needs to be hospitalized and treated intravenously (through a vein) with a higher dose of acyclovir.

How can a pregnant woman who is susceptible to chickenpox avoid exposure?
Pregnant women who are not immune to chickenpox should avoid contact with anyone with chickenpox or shingles. These women should be vaccinated after delivery (2).

Can a pregnant woman catch chickenpox from a recently vaccinated child?
It is very rare for a vaccinated child to pass the virus on to others, but it does happen (2). Vaccinated children can pass the virus on to others only if they develop sores (which may occasionally occur around the injection site). A pregnant woman generally should have any susceptible children vaccinated at the recommended ages (12 to 15 months and 4 to 6 years), even if she knows she is susceptible (2, 6). This could help protect the pregnant woman from chickenpox because her risk of catching the infection from a vaccinated child is far less than the risk of contracting the infection from her unvaccinated child (6).

Can shingles harm the fetus?
Shingles (herpes zoster) is caused by a limited reactivation of the chickenpox virus, usually years after the infection. It causes painful, localized clusters of blisters. Shingles is rare in pregnancy and does not appear to cause birth defects (4).

For more information
Read the fact sheet provided by the Organization of Teratology Information Specialists (OTIS).

References


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