



## A CUP OF HEALTH WITH CDC

### *Healthy Little Hearts*

National Birth Defects Prevention Month — January 2012

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*[Announcer] This program is presented by the Centers for Disease Control and Prevention.*

[Dr. Gaynes] Welcome to *A Cup of Health with CDC*, a weekly feature of the *MMWR*, the Morbidity and Mortality Weekly Report. I'm your host, Dr. Robert Gaynes.

Each year in the United States, nearly 40,000 infants are born with a heart defect. Advances in the treatment of heart defects have improved the chances of living a longer, healthier life, however, many of these conditions can be prevented with some simple precautions during pregnancy.

Dr. Stuart Shapira is a researcher and pediatrician with CDC's National Center on Birth Defects and Developmental Disabilities. He's joining us today to discuss ways to prevent heart defects in newborns. Welcome to the show, Stuart.

[Dr. Shapira] Thank you, Bob. It's a real pleasure to be here.

[Dr. Gaynes] Stuart, what exactly are heart defects?

[Dr. Shapira] Heart defects are problems with the structure of the heart. And these structure problems lead to problems with function – how the heart works. These structure problems occur during the pregnancy so they're there before the baby is even born. Now you mentioned a minute ago that 40,000 babies are born every year with heart defects and this means approximately one out of 100 babies has a heart defect, therefore heart defects are the most common types of birth defects.

[Dr. Gaynes] What causes these conditions?

[Dr. Shapira] Actually, the cause of most heart defects is unknown. Some are caused by changes in genes or chromosomes. For example, children with Down syndrome can be born with a heart defect and Down syndrome is a genetic condition in which children have extra genetic material known as chromosome number 21 in every cell of their body, and it's thought that this extra genetic material causes the infant's heart not to develop normally during the pregnancy. Although we don't know the specific cause in most children, we do know that some women have a higher chance to have a baby with a heart defect. Specifically, women who are obese, women who smoke, or women who have diabetes that is not well controlled during their pregnancy.

[Dr. Gaynes] How are heart defects treated?

[Dr. Shapira] Infants and children generally require surgery for heart defects, and they may need to take certain medications to help their hearts work better. Children with more severe heart

defects generally require more than one surgery, sometimes numerous surgeries, and some children may even need heart transplants in order to survive.

[Dr. Gaynes] Are newborns always checked for heart defects before they leave the hospital?

[Dr. Shapira] All newborns should be examined by a pediatrician before leaving the hospital. Listening with a stethoscope can often provide clues as to whether or not an infant has a heart defect. Unfortunately, many newborn babies leave the hospital and go home with an undiagnosed heart defect and are not diagnosed for days or sometimes weeks, sometimes returning to the emergency room critically ill, and some may even die at home. Therefore, the Secretary for Health and Human Services approved in the fall of 2011 a recommendation that all babies are tested as newborns before leaving the hospital for the more severe types of heart defects. In other words, this is known as Universal Newborn Screening for Critical Congenital Heart Defects. States are beginning to implement this recommendation so it's not yet universal. This is a very simple test known as the pulse oximetry test. It is a simple, painless test where a device, similar to a glove, is placed over a finger or a toe of the baby and it measures the amount of oxygen in the baby's blood. This test can detect infants with the more severe types of heart defects.

[Dr. Gaynes] How can a pregnant woman improve her chances of having a healthy baby?

[Dr. Shapira] There are specific things that women can do to lower their risk to have a baby with a heart defect. Since women who are obese or women who smoke or women with poorly treated diabetes have a higher chance to have an infant with a heart defect, there are some pretty straightforward things that women can do to decrease their chances. Number one – don't smoke. Number two – if a woman is overweight, she can lose weight before she becomes pregnant and get down to a more healthy weight. And number three – if a woman has diabetes, she can get optimal treatment and work during the pregnancy to keep her blood sugar levels in the normal range. There are several other things that women can do to decrease their chances of having a baby with other birth defects. A woman can get at least 400 micrograms of the B vitamin folic acid every day from food or from multi vitamin supplements. Women should not drink alcohol if they're pregnant or planning to become pregnant. Women should not use illicit or street drugs during a pregnancy. And women should talk to their health care provider about all medications that they're taking, including prescription, over-the-counter, or non-prescription, and herbal medications. And women should talk to their health care providers about vaccines. They should make sure that they've had the right vaccines to keep both her and her baby healthy. Women should also see their health care providers throughout a pregnancy on a regular basis.

[Dr. Gaynes] Stuart, where can listeners get more information about preventing heart defects?

[Dr. Shapira] Listeners can go to [www.cdc.gov/birthdefects](http://www.cdc.gov/birthdefects), where 'birthdefects' is typed in as one word. On the website is a wealth of information on the causes of birth defects and what couples can do to improve their chance to have a healthy baby.

[Dr. Gaynes] Thanks, Stuart. I've been talking today with Dr. Stuart Shapira of CDC's National Center on Birth Defects and Developmental Disabilities about ways to prevent heart defects in newborns.

Remember, if you're considering having a baby, lose weight if you're overweight, don't smoke, and if you have diabetes, make sure it's under control before pregnancy.

Until next time, be well. This is Dr. Robert Gaynes for *A Cup of Health with CDC*.

[Announcer] For the most accurate health information, visit [www.cdc.gov](http://www.cdc.gov) or call 1-800-CDC-INFO.