

If You Are Planning A Pregnancy, Make Sure You're Vaccinated

Despite the obvious benefits of vaccines, rumors about vaccines' link to autism have led to "vaccine hesitancy"

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The Centre for Disease Control in British Columbia (BC CDC) is working to contain a measles outbreak. As of Feb. 27, 2019, there were 15 confirmed cases of measles in B.C., and that number is expected to rise.

Measles is an extremely contagious virus with a 90 per cent secondary infection rate. It is transmitted through coughing or sneezing of droplets, which can linger in the air and remain infectious for several hours.

Symptoms of a measles infection typically start seven to 10 days after exposure. A high fever ($> 40^{\circ}\text{C}$) and fatigue are followed by the "3 Cs": cough, conjunctivitis (red eyes) and coryza (upper respiratory tract inflammation).

A rash may appear in the mouth that looks like white "grains of sand" on a red base. Days later, the infamous red skin rash of a measles infection begins on the face and spreads downwards, covering the entire body including the palms of the hands and soles of the feet.

Serious complications can result from measles including ear infections and pneumonia (one in 10), brain inflammation and brain damage (one in 1000) or even death (one in 3000).

Measles, also known as rubella, is preventable with a vaccine that also confers immunity to mumps and rubella. The MMR vaccine is routinely administered to babies at 12 months and again at school entry, between four and six years

old. Infants, immunocompromised people and the unvaccinated are therefore most susceptible to catching measles, mumps or rubella.

In the case of measles, even those who have not been vaccinated *may* benefit from the vaccine if they receive it within 72 hours of exposure.

Because the MMR vaccine contains live-attenuated virus, it should not be given in pregnancy and a woman must wait four weeks post-vaccination before trying to conceive. Concerns about the MMR vaccine in pregnancy are largely theoretical however, as it has not actually been shown to cause birth defects. According to the Society of Obstetricians & Gynecologists of Canada, if a pregnant woman inadvertently receives the vaccine, it is not recommended that she terminate the pregnancy.

Despite the obvious benefits of vaccines, not everyone chooses to receive them. Over the past 20 years, rumors about vaccines and their link to autism have led to "vaccine hesitancy."

"Women who have not received the MMR vaccine are particularly vulnerable during pregnancy."

The entirely made-up connection between autism and the MMR vaccine started in 1998 when a British doctor published falsified data. Dr. Andrew Wakefield's publication was subsequently retracted by the Lancet and he was banned from practicing medicine.

Since then, numerous reliable and high-quality scientific studies have been performed to debunk the MMR-autism myth. Immunize Canada and the American Centres for Disease Control & Prevention have unequivocally stated that vaccines do not cause autism.

Women who have not received the MMR vaccine are particularly vulnerable during pregnancy. Contracting measles while pregnant can lead to an increased risk of preterm birth, miscarriage and low birthweight babies. Mumps has also been associated with an increased risk of miscarriage.

Although all three of the MMR viruses can cause pregnancy complications, rubella is by far the most devastating. If contracted in the first half of pregnancy, rubella can lead to severe birth defects including brain damage, vision loss, skin changes and heart problems.

As a fertility doctor, I recommend that all of my patients check their level of rubella antibody before trying to conceive. Getting vaccinated before pregnancy gives both mom and baby the best chance of a healthy outcome.