

The Baby Boosters

Did you know that a baby with a normal immune system could handle being given the 14 routine vaccinations all at once? It's true! Arm yourself with the facts about baby and toddler vaccinations with this quiz.

MMR vaccines can cause autism.

- a) True
- b) False
 - i. The widespread fear that vaccines increase risk of autism originated with a 1997 study published by Andrew Wakefield, a British surgeon. The article was published in The Lancet, a respected medical journal, suggesting that the measles, mumps, rubella (MMR) vaccine was increasing autism in British children. The paper has since been completely discredited due to serious procedural errors and ethical violations. The hypothesis was taken seriously anyway, and several other studies were conducted—but no links between vaccines and autism were ever found.

The average child's immune system is equipped to handle multiple vaccines at once, as scheduled.

- a) True
 - i. Infant immune systems are stronger than you might think. Based on the number of antibodies present in the blood, a baby would theoretically have the ability to respond to around 10,000 vaccines at one time. Even if all 14 scheduled vaccines were given at once, it would only use up slightly more than 0.1% of a baby's immune capacity. And scientists believe this capacity is purely theoretical. The immune system could never truly be overwhelmed because the cells in the system are constantly being replenished. In reality, babies are exposed to countless bacteria and viruses every day, and immunizations are negligible in comparison.
- b) False

Vaccines do not give your child the disease it is protecting against.

- a) True
 - i. Vaccines can cause mild symptoms resembling those of the disease they are protecting against. A common misconception is that these symptoms signal infection. In fact, in the small percentage (less than 1 in one million cases) where symptoms do occur, the vaccine recipients are experiencing a body's immune response to the vaccine, not the disease itself. There is only one recorded instance in which a vaccine was shown to cause disease. This was the oral polio vaccine (OPV) which is no longer used in the U.S. Since then, vaccines have been in safe use for decades and follow strict Food and Drug Administration (FDA) regulations.
- b) False

There is no need to vaccinate my child because of the low U.S. infection rates of today.

- a) True
- b) False
 - i. Thanks to herd immunity, so long as a large majority of people are immunized in any population, even the unimmunized minority will be protected. But if too many people don't vaccinate themselves or their children, they contribute to a collective danger, opening up opportunities for viruses and bacteria to establish themselves and spread. Even if a disease is not a threat in your country, it may be common elsewhere. If someone were to carry a disease in from abroad, an unvaccinated individual will be at far greater risk of getting sick if he or she is exposed.

Better hygiene and sanitation is more effective at preventing diseases than vaccinations.

- a) True
- b) False
 - i. Vaccines don't deserve all the credit for reducing or eliminating rates of infectious disease. Better sanitation, nutrition, and the development of antibiotics helped a lot too. But when these factors are isolated and rates of infectious disease are scrutinized, the role of vaccines cannot be denied.

Natural immunity from getting a disease is better for you than getting vaccinated.

- a) True
- b) False
 - i. In some cases, natural immunity — meaning actually catching a disease and getting sick — results in a stronger immunity to the disease than a vaccination. However, the dangers of this approach far outweigh the relative benefits. If you wanted to gain immunity to measles, for example, by contracting the disease, you would face a 1 in 500 chance of death from your symptoms. In contrast, the number of people who have had severe allergic reactions from an MMR vaccine is less than 1 in 1 million.

Most of the recommended childhood immunizations are 90-99% effective.

- a) True
 - i. Vaccines work. They have kept children healthy and have saved millions of lives for decades. Most childhood vaccines are 90 to 99% effective in preventing disease. And if a vaccinated child does get the disease, the symptoms are usually less serious than in a child who did not get the vaccine and got sick from the disease. Your child may have mild side effects after a shot, like swelling where the shot was given. These side effects don't last long though, and it is rare for side effects to be serious.
- b) False

Pregnant women are more at risk for severe illnesses, making it very important for them to get vaccinated.

- a) True

- i. Research shows that for many weeks of pregnancy, pregnant women are more vulnerable to bacterial infection because the immune system changes to make room for the baby and protect it. And while your baby is being protected, you become vulnerable to various infections: bacterial, viral and parasitic.
- b) False

COVID-19 infection affects women's fertility more than men's.

- a) True
- b) False
 - i. COVID-19 vaccinations won't affect a couple's chances of conceiving a child, but an infection of SARS-Cov-2 (COVID-19) can temporarily diminish male fertility, an NIH-funded study found.

Children and teens do not need to be vaccinated for diseases like measles, mumps or chickenpox, because the modern day infection rate is negligible.

- a) True
- b) False
 - i. These diseases still exist, even if they are rare. Thanks to vaccine programs, all vaccine-preventable diseases have declined in the US. But when immunization rates drop, these diseases can come back. Many of the vaccine-preventable diseases that are uncommon in the US still occur in other parts of the world. With travel and immigration, there is a real risk of these diseases being brought into the US. Any child who is not vaccinated is at risk when infections are "imported."