

VACCINATED OR UNVACCINATED: WHAT YOU SHOULD KNOW

Some people ask the question, “If vaccines work, why do unvaccinated people present a risk to those who have been vaccinated?” This sheet is meant to answer that and related questions while highlighting the different considerations for families of vaccinated and unvaccinated individuals.

ALL COMMUNITIES HAVE VACCINATED AND UNVACCINATED MEMBERS

While unvaccinated people are often thought of as those who have chosen to remain that way; in fact, people can be unvaccinated for any number of reasons.

Newborns and young infants may not be old enough to receive certain vaccines, like the influenza or MMR vaccines. Also, some people have legitimate medical reasons for not getting one or more vaccines, such as an allergy to a vaccine component. Others may be immune-compromised due to medicines like steroids for asthma that cause them to be susceptible to infections. Still others might not be vaccinated because they are receiving chemotherapy for cancer or immune suppressive medicines following an organ transplant.

Also, vaccines don't work 100 percent of the time. For example, 95 of every 100 people who receive a single dose of measles vaccine will be protected, but five will not. These five vaccinated people who didn't develop an immune response to the vaccine are just as susceptible to disease as people who aren't vaccinated.

For all of these reasons, virtually every family experiences periods of time when they rely on the collective immunity of their community to protect their loved ones.

ALL MEMBERS OF THE COMMUNITY CONTRIBUTE TO ITS COLLECTIVE IMMUNITY

Just as every family relies on their community for protection of their loved ones, so too does every family contribute to the relative strength of their community's ability to stave off the spread of infection. So how does this work?

Germs (or pathogens) are like rainwater. They find the weak spots in a community the same way that rainwater finds the weak spots in a leaky roof. When a high percentage of people in a community are protected against a disease, everyone in the community, including those who have not been vaccinated, is at lower risk of being infected with a potential pathogen. This concept is commonly known as herd (or community) immunity. In this case, the roof is effectively sealed.

On the other hand, as the unvaccinated population increases, so does the opportunity for a pathogen to spread through the community. This shared environment is important to all families because studies have shown that vaccinated people in a relatively unvaccinated community are at greater risk than unvaccinated people in a highly vaccinated community. In the first case, the roof is too leaky; in the second case, it's not. Therefore, collectively, the community plays an important role in individual protection, particularly for those who are most susceptible.

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MY FAMILY MEMBER IS UNVACCINATED

While vaccination provides the best measure of protection, as discussed earlier, sometimes vaccination is not possible. Therefore, if you or a family member is unvaccinated, here are some things to consider:

Limit opportunities for exposure — Several strategies can help keep an unvaccinated family member — especially a newborn or infant — healthy by identifying and limiting opportunities for them to be exposed to potentially harmful germs. These include:

- Discourage kissing babies or susceptible relatives on the lips
- Limit exposure to those who are sick by asking how others are feeling before setting up visits
- Limit exposure to places with large groups
- Wash hands thoroughly and often, especially after using the restroom, before preparing or consuming meals, before holding a newborn or infant, and before hugging or holding hands with older relatives
- Don't share cups, utensils, pacifiers or teething toys
- Don't put the baby's hands in other people's mouths

Pay attention to news of outbreaks — Being aware of outbreaks in your community is important. Monitoring news reports and social media can alert you to outbreaks of vaccine-preventable diseases or other infections circulating in your area. When traveling, check for news of outbreaks in the areas you're visiting.

Inquire about the vaccine status of caregivers — If you have an unvaccinated family member, you can make sure those around them most — yourself, other family members, and primary caregivers — are vaccinated. This protected ring of close contacts decreases the chance for exposure to a vaccine-preventable disease.

Consider the time it takes to become immune — After vaccination, it takes time for an immune response to develop and be protective. For example, it takes approximately two weeks after vaccination against influenza to develop protective immunity. In the interim, the vaccine recipient could be exposed to the virus and become infected.

MY FAMILY MEMBER IS VACCINATED

If you or a family member is vaccinated, here are some things to consider:

Confirm whether all doses have been completed — Some vaccines require multiple doses before a vaccine recipient is considered protected. For this reason it is useful to check if additional doses of a vaccine are necessary.

Check immunization status at each healthcare visit — Because new vaccines may be developed; existing vaccines updated; or vaccine recommendations changed, it is good to be in the practice of asking if you or your family members need any vaccines at each healthcare visit. This is particularly true for adults who often think they are up-to-date or no longer need vaccines because they are adults. Given that some adults require certain vaccines as determined by their age, immune status, job or lifestyle habits, the need for vaccines may change from time to time.

Realize that immunity could wane — In some instances, immunity from a vaccine may decrease over time. This is why booster doses of the same or a similar vaccine later in life are sometimes recommended. In fact, mumps outbreaks on college campuses are probably the result of waning immunity from childhood mumps vaccine.

Keep in mind the vaccine may not have worked — While most vaccines work well, the reality is that in some cases, a person will not develop a protective immune response even after multiple doses. Because we do not typically check immune response to vaccines, we don't know who among a population of vaccinated individuals may still be susceptible during an outbreak. The good news is that often these people develop some immunity, so even if they are infected, their illness tends to be of shorter duration and less severe compared with someone who was not vaccinated.



This information is provided by the Vaccine Education Center at Children's Hospital of Philadelphia. The Center is an educational resource for parents and healthcare professionals and is composed of scientists, physicians, mothers and fathers who are devoted to the study and prevention of infectious diseases. The Vaccine Education Center is funded by endowed chairs from Children's Hospital of Philadelphia. The Center does not receive support from pharmaceutical companies. ©2017 Children's Hospital of Philadelphia, All Rights Reserved. 17018-08-17.