

INFECTIOUS DISEASES AND IMMUNE-COMPROMISED PEOPLE

WHAT YOU SHOULD KNOW

Many people in our communities are at an increased risk of getting or suffering complications from infectious diseases. For these people, understanding infectious diseases and ways to stay healthy or decrease their risk of infection is important.

WHAT DOES IT MEAN TO BE IMMUNE COMPROMISED?

When someone's immune system is not functioning properly, they are considered to be immune compromised. Because their immune system is compromised, they may be at an increased risk of severe infections caused by viruses or bacteria. Immune-compromised people are also sometimes referred to as being immune suppressed.

A person can be immune compromised permanently or during a particular situation, depending upon the cause. Examples of people who are always at increased risk include those who have syndromes that affect components of their immune system, such as B- or T-cell deficiencies; people on long-term steroid therapy, such as those with asthma or autoimmune diseases; people with chronic diseases, such as diabetes or heart disease; solid organ transplant recipients such as lung, heart or kidney transplants; bone marrow transplant recipients; individuals infected with human immunodeficiency virus (HIV); and the elderly. People who are immune compromised only for a certain period include those receiving immune-suppressing drugs and therapies, such as chemotherapy and radiation therapy for cancers, hemodialysis for long-term kidney disease, or steroids for asthma. People who are malnourished are also at greater risk of infection because their immune systems are compromised.



ARE IMMUNE-COMPROMISED PEOPLE MORE SUSCEPTIBLE TO INFECTIOUS DISEASES?

Yes. Because their immune systems are weakened or not functioning at all, immune-compromised people are more susceptible to infectious diseases. These people may also be more likely to suffer complications from infections that are normally not a problem. For example, children with cancer are two times more likely to be infected with influenza and hospitalized as a result. In addition, 1 in 10 typically requires higher level medical treatment, causing them to be moved to the intensive care unit.

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CAN IMMUNE-COMPROMISED PEOPLE RECEIVE VACCINES?

Because immune-compromising conditions result from different causes, the recommendations about vaccinations vary. Affected individuals should discuss vaccines with their healthcare provider. However, the general rule of thumb is that in most cases, immune-compromised individuals can safely receive inactivated vaccines, such as those that prevent hepatitis A, polio, hepatitis B, human papillomavirus, influenza (the shot), *Haemophilus influenzae* type b, pneumococcus, meningococcus, diphtheria, tetanus and pertussis. However, many immune-compromised individuals are not recommended to get live weakened viral vaccines, such as those for measles, mumps and rubella, influenza (nasal spray), chickenpox, rotavirus, yellow fever and typhoid (oral version). The potential risk of getting a live weakened viral vaccine is that the person's immune system may not be able to control the number of times that these weakened viruses reproduce themselves.

Another consideration related to vaccines is that even if individuals get vaccinated, the immune response that develops may be inadequate and, as a result, the vaccination may have to be repeated.

CAN HOUSEHOLD CONTACTS OF IMMUNE-COMPROMISED PEOPLE RECEIVE VACCINES?

Yes. Children in the homes of immune-compromised people can safely receive all routinely recommended vaccines. Adults in the home or in close contact with immune-compromised individuals should also be up to date on all routinely recommended vaccines, so they do not inadvertently expose the vulnerable person to vaccine-preventable diseases.

CAN CHILDREN WITH IMMUNE-COMPROMISING CONDITIONS FOLLOW THE RECOMMENDED IMMUNIZATION SCHEDULE?

Immune-compromised children can generally follow the recommended immunization schedule; however, children affected by chronic conditions, such as asthma or HIV/AIDS, may have special vaccine needs. For this reason parents of immune-compromised children should make sure their child's healthcare provider is aware of these conditions during each visit and particularly before receiving vaccines.

ARE THERE VACCINE CONSIDERATIONS FOR PEOPLE WHO KNOW THEY WILL BECOME IMMUNE COMPROMISED DUE TO MEDICAL TREATMENTS OR PROCEDURES?

Yes. People who will become immune compromised due to treatments or procedures, like chemotherapy or organ transplantation, should make sure their vaccines are up to date prior to beginning treatment. People who will be immune compromised should receive live viral vaccines at least four weeks prior to starting treatment. Likewise, they should get inactivated vaccines at least two weeks before starting treatment.

WHAT CAN BE DONE, BESIDES VACCINATING, TO PROTECT IMMUNE-COMPROMISED INDIVIDUALS?

The best way to prevent the spread of infectious diseases to an immune-compromised person is to decrease contact with people who are ill. This includes avoiding direct contact with anyone who has a fever or other symptoms of infection; making sure those around them have been vaccinated; promoting hand washing; properly washing and cooking foods; avoiding shared use of razors, toothbrushes, and drinking glasses; and avoiding contact with animals and their droppings.



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