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Influenza Prevention

The most effective way to prevent influenza (flu) is by getting a yearly influenza vaccine (ie, a flu shot or nasal spray) and using simple infection control measures such as handwashing. Antiviral medicines can also help prevent infection if you are exposed.

Influenza Vaccine

Getting the influenza vaccine is the most effective way to reduce the chance of becoming infected with the flu. People who get the influenza vaccine have a lower chance of illness and death from influenza compared with people who are not vaccinated. The flu vaccine is recommended for nearly all people six months of age and older. The vaccine is especially important for:

- Adults age 50 or older.
- People who live in nursing homes and other long-term care facilities.
- Adults and children who have chronic lung or heart conditions. This includes children with asthma.
- Adults and children with chronic diseases, such as diabetes or kidney disease.
- Adults and children with HIV infection or who have received organ or stem cell transplants.
- Children and teenagers age 6 months to 18 years who are taking long-term aspirin therapy and might be at risk for Reye syndrome.
- Women who will be pregnant during the influenza season.
- Adults and children who might transmit influenza to high-risk individuals (including people listed above). This includes health care workers, workers in nursing homes, home health workers, and people who live with a high-risk individual.

Timing: Because the influenza virus changes (or "mutates") slightly from year to year, you need a new influenza vaccine every year, before each flu season. People should get the flu vaccine soon after it has become available to get the most benefit.

Effectiveness: People who are vaccinated form antibodies (proteins), which destroy the influenza virus after the person is exposed. It generally takes about two weeks to make

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these antibodies. The vaccine usually protects 50 to 80 percent of those who are vaccinated from getting the flu. If you do get the flu after being vaccinated, your symptoms are likely to be milder and last for a shorter time compared with people who were not vaccinated.

Types of vaccine: There are different types of flu vaccine available in the United States. The best type for you depends on different factors including your age, health, and personal preference. Differences between the available vaccines include:

- Whether they are "trivalent" or "quadrivalent" – Trivalent vaccines protect against three different types of flu virus. Quadrivalent vaccines protect against four different types. Both trivalent and quadrivalent vaccines are effective.
- Whether they contain live virus - Vaccines are either inactivated, meaning that they do not contain live virus, or they contain weakened live virus.
- How they are given - The inactivated vaccine is given as a flu shot in the muscle and the weakened live virus vaccine is given as a nasal spray.

Your doctor will talk to you about which vaccine is most appropriate for your situation. Below are some general guidelines:

- The regular flu shot given into the muscle is approved for adults and children six months and older in the United States. In older adults (people ≥ 65 years of age), a high-dose version of this vaccine works a little better than the standard-dose version.
- The "recombinant hemagglutinin vaccine," also approved for use in adults, is not made using eggs and is not a live vaccine. It is more effective than the regular flu shot but it has not been compared directly with the high-dose flu shot.
- Another way of improving vaccine response is to combine it with something called an "adjuvant" to make the vaccine work better. The vaccine containing the adjuvant is approved for adults aged 65 years and older.
- The live weakened vaccine (nasal spray) is approved only for healthy children age 2 years and older and healthy adults through 49 years. The United States Centers for Disease Control and Prevention (CDC) monitors how effective this vaccine is; while it was not recommended during several past flu seasons, it was

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reintroduced as an option starting with the 2018 to 2019 flu season. Pregnant women and people who have a weakened immune system or chronic medical problems should not get the nasal spray because it contains live virus. If you live with a person with a severely weakened immune system, you should not get the nasal spray.

Individuals with Egg Allergy: If you have an egg allergy, you should still get the flu vaccine every year. People sometimes worry about this because some forms of the vaccine contain small amounts of egg protein; however, the amount present in vaccines today is so small that it does not cause an allergic reaction, even in people with severe egg allergy.

Vaccine side effects: People who get the vaccine as an injection into the muscle can have reactions at the injection site. Intramuscular injections can cause redness, swelling, and/or soreness at the site. The high-dose intramuscular vaccine is more likely to cause local reactions than the standard-dose intramuscular vaccine.

Other possible side effects of these vaccines include body aches, headache, and a low-grade fever (usually less than 100.4°F or 38°C). These problems are usually mild and go away within a day or two; they are indications that the vaccine is working and causing an immune response.

Many people are concerned about the safety of vaccines. But for most people, the risk of complications from the vaccine is much smaller than the risk of complications from being infected with the flu. While no vaccine is 100 percent safe for everyone, the flu vaccine appears to be low risk. For example:

- The flu vaccine is less likely than the flu itself to increase the risk of a nervous system disorder called Guillain-Barré syndrome.
- There is no evidence that the flu vaccine increases the risk of birth defects or miscarriage.
- Some formulations of the flu vaccine contain a preservative called thimerosal, which is derived from mercury. However, there is no convincing evidence that

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the small amount of thimerosal in this vaccine will be harmful to children, pregnant women, or adults.

- Several groups, including the Vaccine Adverse Event Report System (VAERS; <http://vaers.hhs.gov>), monitor the reports of vaccine side effects closely.

Antiviral Medicines

Antiviral medicines can help to reduce the chances of developing the flu after being exposed to someone who is infected. These medicines can also be used in certain people who are at risk for developing complications from the flu and who cannot receive the flu vaccine. The "best" medicine depends on the strain of influenza circulating in the community.

Infection Control

Infection control measures, like handwashing and covering your mouth when you cough, can help to prevent the spread of influenza.

- Frequent handwashing with soap and water can help limit the spread of influenza. You can use alcohol-based hand sanitizers when soap and water are not available. Whether you are infected with the flu or are caring for someone with the flu, you should wash your hands frequently.
- Cover your mouth and nose while coughing or sneezing, and throw away dirty tissues immediately. Sneezing/coughing into the sleeve of your clothing (at the inner elbow) is another means of containing sprays of saliva and secretions and will not contaminate your hands.
- Avoid touching your eyes, nose, and mouth since germs spread this way.
- Avoid close contact with sick people.
- If you are sick with a flu-like illness, you should stay home for at least 24 hours after your fever is gone, except to get medical care or for other necessities. Do not return to work or school until you have been fever-free for 24 hours without the use of a fever-reducing medicine.
- While you are sick, limit contact with others as much as possible to keep from infecting them.