# Cdc flu vaccine info sheet

During the 2019-20 flu season alone, more than 162 million doses of influenza vaccine will be produced in the United States. The influenza vaccine can only be widely distributed for a certain number of months, but creating it is a year-round process. These vaccines are the result of months of careful research and planning for the production of the most effective vaccine possible. This is the process from start to finish. Influenza vaccines are designed months in advanceThe vaccines begin with viral strains. There are more than 100 national influenza centers in more than 100 countries continuously collecting and analyzing strains of influenza viruses to determine which centers will be included in the next vaccine. The director of five World Health Organization collaboration centers then reviewed the data and selected the candidate vaccine virus (CVV) that would make up the vaccine that year. This assessment occurs twice a year. Once in February - to pick up the flu vaccine for the northern hemisphere's upcoming flu season - and again in September - to pick up the vaccine for the southern hemisphere's flu season. The influenza vaccine contains several strains of the virusThe CVV is mainly grown and grown in fertilized chicken eggs or cultured cells without eggs. No matter during the year, the flu vaccine is designed to protect against 3-4 influenza viruses in circulation. That's because there are many different types of flu caused by different strains of the virus. The most common are influenza types A and B, which is why each year the influenza vaccine contains strains of the virus of both type A and B. For example, the vaccine for the 2019-20 influenza season in the United States contains strains H1N1 and H3N2 - both of which cause type A influenza - and two strains of influenza type B, called B/Victoria and B/Yamagata.Catch all the different viruses that coexist in one place where hen eggs and cell cultures are located. Each strain of the virus is injected into the egg or added to cell culture. Then the virus is given a few days to replicate and develop, as if they were inside a person. Meanwhile, eggs and cultures are processed under disinfestation conditions. For example, egg yolks are vaccinated against the virus under ultraviolet light and in an area without dust and other contaminants. After a few days, eggs and cultures are partnering with the influenza virus, which means it's time to extract them. After extraction, these viruses are then killed or weakened for vaccines, at which point a small amount of stabilized substances and preservatives are added to prevent contamination and keep the vaccine stable after production. Once stabilizeants and preserves are added, the vaccines are tested for quality and sterilization before fda final approval for shipping for delivery. A new influenza vaccine For the 2019-20 flu season, the majority of the vaccine will be made from eggs, likely in one of two well-known U.S. influenza vaccine manufacturers: Sanofi Pasteur, which has a manufacturing plant in Swiftwater, Pennsylvania, and Seqirus, with a plant in Holly Springs, North The health care community is sluggish, but certainly, promoting vaccines without eggs, without pus and without mercury. That is why cell cultures and another method, called re-combining, have become more common in recent years as an alternative to making flu vaccines for people with egg allergies. After a flu season that hit hard in Australia and the United States, scientists are trying to see what lessons can be applied to vaccines for next winter. Sharing on PinterestAfter a bad flu season in the Southern Hemisphere last fall, many in the health care community in the United States braced themselves. Many of us predicted that we would have a flu season that was at the serious end of the spectrum. It certainly has and certainly continues to be, Dr. William Schaffner, an infectious disease expert at Vanderbilt University Medical Center in Tennessee, told Healthline. But even with knowledge of Australia's flu season, the flu still hits hard in the United States. Most of us have braced for an attack, but it's still a siege even if you know it's coming, Stephen Morse, Ph.M., a professor of epidemiology and a flu expert at Columbia University in New York, told Healthline. Experts say this year's flu season may have peaked, or at least plateaued. The U.S. Food and Drug Administration (FDA) has begun work on the vaccine next year. Preliminary reports on the effectiveness of this year's vaccine show that there is a 25 percent effectiveness against the H3N2 strain. For people aged 65 and over, the vaccine is only 17% effective. In older children and adults under 65 years of age, the effect is even lower. In a statement, FDA Commissioner Dr. Scott Gottlieb said efforts are underway to see what can be done to improve the effectiveness of future vaccines. We are trying to better understand why we saw the reduced effectiveness of this year's flu vaccine against a strain of influenza A, called H3N2. It is this strain that has caused many flu-related diseases this flu season, he said. Schaffner said there are clear lessons to be learned from this year's flu season. The most important lesson is the one that we already know but it has been painfully reinforced: Science needs to give us a better flu vaccine, he said. Twice a year, the World Health Organization (WHO) holds a meeting to plan for the upcoming flu seasons in the Northern and Southern Hemispheres. The FDA and the Related Vaccines and Biological Products Commission later met to discuss who's recommendations. This occurs more than six months before the flu season begins. It may seem premature, but it needs to be done enough in advance to allow time to scale, produce and distribute vaccines. If nothing else, it attracts people at a peak motivation time. In recent years, with the benefits of experience and improvements in the system, recommendations are often targeted, and this it must be weakest link now, Morse told Healthline. So can health authorities do anything to make next year's vaccine better? It is possible, experts say, but will require a move away from creating flu vaccines using chicken eggs. In short, I think we need agile and easier-to-expand production methods that do not depend on the egg being honored respectable time, and even so there is still room for improvement. Even if it's not an egg's fault, we still need newer and more adaptable technologies, Morse said. During Australia's record flu season last year, the H3N2 strain prevailed. It is believed that this is due to the production process. A major problem with the H3N2 component of the vaccine is that this strain of influenza varies significantly while it is being prepared to produce egg-based vaccines. These changes can lead to a different vaccine virus than H3N2 in the community during the flu season. This is on top of the virus changing as it moves through humans, between countries, and around the world, Ian Mackay, PhD, associate professor at the University of Queensland in Australia, told Healthline. After the flu season, the Australian government has launched new initiatives to provide free vaccination to those most susceptible to influenza. If the United States has anything to learn from the Australian experience, Mackay said, it's the importance of spreading the correct vaccination message. Vaccinations are important but are under threat from a few very large people who have no expertise and little understanding of safety or science, he said. Communication programs that clarify the benefits and reality of influenza vaccination, especially among those most at risk from serious illness, can help communities to separate reality from increasingly deafening forms of vaccination. These messages need to reach as much as possible in as many forms as possible, he added. In the United States and elsewhere, one thing manufacturers have done to try and improve vaccines is to provide a stronger vaccine for people over the age of 65. The vaccine is four times higher than the number of regular vaccines and works better than the usual vaccine for people over 65 years of age. Schaffner noted this has begged the question as to why such a powerful vaccine cannot also be used in young people. I think there's something to be said for that: Why don't we study vaccines in younger populations as well? It may just be that more punch actually elicits a larger and perhaps more effective immune response. It's worth learning, he said. Despite the flaws, Schaffner insists many things are going right in dealing with the flu. WHO has created an international influenza surveillance network that has been greatly improved scientifically over the past 10 to 15 years. The ability to detect new strains of influenza, new variants that can become pandemics, is much enhanced, because these viruses are being detected much faster, he said. As the FDA continues to work with public health agencies to prepare for next year's flu season, Schaffner said there is a clear way to better prepare for next year. I think there is room for improvement in the way providers strongly recommend vaccines. Some vaccines are better than none, because influenza is a very serious disease. I don't want providers recommending vaccines. I want them to insist on it, he said. Says.