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TRANSCRIPT

Transcript Details

This is a transcript of an educational program. Details about the program and additional media formats for the program are accessible by visiting: https://reachmd.com/programs/vaccination/how-different-types-of-influenza-vaccines-are-made/15000/

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How Different Types of Influenza Vaccines Are Made

Announcer Intro:
Welcome to *VacciNation* on ReachMD. On today's program, we'll hear from Dr. Jason Goldman, who's a primary care physician and the Governor of the Florida Chapter of the American College of Physicians. Dr. Goldman will be breaking down the different manufacturing processes for various types of influenza vaccines. Here he is now.

Dr. Goldman:
The standard dose, or unadjuvanted, vaccines differ from the high dose in several ways. In understanding the high-dose versus standard, it may be helpful to know the basics of influenza vaccines.

We have standard inactivated vaccines, recombinant vaccines, and live vaccines. You can either grow the virus in basic eggs or in cell culture. The benefit of growing it in cell culture, such as canine mammal cells, is there's no egg medium in it, so there's no egg allergies. In the recombinant version, you'll take the genetic material of the virus, grow those in cells, and then produce antigens, which is what stimulate the immune response and harvest those. These vaccines are safe. The standard vaccines do not have a living material in it, so you're not injecting any virus; you're injecting particles that stimulate the immune system. And many of these are egg free, so we don't have to worry about egg allergies.

When you deal with the high-dose vaccines, these are usually egg based, so you have to be concerned about egg allergies if a patient has them. But what they do to differentiate from the standard is in the high-dose vaccines, they will take a higher concentration of antigens, those particles that identify the virus. A coating of the viral particle called hemagglutinin is what the body will recognize as foreign material and generate the immune response to. So by taking a higher concentration of this antigen, you are able to create a more robust immune response.

Alternatively, you can take a protein-type material, attach it to the antigen, which will create a more stimulated immune response. That's known as an adjuvanted vaccine; you're adding an additional component to the antigens, so the body will have a more robust response. So the basic difference is the amount of material within the injection to create a more robust immune response to the influenza virus.

The use of these vaccines will have a great impact on and benefit to the older population. We know that our immune system does weaken over time. We know that those who are older have a higher risk of severe infection, hospitalization, and death from various infections. So we also know that vaccination is the best way to prevent these bad outcomes.

Announcer Close:
That was Dr. Jason Goldman talking about how different types of influenza vaccines are made. To find other episodes in this series, visit ReachMD.com/VacciNation, where you can Be Part of the Knowledge. Thanks for listening!