

Who needs a higher dose flu vaccine with Sandra Fryhofer, MD [Podcast]

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AMA UPDATE



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Sandra Fryhofer, MD, on who needs a higher dose flu vaccine

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In today's AMA Update, everything you need to know about the 2022-2023 flu season, including: types of flu vaccines available, when you should get vaccinated—as well as which shot you, adults over 65 and those with egg allergies should get. Sandra Fryhofer, MD, is AMA's liaison to the Advisory Committee on Immunization Practices (ACIP) and a member of ACIP's COVID-19 Vaccine Workgroup. AMA Chief Experience Officer Todd Unger hosts.

Speaker

- Sandra Fryhofer, MD, chair, AMA Board of Trustees; AMA liaison, Advisory Committee on Immunization Practices (ACIP)

Transcript

Unger: Hello, and welcome to the AMA Update video and podcast, an ongoing series covering a range of health care topics that affect the lives of physicians and patients. Today's topic: flu vaccination, including new recommendations for those that are over 65.

I'm joined today by Dr. Sandra Fryhofer, the AMA's in-house vaccine subject matter expert. Dr. Fryhofer is also the AMA's liaison to the CDC's Advisory Committee on Immunization Practices, or ACIP, and serves on the ACIP's Influenza Vaccine Workgroup. She's also chair of the AMA Board of Trustees. I'm Todd Unger, AMA's chief experience officer in Chicago. Dr. Fryhofer, thanks for joining us today.

Dr. Fryhofer: Todd, thanks for having me.

Unger: So let's talk about the news for flu vaccination. Tell us what's new. Why don't we start with recommendations for those that are 65 and older.

Dr. Fryhofer: Well, everyone six months and older needs flu vaccination every year. That hasn't changed, but recommendations for those 65 and older have.

Three vaccines are now preferred for these older adults. Two of them are higher dose flu shots. The third one is an adjuvanted flu vaccine. Of the two higher dose options, the highest dose flu vaccine currently available, is abbreviated HD for high-dose vaccine and is sold under the brand name Fluzone High-Dose. It's four times stronger than regular standard dose flu shots.

The recombinant influenza vaccine abbreviated RIV and sold as Flublok is also higher dose. It's three times stronger than regular flu shots. The adjuvanted inactivated influenza vaccine, abbreviated aIIV, sold as Fluad, is the same strength as regular standard dose flu shots, but it adds an adjuvant called MMF 59 to boost its immune response. This preferential recommendation is for those 65 and older.

For everyone else, any age and health condition appropriate vaccine is fine. The high dose shot and the adjuvanted shots are limited to those 65 and older. The recombinant vaccine Flublok can be given to adults 18 and older. And for older adults, a regular flu shot's fine if a higher dose or adjuvanted flu vaccine is not available. It's better to get any flu shot than no flu shot at all.

Unger: Dr. Fryhofer, what about timing? I hear a lot of questions about that. When's the best time to get a flu shot? How long does it take for the flu shot to work?

Dr. Fryhofer: It takes about two weeks after vaccination to build up those protective antibodies. And for most people, the ideal time to get your flu vaccine is September, October. Vaccination should continue as long as flu's circulating, and vaccine's available.

But understand that vaccine induced immunity wanes with time. So getting vaccinated in July and August is a little early. Getting your flu shot too early could mean protection may not last the entire flu season. But understand each flu shot, each flu season is different, and the timing of when flu season begins, peaks and declines cannot be precisely predicted. And we don't want to miss opportunities to vaccinate.

As a reminder, both COVID and flu are now circulating, and it's fine to get a flu shot and any COVID vaccine dose at the same time. In fact, CDC is encouraging it. It's also fine to give both flu vaccines and COVID vaccines, including these new bivalent boosters with other needed vaccines with one exception, and that's monkey pox. You should not give monkeypox vaccine and COVID vaccine at the same time due to myocarditis risk concerns.

Unger: What about pregnancy? What's the best time during pregnancy to get vaccinated, and is there a certain kind of vaccination that's best?

Dr. Fryhofer: All pregnant women should receive a flu shot. During pregnancy changes and the immune system, heart and lungs make pregnant women more prone to severe illness from flu. And flu vaccination has been shown to cut risk of flu-related respiratory infections in pregnant women in half.

Also flu shots can reduce a pregnant woman's risk of being hospitalized with flu by an average of 40%. Any age-appropriate inactivated or recombinant vaccine may be given to pregnant women. However, LAIV, the live attenuated vaccine aka the nasal flu vaccine, should not be used during pregnancy because it is made from live virus. But it's fine to give LAIV postpartum.

As for timing, getting your flu shot in the third trimester of pregnancy is best that way mom's antibodies can be passed on to baby and provide protection to the infant during the first months of life when the baby's too young to be vaccinated. The same goes for Tdap. Pregnant women are also supposed to get a Tdap during pregnancy to protect mom and baby from pertussis, aka whooping cough. And the best time for getting Tdap is also between 27 and 36 weeks and for the same reason to maximize mom's antibody response as well as passing antibodies to the baby.

And pregnant women also need protection from COVID and should get COVID vaccination. Both CDC and ACOG, the American College of Obstetrics and Gynecology, recommend that pregnant women receive flu and Tdap vaccination as well as any needed COVID vaccine doses.

Unger: Let's go back just to the beginning because that was a lot of news on the 65 and older side. What is the evidence behind making a change like this for older adults? Any concerns about side effects? Is there any difference here?

Dr. Fryhofer: Older adults are at increased risk for severe influenza associated illness, hospitalization and death. And flu vaccines are often less effective in older adults. Our flu work group's comprehensive evidence review revealed higher dose vaccines and adjuvanted vaccines were more effective than standard dose vaccines and protecting these older patients. And that's the basis for this new preferential recommendation. And this is why ACIP now prefers a higher dose or an adjuvanted influenza vaccine over a standard dose vaccine for those 65 and older.

So again, the standard dose inactivated vaccine contains 15 micrograms of antigen per virus strength covered. The recombinant vaccine contains 45 micrograms per virus strain. So that's triple the antigen dose. And the high dose of vaccine quadruples the dose to 60 micrograms per virus strain. The adjuvanted vaccine contains the same amount of antigen per virus strain as standard, which is 15 micrograms, but it also contains that adjuvant MMF 59, which boosts immune response.

And Todd, you asked about side effects. There were more injection site and systemic reactions with the high dose and adjuvanted vaccines as compared to the standard dose vaccine. However, injection site reactions after the recombinant vaccine were about the same or less as compared to standard dose inactivated vaccine.

Unger: Now Dr. Fryhofer you mentioned every year is different. What do this year's flu shots contain, and how do they differ from prior year? Do the vaccines cover multiple strains, obviously, based on learning from other parts of the world?

Dr. Fryhofer: Well, all flu vaccines available this year are quadrivalent meaning they cover four flu strains, two flu As and two flu Bs. And the exact formula for flu vaccine is re-evaluated each year and often changes depending on which strains are predicted to be circulating. And the current vaccine composition has been updated to better protect against flu viruses expected to circulate this season. Influenza A viruses are divided into two subtypes based on two proteins on the surface of the virus.

H is for hemagglutinin, and N is for neuraminidase. And the flu A subtypes that routinely circulate in people include H1N1 and one H3N2. So you'll hear some of these terms as flu is discussed throughout the season.

Influenza B viruses don't have subtypes. They're classified into lineages, B Yamagata and B Victoria. Both A and B viruses can be further divided into clades and subclades also called groups and subgroups.

Influenza A viruses are the only flu viruses known to cause flu pandemics, which are global epidemics. Influenza B viruses generally change more slowly in terms of their genetic and antigenic properties. And today's quadrivalent seasonal flu vaccine covers one influenza A, H1N1 virus, one influenza A, H3N2 virus, as well as one influenza B Victoria lineage virus and one influenza B Yamagata lineage virus.

Flu vaccines can protect against these flu viruses as well as other flu viruses that are antigenic similar, but understand flu is not the only virus that circulate during flu season. There are many other viruses that can result in influenza like illnesses.

Unger: Gosh, I think we could do a whole other segment just on that one question. That's a lot of great information there. What about people who've got a history of egg allergy? Can they get a flu vaccination?

Dr. Fryhofer: Well, most available flu vaccines are grown in eggs and thus might contain trace amounts of egg proteins with two exceptions. There are two flu vaccines, which are not grown in eggs and are totally egg free, RIV, the recombinant vaccine, brand name Flublok licensed for those 18 and older, and cell-cultured inactivated influenza vaccine abbreviated CCIIV ... and it's licensed for those

as young as six months and older. Again, these two vaccines are totally egg free.

All right, here are the recommendations for those with egg allergy. People with a history of hives only egg allergy symptoms can receive any age and health status appropriate influenza vaccine. The same applies to those with more severe egg allergy reactions. Remember, that the amount of protein in flu vaccines, even those grown in eggs is very, very small.

Anyone with egg allergy reaction more severe than just hives, and this would include angioedema, swelling, respiratory distress, lightheadedness or recurrent vomiting, as well as anyone who might have needed epinephrine or some other emergency medical intervention, can also receive any licensed recommended influenza age appropriate and health status appropriate vaccine with one caveat. If the vaccine is not one of the totally egg free shots, which remember are the cell-cultured CCIIV or the recombinant RIV vaccine Flublok, it must be administered in a medical setting under the supervision of a health care provider who's able to recognize and manage severe allergic reactions.

And a reminder that all vaccination providers should be familiar with their office emergency plan and should be certified in CPR, but no prolonged post-vaccination observation period is recommended specifically for egg allergic patients. However, ACIP does recommend observing patients for 15 minutes after administering any vaccine.

Unger: What about for folks out there that don't like needles? And there are a lot of those people out there. What should they do in regard to flu vaccination?

Dr. Fryhofer: Well, there's only one nasal flu vaccine available, LIAV, the live attenuated influenza vaccine brand name FluMist. Live attenuated means it contains live but weakened virus, and that weakened virus is grown in eggs. Its age approval range is age two through 49. But it's not for everyone. There are many medical conditions considered by ACIP to be contraindications and precautions.

For example, it's not recommended during pregnancy. It's not recommended for young children age two through four with asthma or wheezing. It's not recommended for anyone of any age with an immunocompromised condition, including those on immunocompromising medications. It's also not recommended for close contacts and caregivers of those who are severely immunosuppressed.

It's not recommended for anyone with cochlear implants or for anyone with an active communication between cerebrospinal fluid and the oropharynx, nasopharynx, nose or ear or any other cranial CSF leak. And since the vaccine virus is live, recent use of flu antivirals can make the vaccine ineffective. So timing of taking any flu antivirals can also be a contraindication. Also underlying medical conditions, including chronic heart, lung, kidney, liver, neurologic, as well as blood disorders and metabolic disorders, including diabetes, are also considered precautions for this live attenuated flu vaccine.

ACIP's comprehensive flu update document has all these listed for these patients. It's better and safer to get the shot, but you can also ask for a smiley face Band-Aid, and the shot's not that bad. It only lasts a second.

Unger: It is very, very fast. This has been really informative. I can't imagine there is a more comprehensive preview of this flu shot and this season. Dr. Fryhofer, any final thoughts before we close?

Dr. Fryhofer: Everyone six months and older needs flu vaccination every year. We've been fortunate the last two flu seasons have been mild, but we have no way of knowing what to expect for this season. We've managed so far to avoid a twindemic of both COVID and flu, but news reports from the southern hemisphere say Australia is experiencing its worst flu season in five years, which may serve as a warning for us here in the United States.

Your best way to protect yourself and those around you is to get vaccinated. Now's the time. Get your flu shot and also stay up-to-date on recommended COVID vaccinations. Please get vaccinated.

Unger: Absolutely. That wraps up today's episode. Dr. Fryhofer, thanks again for being here and sharing all of this important information about flu vaccination. We'll be back soon with another AMA update. For all our videos and podcasts, go to ama-assn.org/podcast. Thanks for joining us today. Please take care.

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