

General questions

What can we on the front lines of giving vaccines do to help?

The most powerful thing you can do is create a space where families feel heard and respected. Taking time to listen to questions — even if they have been asked many times — builds trust. Offering clear, concise explanations, using handouts or reputable websites, and reminding families that you'll partner with them over time reinforces confidence. Reporting adverse events through VAERS and sharing feedback from your practice also helps strengthen vaccine safety monitoring.

You can also speak up in support of vaccines, particularly with your elected federal officials. Your experience on the frontlines can help them understand how changes to CDC and FDA processes are affecting the availability of vaccines and the ability for your patients, or subgroups of your patients, to be protected against vaccine-preventable diseases.

How do papers like Andrew Wakefield's get through peer review? How can we make peer review more robust?

Peer review is a human process that can fail, particularly when reviewers have limited time, expertise, or when journals are less rigorous. Wakefield's paper is a reminder that fraudulent or low-quality science can slip through even in good journals. While the system worked in the sense that his article was retracted and his license revoked, it is impossible to un-ring a bell, and the narrative created by his manuscript continues to influence misinformation. Improving review means requiring full data transparency, registered protocols, conflict-of-interest disclosures, and ideally open peer review. These safeguards make it harder for weak or misleading science to shape the public conversation.

What is the best response to the acetaminophen connection that is currently in the news?

Recent headlines suggest a link between acetaminophen (Tylenol) use in pregnancy and development of autism in the child, but the best available data do not support this. A 2024 Swedish study of over 2.5 million children found no causal relationship once genetic and family factors were considered. Some earlier studies noted associations, but they were likely driven by confounding factors. Major organizations, including the American College of Obstetricians and Gynecologists (ACOG), continue to recommend acetaminophen as the safest option for fever and pain in pregnancy, especially since alternatives like ibuprofen have safety concerns during pregnancy. Likewise, the Autism Science Foundation has also made [a statement](#) about this issue that may be helpful when speaking to families.

Do you think it's safe administering multiple vaccines at once visit?

Absolutely. When a new vaccine is licensed and recommended, studies have been conducted on the vaccine's safety and efficacy, both on its own, and when given in conjunction with the other vaccines administered at the time. These studies, called 'concomitant use' studies, ensure that the safety and efficacy of both the new vaccine and existing vaccines are not compromised when given together. Recognizing that humans can manage an onslaught of pathogens daily — from the food we eat, the dust we inhale, and the number of organisms living on our bodies, the addition of antigens in the form of a vaccine is trivial. The other benefits of administering multiple vaccines at a single visit include simplicity for the family in scheduling, and fewer stressful appointments for a patient.

Now that AAP is publishing its own schedule, are you involved in providing that guidance? If CDC/NIH is undermined, where will data come from for forthcoming schedules published outside ACIP?

In June 2025, the composition of the committee that makes vaccine recommendations to the CDC, known as the ACIP, was dramatically changed, as were the processes by which these recommendations were made historically. The result has been recommendations not supported by the body of scientific evidence. The Vaccine Integrity Project (VIP) has brought together groups of scientists and clinicians to ensure that the latest science is used to inform vaccine recommendations and guidance in the U.S. They are working with professional societies and insurers, and they have committed to working in a transparent and science-based manner. Data produced by VIP has informed society guidance for fall 2025-2026 vaccines. Moving ahead, the VEC will continue to review and distill this guidance [on a new webpage](#) so frontline clinicians can easily stay up to date.

Review the latest guidance here: <https://www.chop.edu/vaccine-update-healthcare-professionals/locating-latest-science-based-vaccine-recommendations>

Where can I obtain the slides for this presentation?

The slides are available on the webinar archive page of our Vaccine Update website, <https://www.chop.edu/pages/vaccine-webinar-archive>.

Aluminum-related questions

Is there evidence that increased immune response related to aluminum can trigger food allergies?

There is no evidence to support this. A recent study was published in *Annals of Internal Medicine* that is the best data to date. Of 1,224,176 children in Denmark between 1997 and 2020 during which time varying quantities of aluminum adjuvants were introduced, there was no difference in atopic or allergic outcomes based on aluminum exposure.

Some people insist that injecting aluminum into muscles via vaccines is different than ingesting aluminum in water or breastmilk. Can you please review the data of the amount of aluminum in vaccines vs. breast milk and formula? How can we frame this data for people?

By six months of age, an infant receives about 4 mg of aluminum from vaccines. In contrast, they ingest about 7 mg from breast milk, 38 mg from infant formula, or 117 mg from soy formula in the same period. A difference to note is that most ingested aluminum will be eliminated from the gut without absorption. However, aluminum that is absorbed from ingestion into the bloodstream will be excreted in the same way as aluminum absorbed into the bloodstream after vaccine injection — by the kidneys. Second, aluminum is ingested daily, whereas that from vaccines is only sporadic. As a result, over time the quantities introduced from food overtake those introduced by vaccines. We address this in several resources that you might find helpful when speaking with family members who have this concern: [Q&A sheet](#) (also available in [Spanish](#) and [Japanese](#)), [infographic](#) (also available in [Spanish](#)), and [webpage](#).

One issue with the July 2025 Denmark study is that Asperger's syndrome has a lower risk factor than other forms of autism. Some have interpreted that as aluminum causes profound autism. How should we interpret the hazard ratios here?

The July 2025 study of children in Denmark used adjusted hazard ratios as the outcome. A hazard ratio (HR) compares the likelihood of an event (in this case, occurrence of a disease) occurring at any given point in time between groups. In this study, the groups differed by amount of aluminum received through vaccines. An HR of 1 means the event is equally likely in each group. In the Hviid study, the HR represent how much the hazard changed with an additional 1 milligram of aluminum in vaccines compared with a child who received 1 mg less. Reviewing the results, shown in Figure 3 in the

manuscript, both “Asperger’s syndrome” and “atypical autism” had confidence intervals that crossed 1, meaning no additional risk could be detected. On the other hand, “autistic disorder” and “autism spectrum disorder composite” both had HR and confidence intervals less than 1, suggesting no increased risk from higher doses of aluminum. [Unbiased Science has an informative article](#) that reviews the statistical analysis of this study in detail.

Dive into the details here: https://medium.com/@jsteier_29203/dont-be-foiled-by-rfk-jr-s-rebuttal-of-the-danish-aluminum-study-e7757fda4a2f

COVID-19-related questions

I would appreciate your thoughts regarding the new Moderna COVID-19 vaccine mNEXSPIKE for 65+ compared to the Spikevax formulation.

Unlike Spikevax, which encodes the full-length spike protein, mNEXSPIKE targets only the N-terminal domain (NTD) and receptor-binding domain (RBD) of the spike protein from the Omicron variant. The mNEXSPIKE is given in a lower dose with comparable safety. Clinical trials demonstrated similar, if not improved, efficacy as well as stronger antibody responses. Currently, there is no preferential recommendation.

Do you foresee issues with insurances covering COVID-19 vaccines? Do you feel that non-clinical entities will be able to be reimbursed for COVID-19 without having an electronic medical record system to document medical conditions in patients under 65?

Insurance companies, through their professional organization AHIP, have indicated that they will cover fall respiratory viral vaccines. However, two points are important. First, individual companies may diverge from this approach. Second, the pending ACIP meeting could affect coverage since coverage is typically linked to ACIP recommendations. The new ACIP is scheduled to meet on September 18-19, 2025.

How are you/CHOP "recommending" COVID-19 vaccines without going outside of CDC guidelines or are you unable to recommend due to those guidelines?

As the Vaccine Education Center, we are recommending clinicians follow guidance supported by science, including recent guidance issued by the American Academy of Pediatrics, American Academy of Family Physicians, and American College of Obstetricians and Gynecologists. We have collated guidance from these societies and others [here](https://www.chop.edu/vaccine-update-healthcare-professionals/locating-latest-science-based-vaccine-recommendations). <https://www.chop.edu/vaccine-update-healthcare-professionals/locating-latest-science-based-vaccine-recommendations>

Health systems, such as Children’s Hospital of Philadelphia, are in the process of determining how to best navigate divergent guidance and insurance coverage, and they are monitoring ACIP’s September meeting deliberations, which may inform Vaccines for Children (VFC) program supplies.

What are your recommendations for ongoing COVID-19 vaccination for those of us over 65? Especially people who may now have had many (i.e. 5 or more)?

Individuals 65 and older should continue to receive an annual COVID-19 vaccine. As individuals age, T cell responses are less robust, so vaccination continues to provide protection against severe disease, as measured by the need for hospitalization or death.