**IMMUNIZATIONS NEWSLETTER**

**PROVIDING GSA MEMBERS WITH UPDATES ON ADULT IMMUNIZATIONS**

**MAY 2016**

Developed by The Gerontological Society of America

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**DEBUNKING VACCINE MYTHS**

In the battle between people and microbes, vaccines are undoubtedly one of the most powerful tools available. Being able to stimulate immunity in people through administration of safe and effective vaccines has ridded the world of smallpox and reduced infections of several other deadly and debilitating pathogens to an insignificant level for most countries. Yet some people continue to resist vaccines. Adult vaccines, not being mandatory for most of the population, are particularly underused. GSA members can play important roles in debunking myths about vaccines and thereby improve adult immunization rates among patients, colleagues, and family members.

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**HEALTH SCIENCE**

**Myth:** People with egg allergy should not receive influenza vaccine.

**Fact:** Those who develop only hives after egg exposure can receive influenza vaccine with no special precautions. Patients who’ve had more severe reactions to eggs can receive influenza vaccine in appropriate medical settings.

The latest myth to fall is that people with egg allergies cannot receive influenza vaccines that are made in egg culture. At its February 2016 meeting, the Advisory Committee on Immunization Practices recommended removal of the “egg allergy” algorithm from the CDC’s guidance, replacing it with four key points:

- All vaccines should be administered in settings where treatments for anaphylaxis are available.
- Patients who have previously had severe allergic reactions to influenza vaccine should not receive future vaccinations regardless of the suspected causative component.
- All types of influenza vaccines that are appropriate for a patient’s age and health status may be administered to those who have only urticaria (hives) following exposure to eggs.
- Patients with more severe reactions to eggs should receive influenza vaccine in settings where a health professional with experience in the recognition and management of severe allergic conditions is immediately available.

The rationale for this change in policy is that the amount of egg albumin in influenza vaccine is more than 100 times less than the minimum amount needed for an allergic reaction to eggs. Research has shown that severe reactions of any type to influenza vaccine are extremely rare and not associated with patients’ egg-sensitivity status.
Myth: Receiving too many vaccines at once is dangerous.
Fact: The human body can easily react to thousands of antigens simultaneously. Dealing with a few vaccines at the same time is not a problem.

The administration of several vaccines at once is common in the pediatric population. Concerns about this have the potential to spill over into the adult vaccination world when, for instance, pneumococcal or shingles vaccines are recommended when patients present for flu shots.

Patients should not be concerned about getting more than one vaccine during a health care visit. A major obstacle to adult vaccination is that many adults do not have regular or frequent visits to health care providers. Since getting one’s flu shot has become a regular and natural event each fall, health professionals should make the most of this opportunity by strongly recommending other indicated vaccines while the patient is there.

Myth: Natural immunity is better than vaccine-induced immunity.
Fact: A higher level of immunity is induced by infection, but it comes with the possibility of serious complications, such as pneumonia or even death.

In the pediatric realm, vaccine opponents have gone so far as to have “pox parties” as a means of inducing “natural” immunity to childhood varicella. Uninfected children are purposely exposed to a friend with chickenpox, increasing the chances of serious complications such as pneumonia.

While two or more doses of a vaccine are sometimes needed to induce adequate immunity to a pathogen, this is a far safer practice than allowing or causing the person to get the natural disease. People have been led to believe that “natural is better” in all concerns. However, this is definitely not the case with adult vaccines for influenza, shingles, pneumococcal and meningococcal disease, and papillomavirus.

Myth: If everyone else gets vaccinated, I don’t need to.
Fact: Herd immunity provides some protection to communities, but it’s still important to vaccinate as many people as possible.

Influenza provides an excellent example of the importance of herd immunity as well as the need for universal immunization. People at highest risk of complications with influenza are the very young and the very old. Those whose social patterns make them the best carriers and transmitters of the virus are school-aged children. The children pick up the virus from other kids, bring it home to more susceptible members of the household and extended family, and the younger and older individuals suffer the consequences.
Studies have shown that vaccination of school-aged children against influenza can decrease the occurrence of these infections in grandparents with whom they live or interact often, even if the older relative isn’t vaccinated. This is herd immunity in action, and it’s very important with influenza vaccine because older people don’t respond to the vaccine as well as younger people. The ideal situation is when everyone is vaccinated; this gives all members of the “herd” the best chances of avoiding the disease and stopping any spread of the pathogen to those who cannot take the vaccine or who respond to it inadequately. It also protects the group from influenza virus transmitted by animals and through the environment.

BIOLOGICAL SCIENCE

**Myth:** Ancillary and pharmaceutical ingredients in vaccines are dangerous.

**Fact:** Adjuvants and preservatives are important components that help make vaccines more effective and safer.

Vaccines contain ingredients that can sound scary to patients. These include adjuvants such as aluminum and preservatives such as formaldehyde or antibiotics.

Adjuvants are especially interesting. These added ingredients improve the body’s response to the antigens in the vaccines. In most cases, the way they do this is unknown; it’s simply known that they do. With adjuvants, people attain adequate immunity with fewer doses of the vaccine. While a very small number of people may have reactions to the adjuvants, these vaccines are generally very safe and beneficial for people overall.

Likewise, preservatives are used to make sure vaccines don’t become contaminated during shipment, storage, and use. Especially for multidose vials of vaccines that are used for several patients, a preservative is necessary because otherwise a contaminant introduced during one withdrawal might grow and cause problems for those vaccinated later.

By debunking myths surrounding vaccines, the gerontological community can be influential voices in the ongoing debate over vaccines. Dating back to public campaigns against smallpox and diphtheria at the turn of the 20th century, people have been concerned about governmental authorities mandating interventions such as quarantine and vaccination. Yet the results speak for themselves, and it’s important for GSA members to make these facts known.
## SOURCES AND RESOURCES

2. **Children’s Hospital of Philadelphia website** [http://www.chop.edu/centers-programs/vaccine-education-center/vaccine-science/vaccines-and-immune-system#.VwQjWmMbKvZ](http://www.chop.edu/centers-programs/vaccine-education-center/vaccine-science/vaccines-and-immune-system#.VwQjWmMbKvZ)
3. **Centers for Disease Control and Prevention (CDC) vaccines website** [http://www.cdc.gov/vaccinesafety/concerns/](http://www.cdc.gov/vaccinesafety/concerns/)
4. **CDC Advisory Committee on Immunization Practices website** [http://www.cdc.gov/vaccines/acip/meetings/meetings-info.html](http://www.cdc.gov/vaccines/acip/meetings/meetings-info.html)

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