

Amount of Antigens

Concern: I don't understand why my child needs more than one shot of any vaccine. It seems like this would overload their immune system.

General Responses:

- Vaccines will not overload a child's immune system.
- Every day, healthy children successfully fight off millions of antigens - the parts of germs that cause the body's immune system to respond.
- Vaccines are made from the same germs (or parts of them) that cause disease. For instance, a measles vaccine is made from the measles virus. Scientists isolate those germs and the germs are weakened or killed so they cannot cause serious illness.
- Vaccines only contain a small amount of the antigens that your child encounters every day and use only a tiny proportion of a child's immune system's ability to respond, even when your child receives several vaccines in one day.
 - The vaccines that children receive in the first two years of life are just a drop in the ocean when compared to the tens of thousands of environmental challenges they successfully manage every day.
- The small amount of antigens in vaccines causes the body to produce antibodies, which are needed to fight off the serious illness.
- The vaccines are recommended when the child's immune system will best respond and when the child is most susceptible to disease.

Risk of Disease:

- Vaccine-preventable disease can be serious, or even deadly.
- Although many of these diseases are rare in this county, they remain a concern in other parts of the world (for example, polio or diphtheria) and these diseases can be brought into the U.S., putting your unvaccinated child at risk.
- Even with advances in health care, the diseases that vaccines prevent can still be very serious – and vaccination is the best way to prevent them.
- Each year we hear about disease outbreaks in undervaccinated communities across the United States.
 - We have seen an increase in pertussis cases in Michigan for several years. Michigan has experienced infant deaths, including a 3 month old little girl in 2012.
 - There were 1,301 cases of pertussis disease reported in Michigan in 2014.
 - We have also seen an increase in measles cases in 2014, with over 600 cases reported in the United States during 2014.
 - This is more cases than in any year since 1996; only 37 cases in 2004.

Benefit of Vaccination:

- Vaccines do work!
- Vaccines can prevent diseases that once killed or harmed infants, children and adults.

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- Because of advances in medical science, your child can be protected against more diseases than ever before.
- With these advances in medical science, the number of vaccine antigens has decreased in recent years.
 - The number of antigens that children fight every day (2,000-6,000) is many more than the antigens in any combination of vaccines on the current schedule (150 for the whole schedule). So children's immune systems are not overwhelmed by vaccines.
- Each and every vaccine will save lives and/or reduce the number of disabilities in children in the United States.

An analogy of seat belts to vaccines:

You can think of a vaccine like a seat belt. It's possible that in an accident your child's seat belt could cause a minor injury, like a bruise. That's a side effect of wearing one. But if you measure the risk of wearing a seat belt against the risk of not wearing one, the decision to wear a seat belt is an easy one.

Resources (*Available in Spanish)

The Children's Hospital of Philadelphia

*Too Many Vaccines? What you should know.

<http://vec.chop.edu/export/download/pdfs/articles/vaccine-education-center/too-many-vaccines.pdf>

*Recommended Immunization Schedule: What You Should Know

<http://vec.chop.edu/export/download/pdfs/articles/vaccine-education-center/recomm-immuniz-sched-eng.pdf>

*The Facts about Childhood Vaccines

<http://vec.chop.edu/export/download/pdfs/articles/vaccine-education-center/vaccines-fact.pdf>

Booklets: *Vaccines and Your Baby and *Vaccine Safety and Your Child

<http://vec.chop.edu/service/vaccine-education-center/order-educational-materials/order-educational-materials.html#booklets>

CDC

*Infant Immunizations FAQs

http://www.cdc.gov/vaccines/events/niiw/ed-resources/downloads/f_provider-qa-bw.pdf

The Childhood Immunization Schedule

<http://www.cdc.gov/vaccines/hcp/patient-ed/conversations/downloads/vacsafe-child-immun-bw-office.pdf>

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Immunization Action Coalition

*Questions Parents Ask About Vaccinations for Babies

<http://www.immunize.org/catg.d/p4025.pdf>

American Academy of Pediatrics

Website: Too Many Vaccines?

<http://www2.aap.org/immunization/families/toomany.html>

The Childhood Immunization Schedule: Why Is It Like That?

<http://www.aap.org/en-us/advocacy-and-policy/Documents/Vaccineschedule.pdf>

*Facts for Parents about Vaccine Safety

<http://www2.aap.org/immunization/families/VaccineSafety1pagerEnglish.pdf>

Vaccine Safety: The Facts

http://www2.aap.org/immunization/families/VaccineSafety_parenthandout.pdf

Every Child by Two

Booklet: Protect Your Child - Immunize on Time, Every Time

<http://www.ecbt.org/images/articles/eBookOfDiseases.pdf>

California Immunization Coalition

Booklet: Vaccine Safety: Responding to Parents' Top 10 Concerns

<http://www.cdph.ca.gov/programs/immunize/Documents/IMM-917.pdf>