PEDIATRIC ASSOCIATES

VACCINES: Facts, Myths, and More

Q: What is a vaccine?
A: A vaccine is a tiny amount of a killed or "purified" virus or bacteria that stimulates our immune system to build a protection against that particular disease.

Q: Is it safe for my child to receive a vaccine?
A: YES. Vaccines have been shown to prevent many dangerous infections and have relatively few side effects, the most common of which are fever and soreness at the injection site.

Q: Why are vaccines given to babies?
A: There are certain dangerous infections that can hurt children as early as the first few months of life.

Q: Is it safe to give more than one vaccine at a time?
A: YES. In fact, certain combination vaccines such as the MMR vaccine decrease the number of shots a baby needs to have.

Q: Can vaccines overload a child's immune system?
A: NO. Vaccines only contain tiny amounts of viruses or bacteria compared to the large amount of germs a child comes into contact with every day on a regular basis. Therefore, a healthy child's immune system should have no problem at all handling the vaccinations even when several vaccines are given during a single doctor visit.

Q: If all of the other children in the community are vaccinated, then why should I vaccinate my child?
A: Even though many children are vaccinated, diseases still exist. With increased international travel it is quite common for many diseases to be brought into our community. Not vaccinating leaves your child defenseless against these illnesses as well as increases the chance for your child to spread these diseases to other young or unvaccinated children.

Q: Can vaccines cause Autism?
A: NO. There have been numerous studies involving hundreds of thousands of children across three continents, all demonstrating that there is no relationship or link between any component of any vaccine and autism.

Q: Are there any risks from vaccine preservatives such as Thimerosal and Mercury?
A: NO. There is no evidence that thimerosal or mercury in vaccines has ever caused any harm to children. Nevertheless, as of 2001 thimerosal and mercury have been removed from vaccines and vaccines today contain little or no thimerosal or mercury.

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Vaccines and Preventable Diseases in Children

Hepatitis A: This infection causes loss of appetite, nausea, vomiting, stomach pain, jaundice (yellow skin and eyes), bleeding problems, fever and headaches. It may cause prolonged weakness and serious illness in individuals already suffering from liver disease.

Hepatitis B: This infection can lead to vomiting, stomach pain, jaundice (yellow skin and eyes), permanent liver damage, liver cancer, cirrhosis and death. Approximately 25% of children who develop lifelong hepatitis B infection die of related liver disease as adults.

DTaP (Diphtheria, Tetanus, Pertussis): This vaccine works to prevent three infections.

- **Diphtheria** may cause a sore throat, suffocation, paralysis, heart failure, coma and even death. Before the vaccine, diphtheria caused more than 15,000 deaths in children each year.
- **Tetanus** causes severe muscle spasms (including the mouth and jaw), breathing problems, severe heart damage, lung infections, coma and death.
- **Pertussis** causes "Whooping Cough." It may lead to severe coughing, pneumonia, seizures, brain damage, and death. Pre-vaccine, over 200,000 cases and up to 9,000 deaths were reported each year.

Hib (Haemophilus Influenzae type b): This infection may lead to breathing problems, meningitis, blindness, brain damage, paralysis, hearing loss and death. Before the vaccine, Hib meningitis killed 600 children each year and left many other children with deafness, seizures and mental retardation.

Gardasil (HPV): Human papillomavirus will affect an estimated 75% to 80% of males in females in their lifetime. For most, HPV could cause significant consequences: cervical, vaginal, and vulvar cancers in females. Other types could cause genital warts in males and females.

Influenza: This infection causes high fever, chills, severe muscle aches, headaches, pneumonia, swelling of the brain and death. There are still thousands of deaths every year in the U.S. from influenza related complications.

IPV (Polio): This infection leads to paralysis, difficulty breathing and death. Before the vaccine, 20,000 cases of polio were reported each year in the United States. Many children were left on crutches, in wheelchairs and on iron lungs.

Menactra (Meningococcal): This infection causes an inflammation of the protective layer around the brain and spinal cord. Meningococcal disease spreads like the flu, passing from person to person through everyday activities.

MMR (Measles, Mumps, Rubella): This vaccine works to prevent three infections.

- **Measles** (rubeola) causes runny nose, cough, conjunctivitis, rash, pneumonia, ear infections, brain damage, seizures and death. It is estimated that if the measles vaccine were stopped, approximately 2.7 million people would die worldwide.
- **Mumps** causes swollen glands, headaches, deafness, brain damage, meningitis, swelling of the testicles and sterility in males.
- **Rubella (German Measles)** causes fever, rash, swollen glands, birth defects such as deafness, blindness, mental retardation and heart defects, and can cause miscarriage and premature birth in pregnant women. Prior to this vaccine rubella affected over 20,000 newborns over half of which were deaf and with many suffering from blindness and mental retardation.

Prevnar (Pneumococcus): This infection leads to ear infections, sinus infections, pneumonia, meningitis, sepsis (infection of the blood) and brain damage.

RotaTeq (Rotavirus): This infection may include fever, vomiting, upset stomach, and watery diarrhea that can last from 3 to 9 days, and can quickly lead to dehydration (loss of body fluids).

Varicella (Chicken Pox): This causes an itchy rash with many sores and may lead to lung damage, brain damage and death. Prior to this vaccine approximately 4 million people got chicken pox, causing 11,000 hospitalizations and 100 deaths each year.