



Which Vaccines Do Children Need?

CDC SAYS 69 DOSES OF 16 VACCINES, WITH OVER HALF GIVEN BY 15 MONTHS OF AGE

All states mandate vaccination for day care and school admission. No vaccination consent statute exists at the federal level.¹ Exemptions are available, although state laws vary significantly, restrictions are typically severe, and bills in 18 states aim to significantly impede parental options. Vaccination is a serious and complex medical decision that should be evaluated by each disease and vaccine.

#1 CHICKENPOX (VARICELLA)

Chickenpox is a mild disease in childhood.² Vaccination shifts disease onset to adulthood and increases the incidence of shingles, a far more serious disease, in adults.³ Adult shingles cases have risen in the US since the introduction of the chickenpox vaccine but not in the UK where this vaccine has not been introduced. **Parents should decide whether to vaccinate children or allow them to contract this mild disease in childhood, which will reduce the likelihood of harm from both diseases in adulthood.**

#2 DIPHTHERIA

Diphtheria is a very rare disease that can harm people at any age. A total of seven cases were reported to the CDC from 1998-2009.⁴ Diphtheria affected children when it was prevalent over a century ago. Scattered outbreaks in developed countries in recent decades have affected mostly adults who use drugs and alcohol.⁵ **Parents should decide whether to vaccinate children against an extremely uncommon disease that affects mostly adults.**

#3 FLU (INFLUENZA)

The independent, international Cochrane Collaboration concluded that, at best, only 10% of the 200 known viruses causing flu and flu-like illness are covered by annual vaccination. Flu vaccines do not reduce lost working days or hospitalization.⁶ They are ineffective in preventing illness in children.⁷ In children under two, the inactivated vaccine is no better than placebo and safety data are absent.⁸ Flu-vaccinated children have a three times greater risk of hospitalization for a flu illness.⁹ Four Canadian studies showed that people who receive annual flu shots are more likely to catch the flu.^{10 11} **Parents should decide whether modest strain coverage and low effectiveness justifies flu vaccination.**

¹ http://pediatrics.aappublications.org/content/121/Supplement_1/S85.full

² <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2563790/>

³ Ibid

⁴ <http://www.immunize.org/catg.d/p4203.pdf>

⁵ <http://www.eurosurveillance.org/ViewArticle.aspx?ArticleId=127>

⁶ http://www.cochrane.org/CD001269/ARI_vaccines-to-prevent-influenza-in-healthy-adults

⁷ http://www.cochrane.org/CD004879/ARI_vaccines-for-preventing-influenza-in-healthy-children

⁸ <http://www.sciencedirect.com/science/article/pii/S0264410X11012175>

⁹ <http://www.sciencedaily.com/releases/2009/05/090519172045.htm>

¹⁰ <http://www.cbc.ca/news/health/flu-vaccine-paradox-adds-to-public-health-debate-1.2912790>

#4 HEPATITIS A and B

Viral hepatitis diseases are usually mild, resolve quickly, and are more common and dangerous in adults. Hepatitis A is spread through fecal contamination in food and water.¹² Hepatitis B is transmitted by IV drug use and unprotected sex. It is often asymptomatic and can cause chronic infection in a small percentage of cases.¹³ A child is considered at risk only if a primary caregiver or sibling has the virus. Babies can get hepatitis B during childbirth but pregnant women are routinely tested. The hepatitis B vaccine is given at birth regardless of maternal antibody status. Duration of vaccine-induced immunity is unknown.¹⁴ **Parents should decide whether to vaccinate against diseases that largely affect people in developing countries (hepatitis A) and adults who engage in high-risk activities (hepatitis B).**

#5 HUMAN PAPILLOMAVIRUS (HPV)

There are over 150 identified HPV strains. Many are sexually transmitted but 11% of the population carries HPV with no apparent means of transmission.¹⁵ Cervical cancer is prevented best by Pap tests. The vaccine is not proven to reduce cancer, only pre-cancerous lesions,¹⁶ of which about 90% resolve on their own.¹⁷ The World Health Organization says 99.85% of women exposed to high-risk HPV strains will never develop cervical cancer.¹⁸ Important questions have been raised about the long-term effectiveness, cost-effectiveness, and safety of this vaccine.¹⁹ Japan withdrew its support following severe adverse reactions.²⁰ Lawsuits against HPV vaccination have been filed in France, Spain, and India.²¹ **Parents should decide whether to vaccinate their children against HPV given the above concerns, especially when the risk is effectively reduced by safe, low cost Pap smears.**

#6 INVASIVE BACTERIAL DISEASE

Bacteria that exist in the human body for decades without harm can suddenly cause invasive disease at any age. Vaccines against invasive bacterial disease only cover certain strains: Hib vaccine for haemophilus influenza b; Prevnar-13 for 13 strains of Streptococcus pneumoniae bacteria; and meningococcal vaccines for Neisseria meningitidis strains a, c, y, and w, and an additional version covering strain b. These vaccines do not target Haemophilus influenza a, c, d, e, f, or non-encapsulated strains; 77 strains of pneumococcal bacteria; and other meningococcal serogroups (h, i, k, l, w135, x, z, 29e). The highest notification rate for haemophilus influenza invasive disease among infants in Europe in 2010 and 2011 were for non-encapsulated strains not covered by the Hib vaccine.²² Vaccination does not address the trigger factors for invasive bacterial disease. The conditions that allow for one strain to cause disease in a child will permit many other normally harmless strains that are present to take its

¹¹ <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2850385/>

¹² <http://www.who.int/mediacentre/factsheets/fs328/en/>

¹³ <http://www.who.int/csr/disease/hepatitis/whocdscsrlyo20022/en/index3.html>

¹⁴ <http://www.cdc.gov/hepatitis/HBV/HBVfaq.htm>

¹⁵ <http://cat.inist.fr/?aModele=afficheN&cpsid=1403036>

¹⁶ <http://www.ncbi.nlm.nih.gov/pubmed/23016780>

¹⁷ [http://www.thelancet.com/journals/lancet/article/PIIS0140-6736\(04\)17354-6](http://www.thelancet.com/journals/lancet/article/PIIS0140-6736(04)17354-6)

¹⁸ <http://sanevax.org/hpv-vaccines-exposed-subterfuge-syringe/>

¹⁹ <http://www.ncbi.nlm.nih.gov/pubmed/19505744>

²⁰ <http://www.medscape.com/viewarticle/806645>

²¹ <http://sanevax.org/hpv-vaccine-scandal-in-denmark/>

²² http://ecdc.europa.eu/en/healthtopics/Haemophilus_Influenzae_Infection/Pages/index.aspx

place and similarly cause disease. **Parents should decide whether to vaccinate against just a few of the many strains that cause invasive disease or focus instead on trigger factors.**

#7 MEASLES

Measles is a usually mild disease that can cause complications at any age. High dose vitamin A is used in developing countries to reduce morbidity and mortality risk. One study reported a 90% lower death rate in infants.²³ Researchers predicted that mass vaccination would eventually cause large outbreaks.^{24 25} In France, there was zero infant mortality tied to recent cases exceeding 20,000; the 10 deaths were largely in immunodeficient adults.²⁶ Contracting measles in childhood may protect against allergic, autoimmune, and degenerative diseases later in life.²⁷ **Parents should decide whether to vaccinate or allow children to contract measles and enjoy the benefits of lifelong immunity that extend through adulthood.**

#8 MUMPS

Mumps is usually a mild disease that causes more complications in adults. Men can become sterile and pregnant women may have a higher rate of miscarriage. Vaccine immunity wanes and vaccinated children may become vulnerable in college and adulthood. **Parents should decide whether to vaccinate children against mumps because it is not dangerous in childhood and contracting the disease then would protect the child for life.**

#9 PERTUSSIS (WHOOPIING COUGH)

Babies are vulnerable to pertussis. The vaccine has limited strain coverage and poor effectiveness. US children receive six doses, with 95% vaccine coverage. In countries including Australia²⁸ and Holland²⁹, the vast majority of recent cases were caused by non-vaccine strains. US researchers found the highest level of pertussis in fully vaccinated 8 to 12 year olds.³⁰ The vaccine antibodies wane within 2 to 4 years³¹ and the vaccine is associated with a 40-fold increase in pertussis colonization.³² The recently vaccinated carry the bacteria asymptotically and infect others.³³ Australia ended its “cocooning” program in 2012 because the vaccine was ineffective at protecting newborns.³⁴ **Parents should decide whether to vaccinate children with an ineffective vaccine.**

#10 POLIO

The US has been wild polio infection-free since 1979 despite the absence of polio vaccination for adults. Booster shots are only recommended for lab techs, other at risk adults, and travellers to certain

²³ <http://jama.jamanetwork.com/article.aspx?articleid=403569>

²⁴ <http://www.ncbi.nlm.nih.gov/pubmed/6741921>

²⁵ <http://rspb.royalsocietypublishing.org/content/early/2009/02/27/rspb.2009.0057>

²⁶ http://wwwnc.cdc.gov/eid/article/19/3/12-1360_article

²⁷ <http://www.ncbi.nlm.nih.gov/pubmed/19255001>

²⁸ <http://www.medicalobserver.com.au/news/new-pertussis-strain-responsible-for-australian-epidemic-experts>

²⁹ <http://www.ncbi.nlm.nih.gov/pubmed/9453625>

³⁰ <http://www.ncbi.nlm.nih.gov/pubmed/22423127>

³¹ <http://pediatrics.aappublications.org/content/early/2015/04/28/peds.2014-3358.abstract>

³² <http://www.cidr.psu.edu/research/synopses/acellular-vaccine-enhancement-b.-parapertussis>

³³ <http://www.pnas.org/content/111/2/787.abstract>

³⁴ <http://www.news.com.au/breaking-news/states-ending-free-parent-whooping-vaccine/story-e6frfku0-1226350174856>

countries. The original polio vaccine caused over 40,000 cases of polio.³⁵ An early vaccine contained Simian Virus 40 (SV40), which infected millions and has been tied to cancer.³⁶ Polio is spread via oral-fecal route. Polio viruses reside dormant in the GI tracts of most humans. **Parents should decide whether to vaccinate against polio since water purification and sewage treatment protects us all.**

#11 ROTAVIRUS

Rotavirus presents as a gastroenteritis, potentially leading to dehydration in small children. The vaccine is contaminated with porcine circoviruses³⁷ and is known to cause life threatening bowel obstruction. “Rotashield” was withdrawn from the market³⁸ but current vaccines are similarly linked.³⁹ Pre-vaccine, one in 200,000 children died from the disease by age 5.⁴⁰ **Parents should decide whether to vaccinate their children in view of the above risks and limited coverage. They can instead learn to recognize and remedy the symptoms of dehydration regardless of the cause**

#12 RUBELLA

Rubella is a mild disease in children. The vaccine is recommended for women of childbearing age because rubella infection can harm fetuses. The Cochrane Collaboration has been unable to identify any research that assesses the effectiveness of the rubella component of the MMR vaccine.⁴¹ **Parents should decide whether to vaccinate children for rubella to protect susceptible (and likely unvaccinated) pregnant women. Contracting rubella in childhood affords children lifelong immunity.**

#13 TETANUS

Tetanus is a rare disease that is not transmissible. It affects fewer than 50 people annually and deaths are more likely to occur in persons age 60+.⁴² Deaths are also more likely to occur in neonates due to poor hygienic birth practices. Children are not at risk because tetanus bacteria produce toxins in tissue with an inadequate blood supply (i.e., elderly, diabetics). The vaccine has not been tested to modern standards.⁴³ Tetanus vaccine can be given at the time of the injury, along with tetanus immunoglobulin, so there isn't a need to receive it ahead of time.⁴⁴ **Parents should decide whether to vaccinate against tetanus, which is not contagious. There are treatments that are available at the time of injury.**

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³⁵ <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC1383764/>

³⁶ <http://www.sv40foundation.org/CPV-link.html>

³⁷ <http://www.cidrap.umn.edu/news-perspective/2010/05/second-rotavirus-vaccine-found-contain-porcine-circovirus>

³⁸ <http://www.ncbi.nlm.nih.gov/pubmed/24422678>

³⁹ <http://www.jwatch.org/fw108354/2014/01/15/newer-rotavirus-vaccines-linked-small-definite-increase>

⁴⁰ <http://www.cdc.gov/vaccines/pubs/surv-manual/chpt13-rotavirus.html>

⁴¹ <http://www.ncbi.nlm.nih.gov/pubmedhealth/PMH0012766/>

⁴² <http://www.health.state.mn.us/divs/idepc/diseases/tetanus/hcp/clinical.html>

⁴³ <http://www.vaccinationcouncil.org/2014/07/10>

⁴⁴ <http://www.webmd.com/a-to-z-guides/understanding-tetanus-prevention>