Madam Chair and members of the committee:

My name is Darcy Rapoza, and I live in Salem. I am testifying today in strong opposition to any amendment to SB 442 that would remove the non-medical vaccine exemption from Oregon statute.

Vaccinations are pharmaceutical products – products that cause injury and death for some. The United States Government has paid out more than $3 billion dollars to vaccine victims since fiscal year 1989.[1] Many more people have adverse reactions, as is reported in VAERS, the Vaccine Adverse Event Reporting System. Vaccine manufacturers and the doctors who administer vaccines are completely shielded from liability for vaccine injuries and deaths. This is due to the National Childhood Vaccine Injury Act of 1986, which gave drug companies partial liability protection through the creation of a federal vaccine injury compensation alternative to a lawsuit, and more recently, a U.S. Supreme Court case decided on February 22, 2011[2], which shielded drug companies from all liability for harm caused by vaccines mandated by government, even when companies could have made a safer vaccine but chose not to.

By removing the non-medical vaccine exemption, we are not only saying that we are ok with the current vaccine schedule, as it stands, but that we are also ok with any future vaccines that the Government deems fit to require, sight unseen, in perpetuity. Perhaps you are fine with your child or grandchild being vaccinated with the current shots on today's vaccine schedule….ok, great. However, there are hundreds of vaccines in development now including things like herpes, e. coli, smoking cessation, syphilis, and gonorrhea.[3] Are you still fine with it? Are you fine with your child or grandchild being required to be vaccinated for STD's in order to attend school? Or now, do you perhaps have an objection, such as a sincerely held religious conviction, that would make you want to decline such a shot? If the non-medical exemption is taken away from us, TOO BAD! Do you think that those types of shots would never be required for school attendance, since those types of diseases aren't communicable diseases in the same way that measles and chicken pox are? Right now in New York State, there are bills in both houses of their legislature, which would mandate the HPV vaccine, a virus primarily transmitted as an STD, for all children entering the 6th grade.[4]

The vaccination schedule has done nothing but balloon as the years have gone by. In 1983 the schedule called for a child to receive 22 doses of 7 vaccines by six years old.[5] In 1995, it was 31 doses of nine vaccines by six years old.[6] By 2000 it was 32 doses of 10 vaccines by six years old.[7] And today, the vaccine schedule is 49 doses of 14 vaccines by age six, and 69 doses of 16 vaccines by age eighteen.[8 9]

This past history makes it nearly a certainty that the federal government will continue to add more and more vaccines to the recommended schedule, and state governments will continue to mandate more and more vaccines in order to attend school or daycare. If vaccine manufacturers and others who profit from forced vaccination convince the state to take away our right to delay or decline a vaccine now, what will our future look like?

Barbara Loe Fisher, co-founder of the National Vaccine Information Center was absolutely correct when she said, "If the State can tag, track down and force citizens against their will to be

injected with biologicals of known and unknown toxicity today, there can be no limit on which individual freedoms the state can take away in the name of the greater good tomorrow."

Rights are a whole lot easier to defend, than they are to restore once they are lost. Oregonians must not lose the right to delay or decline vaccinations for non-medical reasons, simply because we don't know what the future will bring. To willingly give up our right today to say no to a future unknown medical procedure would be foolhardy in the extreme.

Even the American Medical Association's Code of Medical Ethics recognizes philosophic and religious exemptions to vaccination: "…..physicians have an obligation to accept immunization absent a recognized medical, religious, or philosophic reason not to be immunized" (emphasis added).[10]

Living in a free society as we do, there is always a delicate balancing act between rights of the individual and the rights or safety of the public at large. It is simply not possible to live in a free society, and to have it be 100% risk free. Taking away a person's right to decline a medical procedure, particularly one that carries inherent risk of injury or death, and one for which the manufacturer can't even be held liable – all in the name of the greater good – puts us on an extremely slippery slope. That's not the society that I want my precious kids growing up in.

This issue isn't left or right, Republican or Democrat. It is about personal liberty versus tyranny of Government that says it knows what is best for you and your child, regardless of your convictions. Please stand up for the freedom of Oregon parents to continue to make medical decisions for their children without having to sacrifice a quality education in the process. Please protect the non-medical vaccination exemption.

Thank you.

1. U.S. Department of Health and Human Services, National Vaccine Injury Compensation Program Statistics Report for February 2015
2. Supreme Court of the United States. Russell Bruesewitz et al v. Wyeth et al. No. 09-152. Argued October 12, 2010 – Decided February 22, 2011.
3. Vaccines, A Report on the Prevention and Treatment of Disease Through Vaccines, www.phrma.org/sites/default/files/pdf/Vaccines_2013.pdf
4. New York State Senate bill 509, introduced 1/7/15/Assembly bill 1822, introduced 1/13/15.
5. Recommended schedule for active immunization of normal infants and children, 1983. www.cdc.gov/vaccines/schedules/images/schedule1983s.jpg
6. Recommended childhood immunization schedule, January 1995. www.cdc.gov/mmwr/preview/mmwrhtml/00035471.htm
7. Recommended childhood immunization schedule, January-December 2000. www.cdc.gov/mmwr/preview/mmwrhtml/mm4902a4.htm
8. Recommended childhood immunization schedule for persons aged 0 through 18 years, 2015. http://www.cdc.gov/vaccines/schedules/downloads/child/0-18yrs-child-combined-schedule.pdf
9. National Vaccine Information Center flyer
10. American Medical Association Code of Medical Ethics, Opinion 9.133 Universal Immunization of Physicians, http://www.ama-assn.org/ama/pub/physician-resources/medical-ethics/code-medical-ethics/opinion9133.page

(1)

February 2, 2015

U.S. Department of Health and Human Services
HRSA
Health Resources and Services Administration

National Vaccine Injury Compensation Program Statistics Report
For February 2015

Petitions Filed

Fiscal Year	Total
FY 1988	24
FY 1989	148
FY 1990	1,492
FY 1991	2,718
FY 1992	189
FY 1993	140
FY 1994	107
FY 1995	180
FY 1996	84
FY 1997	104
FY 1998	120
FY 1999	411
FY 2000	164
FY 2001	216
FY 2002	957
FY 2003	2,592
FY 2004	1,214
FY 2005	735
FY 2006	325
FY 2007	410
FY 2008	417
FY 2009	397
FY 2010	448
FY 2011	386
FY 2012	401
FY 2013	503
FY 2014	633
FY 2015	232
Total	**15,747**

U.S. Department of Health and Human Services
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Adjudications[1]

Fiscal Year	Compensable	Dismissed	Total
FY 1989	9	12	21
FY 1990	100	33	133
FY 1991	141	447	588
FY 1992	166	487	653
FY 1993	125	588	713
FY 1994	162	446	608
FY 1995	160	575	735
FY 1996	162	408	570
FY 1997	189	198	387
FY 1998	144	181	325
FY 1999	98	139	237
FY 2000	125	104	229
FY 2001	86	87	173
FY 2002	104	103	207
FY 2003	56	99	155
FY 2004	62	233	295
FY 2005	60	121	181
FY 2006	69	191	260
FY 2007	82	121	203
FY 2008	147	134	281
FY 2009	134	231	365
FY 2010	180	293	473
FY 2011	265	1,370	1,635
FY 2012	261	2,439	2,700
FY 2013	366	627	993
FY 2014	357	167	524
FY 2015	127	33	160
Total	**3,937**	**9,867**	**13,804**

[1]Generally, petitions/claims are not adjudicated in the same fiscal year as filed. On average, it takes 2-3 years to adjudicate a petition/claim after it is filed.

U.S. Department of Health and Human Services
HRSA
Health Resources and Services Administration

Awards Paid[1]

Fiscal Year	Compensated[2]			Dismissed		Interim Fees		Total Outlays
	# of Awards	Petitioners' Award Amount	Attorneys' Fees/ Cost Payments	# of Payments to Attorneys	Attorneys' Fees/ Costs Payments	# of Payments to Attorneys	Attorneys' Fees/ Costs Payments	
FY 1989	6	$1,317,654.78	$54,107.14	0	$0.00	0	$0.00	$1,371,761.92
FY 1990	88	$53,252,510.46	$1,379,005.79	4	$57,699.48	0	$0.00	$54,689,215.73
FY 1991	114	$95,980,493.16	$2,364,758.91	30	$496,809.21	0	$0.00	$98,842,061.28
FY 1992	130	$94,538,071.30	$3,001,927.97	118	$1,212,677.14	0	$0.00	$98,752,676.41
FY 1993	162	$119,693,267.87	$3,262,453.06	272	$2,447,273.05	0	$0.00	$125,402,993.98
FY 1994	158	$98,151,900.08	$3,571,179.67	335	$3,166,527.38	0	$0.00	$104,889,607.13
FY 1995	169	$104,085,265.72	$3,652,770.57	221	$2,276,136.32	0	$0.00	$110,014,172.61
FY 1996	163	$100,425,325.22	$3,096,231.96	216	$2,364,122.71	0	$0.00	$105,885,679.89
FY 1997	179	$113,620,171.68	$3,898,284.77	142	$1,879,418.14	0	$0.00	$119,397,874.59
FY 1998	165	$127,546,009.19	$4,002,278.55	121	$1,936,065.50	0	$0.00	$133,484,353.24
FY 1999	96	$95,917,680.51	$2,799,910.85	117	$2,306,957.40	0	$0.00	$101,024,548.76
FY 2000	136	$125,945,195.64	$4,112,369.02	80	$1,724,451.08	0	$0.00	$131,782,015.74
FY 2001	97	$105,878,632.57	$3,373,865.88	57	$2,066,224.67	0	$0.00	$111,318,723.12
FY 2002	80	$59,799,604.39	$2,653,598.89	50	$656,244.79	0	$0.00	$63,109,448.07
FY 2003	65	$82,816,240.07	$3,147,755.12	69	$1,545,654.87	0	$0.00	$87,509,650.06
FY 2004	57	$61,933,764.20	$3,079,328.55	69	$1,198,615.96	0	$0.00	$66,211,708.71
FY 2005	64	$55,065,797.01	$2,694,664.03	71	$1,790,587.29	0	$0.00	$59,551,048.33
FY 2006	68	$48,746,162.74	$2,441,199.02	54	$1,353,632.61	0	$0.00	$52,540,994.37
FY 2007	82	$91,449,433.89	$4,034,154.37	61	$1,692,020.25	0	$0.00	$97,175,608.51
FY 2008	141	$75,716,552.06	$5,191,770.83	73	$2,511,313.26	2	$117,265.31	$83,536,901.46
FY 2009	131	$74,142,490.58	$5,404,711.98	36	$1,557,139.53	28	$4,241,362.55	$85,345,704.64
FY 2010	173	$179,387,341.30	$5,961,744.40	56	$1,886,239.95	22	$1,978,803.88	$189,214,129.53

Awards Paid[1]

Fiscal Year	Compensated[2]			Dismissed		Interim Fees		Total Outlays
	# of Awards	Petitioners' Award Amount	Attorneys' Fees/ Cost Payments	# of Payments to Attorneys	Attorneys' Fees/ Costs Payments	# of Payments to Attorneys	Attorneys' Fees/ Costs Payments	
FY 2011	251	$216,319,428.47	$9,572,042.87	403	$5,589,417.19	28	$2,001,770.91	$233,482,659.44
FY 2012	249	$163,491,998.82	$9,104,488.60	1,017	$8,621,182.32	37	$5,420,257.99	$186,637,927.73
FY 2013	375	$254,666,326.70	$13,333,179.53	703	$6,970,278.84	50	$1,454,851.74	$276,424,636.81
FY 2014	365	$202,084,196.12	$11,973,575.82	505	$6,801,345.79	38	$2,493,460.73	$223,352,578.46
FY 2015	177	$83,067,135.53	$4,474,812.40	45	$1,245,066.01	19	$1,044,486.97	$89,831,500.91
Total	**3941**	**$2,885,038,650.06**	**$121,636,170.55**	**4925**	**$65,353,100.74**	**224**	**$18,752,260.08**	**$3,090,780,181.43**

[1]"Compensated" are claims that have been paid as a result of a settlement between parties or a decision made by the U.S. Court of Federal Claims (Court). The # of awards is the number of petitioner awards paid, including the attorneys' fees/costs payments, if made during a fiscal year. However, petitioners' awards and attorneys' fees/costs are not necessarily paid in the same fiscal year as when the petitions/claims are determined compensable. "Dismissed" includes the the # of payments to attorneys and the total amount of payments for attorneys' fees/costs per fiscal year. The VICP will pay attorneys' fees/costs related to the claim, whether or not the petition/claim is awarded compensation by the Court, if certain minimal requirements are met. "Total Outlays" are the total amount of funds expended for compensation and attorneys' fees/costs from the Vaccine Injury Compensation Trust Fund by fiscal year.

[2]Due to the populations receiving vaccines added to the VICP in recent years, the proportion of adults to children seeking compensation has changed. Since influenza vaccines (vaccines administered to large numbers of adults each year) were added to the VICP in 2005, many adult claims related to that vaccine have been filed.

U.S. Department of Health and Human Services
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Claims Filed and Compensated or Dismissed by Vaccine [1]
February 2015
Vaccines Listed in Claims as Reported by Petitioners

Vaccine(s)	Filed			Compensated	Dismissed
	Injury	Death	Total		
DT	69	9	78	24	51
DTaP	374	80	454	179	203
DTaP-Hep B-IPV	62	24	86	30	34
DTaP-HIB	10	1	11	4	3
DTaP-IPV-HIB	24	16	40	6	11
DTP	3,286	696	3,982	1,270	2,706
DTP-HIB	20	8	28	4	21
Hep A-Hep B	18	0	18	9	2
Hep B-HIB	8	0	8	4	3
Hepatitis A (Hep A)	65	5	70	27	20
Hepatitis B (Hep B)	618	54	672	241	363
HIB	25	3	28	12	14
HPV	255	12	267	73	85
Influenza	1,704	84	1,788	985	155
IPV	264	14	278	8	267
Measles	143	19	162	55	107
Meningococcal	40	2	42	27	4
MMR	890	57	947	367	502
MMR-Varicella	30	1	31	15	8
MR	15	0	15	6	9
Mumps	10	0	10	1	9
Nonqualified	85	9	94	1	87
OPV	280	28	308	158	150
Pertussis	4	3	7	2	5
Pneumococcal Conjugate	41	5	46	10	26
Rotavirus	65	1	66	39	17
Rubella	190	4	194	70	123
Td	183	3	186	106	64
Tdap	227	1	228	106	12
Tetanus	97	2	99	43	37
Unspecified	5,411	8	5,419	4	4,749
Varicella	78	7	85	51	20
Grand Total	**14,591**	**1,156**	**15,747**	**3,937**	**9,867**

[1] The number of claims filed by vaccine as reported by petitioners in claims since the VICP began on October 1, 1988, and how many of those have been compensated or dismissed by the U.S. Court of Federal Claims (Court). Claims can be compensated by a settlement between parties or a decision by the Court.

[2] Claims filed for vaccines which are not covered under the VICP.

[3] Insufficient information submitted to make a determination.

This information reflects the current thinking of the United States Department of Health and Human Services on the topics addressed. This information is not legal advice and does not create or confer any rights for or on any person and does not operate to bind the Department or the public. The ultimate decision about the scope of the statutes authorizing the VICP is within the authority of the United States Court of Federal Claims, which is responsible for resolving claims for compensation under the VICP.

U.S. Department of Health and Human Services
HRSA
Health Resources and Services Administration

National Vaccine Injury Compensation Program (VICP) Adjudication Categories by Vaccine for Claims Filed Calendar Year 2006 to Present[1]

Vaccine Alleged by Petitioner[2]	No. of Doses Distributed US CY 2006 - CY 2013 (Source: CDC)[3]	Compensable			Compensable Total	Dismissed/ Non-Compensable Total	Grand Total
		Concession	Court Decision	Settlement			
DT	652,327	1		3	4	4	8
DTaP	75,888,233	12	19	75	106	78	184
DTaP-Hep B-IPV	43,929,797	4	7	18	29	38	67
DTaP-HIB	1,135,474				0	1	1
DTaP-IPV-HIB	39,590,896			6	6	11	17
DTP	0[4]		1	2	3	2	5
DTP-HIB	0[4]				0	1	1
Hep A-Hep B	11,662,755			9	9	2	11
Hep B-HIB	4,796,583	1	1	1	3	1	4
Hepatitis A (Hep A)	124,212,280	6	3	22	31	20	51
Hepatitis B (Hep B)	129,820,136	2	10	40	52	38	90
HIB	83,517,849		1	4	5	4	9
HPV	67,250,524	10	1	65	73	85	158
Influenza[5]	944,000,000	73	81	848	1,002	177	1,179
IPV	58,019,052			4	4	2	6
Measles	135,660			1	1		1
Meningococcal	58,412,363	1	2	24	27	4	31
MMR	73,441,556	17	14	56	87	74	161
MMR-Varicella	11,028,270	8		8	16	8	24
Nonqualified[6]	N/A			1	1	22	23
OPV	0	1			1	3	4

National Vaccine Injury Compensation Program (VICP) Adjudication Categories by Vaccine for Claims Filed Calendar Year 2006 to Present[1]

Vaccine Alleged by Petitioner[2]	No. of Doses Distributed US CY 2006 - CY 2013 (Source: CDC)[3]	Compensable			Compensable Total	Dismissed/ Non-Compensable Total	Grand Total
		Concession	Court Decision	Settlement			
Pneumococcal Conjugate	132,932,107		1	5	6	13	19
Rotavirus	70,719,103	3	3	15	21	6	27
Rubella	422,548		1		1		1
Td	55,742,830	5	6	50	61	16	77
Tdap	155,106,848	19	7	87	113	14	127
TETANUS	3,836,052	3		18	21	11	32
Unspecified[7]	N/A	1		2	3	549	552
Varicella	90,425,492	3	6	23	32	10	42
Grand Total	**2,236,678,735**	**170**	**164**	**1,387**	**1,721**	**1,194**	**2,915**

DEFINITIONS:

• Compensable – The injured person who filed a claim was paid money by the VICP. Compensation can be achieved through a concession by the Department of Health and Human Services (HHS), a decision on the merits of the claim by a special master or a judge of the United States Court of Federal Claims (Court), or a settlement between the parties.

• Concession: HHS concludes that a petition should be compensated based on a thorough review and analysis of the evidence, including medical records and the scientific and medical literature. The HHS review concludes that the petitioner is entitled to compensation, including a determination either that it is more likely than not that the vaccine caused the injury or the evidence supports fulfillment of the criteria of the Vaccine Injury Table. The Court also determines that the petition should be compensated.

• Court Decision: A special master or the court, within the United States Court of Federal Claims, issues a legal decision after weighing the evidence presented by both sides. HHS abides by the ultimate Court decision even if it maintains its position that the petitioner was not entitled to compensation (e.g., that the injury was not caused by the vaccine).

• For injury claims, compensable court decisions are based in part on one of the following determinations by the court:

- The evidence is legally sufficient to show that the vaccine more likely than not caused (or significantly aggravated) the injury; or

- The injury is listed on, and meets all of the requirements of, the Vaccine Injury Table, and HHS has not proven that a factor unrelated to the vaccine more likely than not caused or significantly aggravated the injury. An injury listed on the Table and meeting all Table requirements is given the legal presumption of causation. It should be noted that conditions are placed on the Table for both scientific and policy reasons.

- Settlement: The petition is resolved via a negotiated settlement between the parties. This settlement is not an admission by the United States or the Secretary of Health and Human Services that the vaccine caused the petitioner's alleged injuries, and, in settled cases, the Court does not determine that the vaccine caused the injury. A settlement therefore cannot be characterized as a decision by HHS or by the Court that the vaccine caused an injury. Claims may be resolved by settlement for many reasons, including consideration of prior court decisions; a recognition by both parties that there is a risk of loss in proceeding to a decision by the Court making the certainty of settlement more desirable; a desire by both parties to minimize the time and expense associated with litigating a case to conclusion; and a desire by both parties to resolve a case quickly and efficiently.

- Non-compensable/Dismissed – The injured person who filed a claim was ultimately not paid money.
  - Non-compensable Court decisions include the following:
    - The Court determines that the person who filed the claim did not demonstrate that the injury was caused (or significantly aggravated) by a covered vaccine or meet the requirements of the Table (for injuries listed on the Table).
    - The claim was dismissed for not meeting other statutory requirements (such as not meeting the filing deadline, not receiving a covered vaccine, and not meeting the statute's severity requirement).
    - The injured person voluntarily withdrew his or her claim.

[1]The date range for this table was selected to reflect the status of the current Program since the inclusion of influenza in July 2005, which now constitutes the majority of all VICP claims.

[2]This is the first vaccine listed by the petitioner in the claim, and other vaccines may be alleged or may form the basis of compensation.

[3]Vaccine doses are self-reported distribution data provided by US-licensed vaccine manufacturers. The data provide an estimate of the annual national distribution and do not represent vaccine administration. In order to maintain confidentiality of an individual manufacturer or brand, the data are presented in an aggregate format by vaccine type.

[4]Whole cell pertussis vaccines were not distributed during this time period.

[5]Flu doses are derived from CDC's FluFinder tracking system, which includes data provided to CDC by US-licensed influenza vaccine manufacturers as well as their first line distributors.

[6]Claims filed for vaccines which are not covered under the VICP.

[7]Insufficient information submitted by petitioner to make an initial determination. The concession was for multiple unidentified vaccines that caused abscess formation at the vaccination site(s), and the settlements were for multiple vaccines later identified in the Special Master's Decisions.

MEDICINES IN DEVELOPMENT

Vaccines

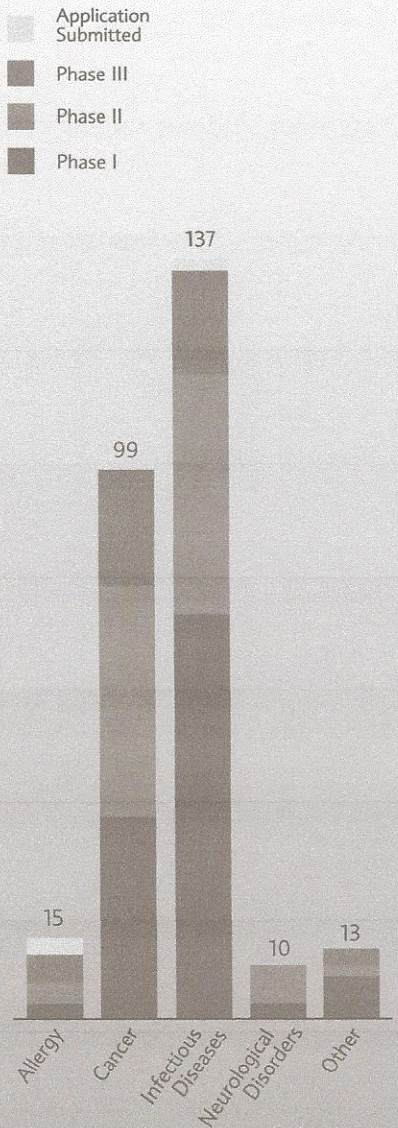
A Report on the Prevention and Treatment of Disease Through Vaccines

PRESENTED BY AMERICA'S BIOPHARMACEUTICAL RESEARCH COMPANIES

2013 REPORT

3

Vaccines in Development*



*Some vaccines are listed in more than one category.

Nearly 300 Vaccines Are in Development; Research Focuses on Prevention and Treatment

For many years, vaccines have been used to successfully prevent devastating infectious diseases such as smallpox, measles and polio. According to data from the U.S. Centers for Disease Control and Prevention (CDC), 10 infectious diseases have been at least 90 percent eradicated in the United States thanks to vaccines. This has protected millions of children and families from needless illness.

These public health triumphs illustrate the major contributions that vaccines have made in saving countless lives around the world. In the past several years, through our growing understanding of the molecular underpinnings of disease and technological advances, many new vaccines have been developed, including one against human papillomavirus (HPV) infections that can lead to cervical cancer, a vaccine to guard against the anthrax virus before exposure, and a vaccine to prevent pneumococcal infections in high-risk populations.

But vaccines are not only for preventing infectious diseases, some help the body fight a range of illnesses by activating the immune system to recognize and attack disease. In 2010, a new cancer vaccine for the treatment of prostate cancer was approved in the United States, and many more immunotherapeutic vaccines are in development.

Today, biopharmaceutical research companies are developing 271 vaccines for infectious diseases, cancer, neurological disorders, allergies and other diseases. Among the projects in development are:

- A therapeutic vaccine for **HIV infection** intended to delay disease progression.
- A monoclonal antibody vaccine that targets both pandemic and seasonal **influenza**.
- A genetically-modified vaccine designed for the treatment of **pancreatic cancer**.
- An irradiated vaccine for protection against **malaria**.

The development and regulatory path that these vaccine candidates face is complex. As with the development of all drugs, the majority of vaccines must prevail through years of clinical testing before they can be approved for use by the general public. However, advances in other scientific fields, such as genomics and manufacturing technologies, are becoming increasingly useful in the development of new vaccines. The continued efforts of researchers within biopharmaceutical companies and across the ecosystem, who are pursuing new techniques and strategies in vaccine development, create tremendous opportunities to protect against many more life-threatening diseases in the future.

Contents

PhRMA
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www.phrma.org/sites/default/files/pdf/Vaccines_2013.pdf

5

TABLE 1. Recommended schedule for active immunization of normal infants and children (See individual ACIP recommendations for details.)

Recommended age*	Vaccine(s)†	Comments
2 mo.	DTP-1,§ OPV-1¶	Can be given earlier in areas of high endemicity
4 mo.	DTP-2, OPV-2	6-wks-2-mo. interval desired between OPV doses to avoid interference
6 mo.	DTP-3	An additional dose of OPV at this time is optional for use in areas with a high risk of polio exposure
15 mo.**	MMR††	
18 mo.**	DTP-4, OPV-3	Completion of primary series
4-6 yr.§§	DTP-5, OPV-4	Preferably at or before school entry
14-16. yr	Td¶¶	Repeat every 10 years throughout life

*These recommended ages should not be construed as absolute, i.e. 2 mos. can be 6-10 weeks, etc.

†For all products used, consult manufacturer's package enclosure for instructions for storage, handling, and administration. Immunobiologics prepared by different manufacturers may vary, and those of the same manufacturer may change from time to time. The package insert should be followed for a specific product.

§DTP—Diphtheria and tetanus toxoids and pertussis vaccine.

¶OPV—Oral, attenuated poliovirus vaccine contains poliovirus types 1, 2, and 3.

**Simultaneous administration of MMR, DTP, and OPV is appropriate for patients whose compliance with medical care recommendations cannot be assured.

††MMR—Live measles, mumps, and rubella viruses in a combined vaccine (see text for discussion of single vaccines versus combination).

§§Up to the seventh birthday.

¶¶Td—Adult tetanus toxoid and diphtheria toxoid in combination, which contains the same dose of tetanus toxoid as DTP or DT and a reduced dose of diphtheria toxoid.

1983 childhood immunization schedule

22 doses of 7 vaccines by 6 years old.

6

font size.

TABLE 1. Recommended childhood immunization schedule * --United States, January 1995

Vaccine	Birth	2 Months	4 Months	6 Months	12 + Months	15 Months	18 Months	4 - 6 Years	11-12 Years	14-16 Years
Hepatitis B &	º- HB-1 --------º	º- HB-2 --------º		º- HB-3 ----------º						
Diphtheria, Tetanus, Pertussis @		DTP	DTP	DTP	º---------- DTP ----------º º- or DTaP at >= 15 months --º			DTP or DTaP	º- Td ---------º	
H. influenzae type b **		Hib	Hib	Hib	º------ Hib ------º					
Poliovirus		OPV	OPV	º- OPV ----------º				OPV		
Measles, Mumps, Rubella ++					º------ MMR ------º			MMR or MMR		

* Recommended vaccines are listed under the routinely recommended ages. Shaded bars indicate range of acceptable ages for vaccination.

\+ Vaccines recommended in the second year of life (i.e., 12-15 months of age) may be given at either one or two visits.

& Infants born to hepatitis B surface antigen (HBsAg)-negative mothers should receive the second dose of hepatitis B vaccine between 1 and 4 months of age, provided at least 1 month has elapsed since receipt of the first dose. The third dose is recommended between 6 and 18 months of age. Infants born to HBsAg-positive mothers should receive immunoprophylaxis for hepatitis B with 0.5 ml Hepatitis B Immune Globulin (HBIG) within 12 hours of birth, and 0.5 ml of either Merck Sharpe & Dohme (West Point, Pennsylvania) vaccine (Recombivax HB (R)) or of SmithKline Beecham (Philadelphia) vaccine (Engerix-B (R)) at a separate site. In these infants, the second dose of vaccine is recommended at 1 month of age and the third dose at 6 months of age. All pregnant women should be screened for HBsAg during an early prenatal visit.

@ The fourth dose of diphtheria and tetanus toxoids and pertussis vaccine (DTP) may be administered as early as 12 months of age, provided at least 6 months have elapsed since the third dose of DTP. Combined DTP-Hib products may be used when these two vaccines are administered simultaneously. Diphtheria and tetanus toxoids and acellular pertussis vaccine (DTaP) is licensed for use for the fourth and/or fifth dose of DTP in children aged >=15 months and may be preferred for these doses in children in this age group.

** Three H. influenzae type b conjugate vaccines are available for use in infants: 1) oligosaccharide conjugate Hib vaccine (HbOC) (HibTITER (R), manufactured by Praxis Biologics, Inc. {West Henrietta, New York}, and distributed by Lederle-Praxis Biologicals, {Wayne, New Jersey}); 2) polyribosylribitol phosphate-tetanus toxoid conjugate (PRP-T) (ActHIB (TM), manufactured by Pasteur Merieux Serums & Vaccins, S.A. (Lyon, France), and distributed by Connaught Laboratories, Inc. {Swiftwater, Pennsylvania}, and OmniHIB (TM), manufactured by Pasteur Merieux Serums & Vaccins, S.A., and distributed by SmithKline Beecham); and 3) Haemophilus b conjugate vaccine (Meningococcal Protein Conjugate) (PRP-OMP) (PedvaxHIB (R), manufactured by Merck Sharp & Dohme). Children who have received PRP-OMP at 2 and 4 months of age do not require a dose at 6 months of age. After the primary infant Hib conjugate vaccine series is completed, any licensed Hib conjugate vaccine may be used as a booster dose at age 12-15 months.

++ The second dose of measles-mumps-rubella vaccine should be administered EITHER at 4-6 years of age OR at 11-12 years of age.

Source: Advisory Committee on Immunization Practices, American Academy of Pediatrics, and American Academy of Family Physicians.

3.1 doses of 9 vaccines by 6 years old.

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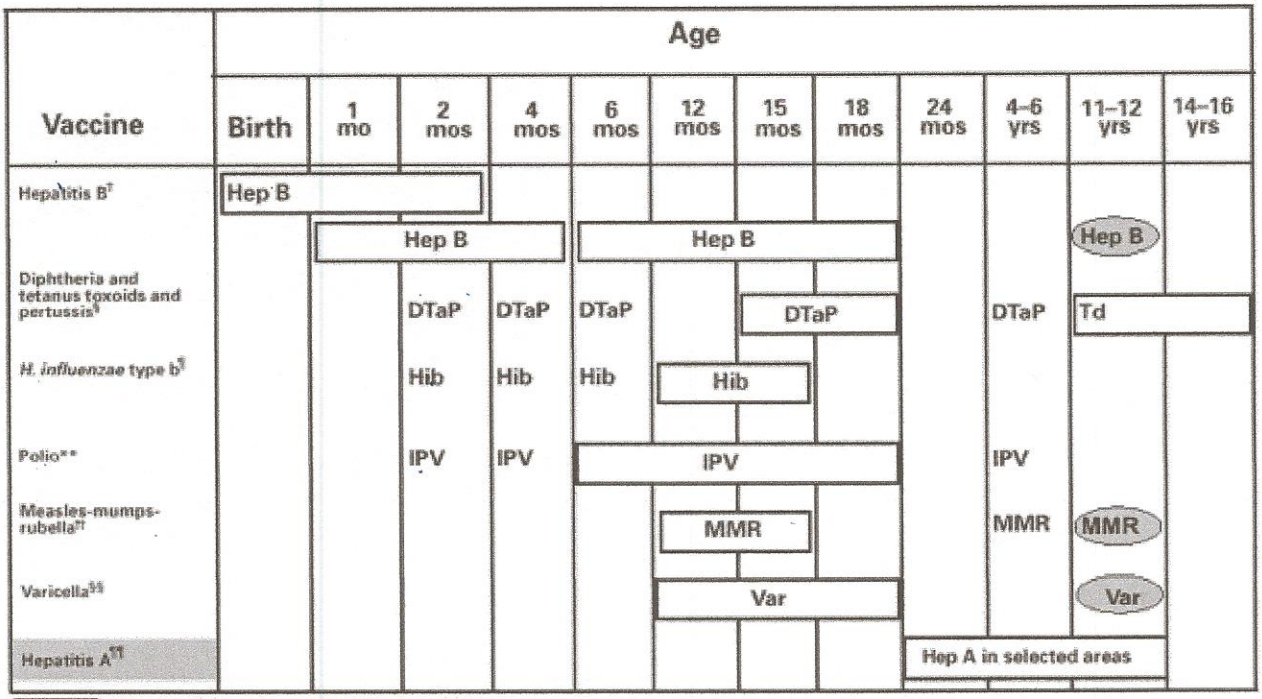
FIGURE 1. Recommended childhood immunization schedule* — United States, January–December 2000



On October 22, 1999, the Advisory Committee on Immunization Practices (ACIP) recommended that Rotashield® (rhesus rotavirus vaccine-tetravalent [RRV-TV]), the only U.S.-licensed rotavirus vaccine, no longer be used in the United States (*MMWR*, Vol. 48, No. 43, November 5, 1999). Parents should be reassured that children who received rotavirus vaccine before July 1999 are not now at increased risk for intussusception.

* This schedule indicates the recommended ages for routine administration of licensed childhood vaccines as of November 1, 1999. Any dose not given at the recommended age should be given as a "catch-up" vaccination at any subsequent visit when indicated and feasible. Additional vaccines may be licensed and recommended during the year. Licensed combination vaccines may be used whenever any components of the combination are indicated and the vaccine's other components are not contraindicated. Providers should consult the manufacturers' package inserts for detailed recommendations.

† **Infants born to hepatitis B surface antigen (HBsAg)-negative mothers** should receive the first dose of hepatitis B vaccine (Hep B) by age 2 months. The second dose should be administered at least 1 month after the first dose. The third dose should be administered at least 4 months after the first dose and at least 2 months after the second dose, but not before age 6 months. **Infants born to HBsAg-positive mothers** should receive Hep B and 0.5 mL hepatitis B immune globulin (HBIG) within 12 hours of birth at separate sites. The second dose is recommended at age 1–2 months and the third dose at age 6 months. **Infants born to mothers whose HBsAg status is unknown** should receive Hep B within 12 hours of birth. Maternal blood should be drawn at delivery to determine the mother's HBsAg status; if the HBsAg test is positive, the infant should receive HBIG as soon as possible (no later than age 1 week). **All children and adolescents (through age 18 years)** who have not been vaccinated against hepatitis B may begin the series during any visit. Providers should make special efforts to vaccinate children who were born in or whose parents were born in areas of the world where hepatitis B virus infection is moderately or highly endemic.

§ The fourth dose of diphtheria and tetanus toxoids and acellular pertussis vaccine (DTaP) can be administered as early as age 12 months, provided 6 months have elapsed since the third dose and the child is unlikely to return at age 15–18 months. Tetanus and diphtheria toxoids (Td) is recommended at age 11–12 years if at least 5 years have elapsed since the last dose of diphtheria and tetanus toxoids and pertussis vaccine (DTP), DTaP, or diphtheria and tetanus toxoids (DT). Subsequent routine Td boosters are recommended every 10 years.

¶ Three *Haemophilus influenzae* type b (Hib) conjugate vaccines are licensed for infant use. If Hib conjugate vaccine (PRP-OMP) (PedvaxHIB® or ComVax® [Merck]) is administered at ages 2 months and 4 months, a dose at age 6 months is not required. Because clinical studies in infants have demonstrated that using some combination products may induce a lower immune response to the Hib vaccine component, DTaP/Hib combination products should not be used for primary vaccination in infants at ages 2, 4, or 6 months unless approved by the Food and Drug Administration for these ages.

** To eliminate the risk for vaccine-associated paralytic poliomyelitis (VAPP), an all-inactivated poliovirus vaccine (IPV) schedule is now recommended for routine childhood polio vaccination in the United States. All children should receive four doses of IPV: at age 2 months, age 4 months, between ages 6 and 18 months, and between ages 4 and 6 years. Oral poliovirus vaccine (OPV) (if available) may be used only for the following special circumstances: 1) mass vaccination campaigns to control outbreaks of paralytic polio; 2) unvaccinated children who will be traveling in <4 weeks to areas where polio is endemic or epidemic; and 3) children of parents who do not accept the recommended number of vaccine injections. Children of parents who do not accept the recommended number of vaccine injections may receive OPV only for the third or fourth dose or both; in this situation, health-care providers should administer OPV only after discussing the risk for VAPP with parents or caregivers. During the transition to an all-IPV schedule, recommendations for the use of remaining OPV supplies in physicians' offices and clinics have been issued by the American Academy of Pediatrics (*Pediatrics*, Vol. 104, No. 6, December 1999).

†† The second dose of measles, mumps, and rubella vaccine (MMR) is recommended routinely at age 4–6 years but may be administered during any visit, provided at least 4 weeks have elapsed since receipt of the first dose and that both doses are administered beginning at or after age 12 months. Those who previously have not received the second dose should complete the schedule no later than the routine visit to a health-care provider at age 11–12 years.

§§ Varicella (Var) vaccine is recommended at any visit on or after the first birthday for susceptible children, i.e., those who lack a reliable history of chickenpox (as judged by a health-care provider) and who have not been vaccinated. Susceptible persons aged ≥13 years should receive two doses given at least 4 weeks apart.

¶¶ Hepatitis A vaccine (Hep A) is recommended for use in selected states and regions. Information is available from local public health authorities and *MMWR*, Vol. 48, No. RR-12, October 1, 1999.

Use of trade names and commercial sources is for identification only and does not constitute or imply endorsement by CDC or the U.S. Department of Health and Human Services.

Source: Advisory Committee on Immunization Practices (ACIP), American Academy of Family Physicians (AAFP), and American Academy of Pediatrics (AAP).

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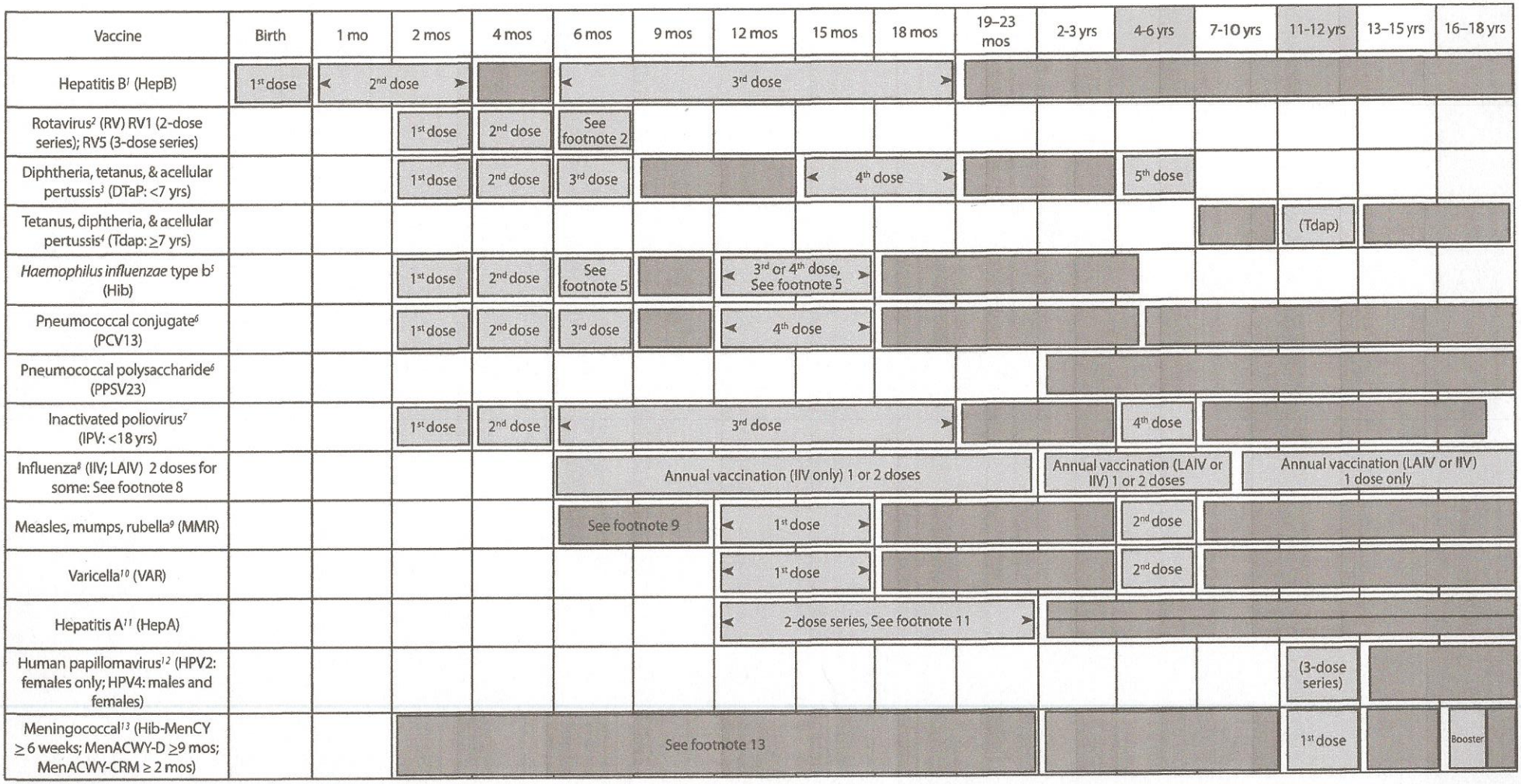
32 doses of 10 vaccines by 6 years old.
Plus Hep A in selected states & regions.

(8)

Figure 1. Recommended immunization schedule for persons aged 0 through 18 years – United States, 2015.

(FOR THOSE WHO FALL BEHIND OR START LATE, SEE THE CATCH-UP SCHEDULE [FIGURE 2]).

These recommendations must be read with the footnotes that follow. For those who fall behind or start late, provide catch-up vaccination at the earliest opportunity as indicated by the green bars in Figure 1. To determine minimum intervals between doses, see the catch-up schedule (Figure 2). School entry and adolescent vaccine age groups are shaded.



This schedule includes recommendations in effect as of January 1, 2015. Any dose not administered at the recommended age should be administered at a subsequent visit, when indicated and feasible. The use of a combination vaccine generally is preferred over separate injections of its equivalent component vaccines. Vaccination providers should consult the relevant Advisory Committee on Immunization Practices (ACIP) statement for detailed recommendations, available online at http://www.cdc.gov/vaccines/hcp/acip-recs/index.html. Clinically significant adverse events that follow vaccination should be reported to the Vaccine Adverse Event Reporting System (VAERS) online (http://www.vaers.hhs.gov) or by telephone (800-822-7967). Suspected cases of vaccine-preventable diseases should be reported to the state or local health department. Additional information, including precautions and contraindications for vaccination, is available from CDC online (http://www.cdc.gov/vaccines/recs/vac-admin/contraindications.htm) or by telephone (800-CDC-INFO [800-232-4636]).

This schedule is approved by the Advisory Committee on Immunization Practices (http//www.cdc.gov/vaccines/acip), the American Academy of Pediatrics (http://www.aap.org), the American Academy of Family Physicians (http://www.aafp.org), and the American College of Obstetricians and Gynecologists (http://www.acog.org).

NOTE: The above recommendations must be read along with the footnotes of this schedule.

49 doses of 14 vaccines by 6 yrs old. Plus Meningococcal for high risk.

For further guidance on the use of the vaccines mentioned below, see: http://www.cdc.gov/vaccines/hcp/acip-recs/index.html.

5. *Haemophilus influenzae* type b (Hib) conjugate vaccine (cont'd)

Catch-up vaccination:

- If dose 1 was administered at ages 12 through 14 months, administer a second (final) dose at least 8 weeks after dose 1, regardless of Hib vaccine used in the primary series.
- If both doses were PRP-OMP (PedvaxHIB or COMVAX), and were administered before the first birthday, the third (and final) dose should be administered at age 12 through 59 months and at least 8 weeks after the second dose.
- If the first dose was administered at age 7 through 11 months, administer the second dose at least 4 weeks later and a third (and final) dose at age 12 through 15 months or 8 weeks after second dose, whichever is later.
- If first dose is administered before the first birthday and second dose administered at younger than 15 months, a third (and final) dose should be given 8 weeks later.
- For unvaccinated children aged 15 months or older, administer only 1 dose.
- For other catch-up guidance, see Figure 2. For catch-up guidance related to MenHibrix, please see the meningococcal vaccine footnotes and also *MMWR* February 28, 2014 / 63(RR01);1-13, available at http://www.cdc.gov/mmwr/PDF/rr/rr6301.pdf.

Vaccination of persons with high-risk conditions:

- Children aged 12 through 59 months who are at increased risk for Hib disease, including chemotherapy recipients and those with anatomic or functional asplenia (including sickle cell disease), human immunodeficiency virus (HIV) infection, immunoglobulin deficiency, or early component complement deficiency, who have received either no doses or only 1 dose of Hib vaccine before 12 months of age, should receive 2 additional doses of Hib vaccine 8 weeks apart; children who received 2 or more doses of Hib vaccine before 12 months of age should receive 1 additional dose.
- For patients younger than 5 years of age undergoing chemotherapy or radiation treatment who received a Hib vaccine dose(s) within 14 days of starting therapy or during therapy, repeat the dose(s) at least 3 months following therapy completion.
- Recipients of hematopoietic stem cell transplant (HSCT) should be revaccinated with a 3-dose regimen of Hib vaccine starting 6 to 12 months after successful transplant, regardless of vaccination history; doses should be administered at least 4 weeks apart.
- A single dose of any Hib-containing vaccine should be administered to unimmunized* children and adolescents 15 months of age and older undergoing an elective splenectomy; if possible, vaccine should be administered at least 14 days before procedure.
- Hib vaccine is not routinely recommended for patients 5 years or older. However, 1 dose of Hib vaccine should be administered to unimmunized* persons aged 5 years or older who have anatomic or functional asplenia (including sickle cell disease) and unvaccinated persons 5 through 18 years of age with human immunodeficiency virus (HIV) infection.

** Patients who have not received a primary series and booster dose or at least 1 dose of Hib vaccine after 14 months of age are considered unimmunized.*

6. Pneumococcal vaccines. (Minimum age: 6 weeks for PCV13, 2 years for PPSV23)

Routine vaccination with PCV13:

- Administer a 4-dose series of PCV13 vaccine at ages 2, 4, and 6 months and at age 12 through 15 months.
- For children aged 14 through 59 months who have received an age-appropriate series of 7-valent PCV (PCV7), administer a single supplemental dose of 13-valent PCV (PCV13).

Catch-up vaccination with PCV13:

- Administer 1 dose of PCV13 to all healthy children aged 24 through 59 months who are not completely vaccinated for their age.
- For other catch-up guidance, see Figure 2.

Vaccination of persons with high-risk conditions with PCV13 and PPSV23:

- All recommended PCV13 doses should be administered prior to PPSV23 vaccination if possible.
- For children 2 through 5 years of age with any of the following conditions: chronic heart disease (particularly cyanotic congenital heart disease and cardiac failure); chronic lung disease (including asthma if treated with high-dose oral corticosteroid therapy); diabetes mellitus; cerebrospinal fluid leak; cochlear implant; sickle cell disease and other hemoglobinopathies; anatomic or functional asplenia; HIV infection; chronic renal failure; nephrotic syndrome; diseases associated with treatment with immunosuppressive drugs or radiation therapy, including malignant neoplasms, leukemias, lymphomas, and Hodgkin's disease; solid organ transplantation; or congenital immunodeficiency:
  1. Administer 1 dose of PCV13 if any incomplete schedule of 3 doses of PCV (PCV7 and/or PCV13) were received previously.
  2. Administer 2 doses of PCV13 at least 8 weeks apart if unvaccinated or any incomplete schedule of fewer than 3 doses of PCV (PCV7 and/or PCV13) were received previously.
  3. Administer 1 supplemental dose of PCV13 if 4 doses of PCV7 or other age-appropriate complete PCV7 series was received previously.
  4. The minimum interval between doses of PCV (PCV7 or PCV13) is 8 weeks.
  5. For children with no history of PPSV23 vaccination, administer PPSV23 at least 8 weeks after the most recent dose of PCV13.

6. Pneumococcal vaccines (cont'd)

- For children aged 6 through 18 years who have cerebrospinal fluid leak; cochlear implant; sickle cell disease and other hemoglobinopathies; anatomic or functional asplenia; congenital or acquired immunodeficiencies; HIV infection; chronic renal failure; nephrotic syndrome; diseases associated with treatment with immunosuppressive drugs or radiation therapy, including malignant neoplasms, leukemias, lymphomas, and Hodgkin's disease; generalized malignancy; solid organ transplantation; or multiple myeloma:
  1. If neither PCV13 nor PPSV23 has been received previously, administer 1 dose of PCV13 now and 1 dose of PPSV23 at least 8 weeks later.
  2. If PCV13 has been received previously but PPSV23 has not, administer 1 dose of PPSV23 at least 8 weeks after the most recent dose of PCV13.
  3. If PPSV23 has been received but PCV13 has not, administer 1 dose of PCV13 at least 8 weeks after the most recent dose of PPSV23.
- For children aged 6 through 18 years with chronic heart disease (particularly cyanotic congenital heart disease and cardiac failure), chronic lung disease (including asthma if treated with high-dose oral corticosteroid therapy), diabetes mellitus, alcoholism, or chronic liver disease, who have not received PPSV23, administer 1 dose of PPSV23. If PCV13 has been received previously, then PPSV23 should be administered at least 8 weeks after any prior PCV13 dose.
- A single revaccination with PPSV23 should be administered 5 years after the first dose to children with sickle cell disease or other hemoglobinopathies; anatomic or functional asplenia; congenital or acquired immunodeficiencies; HIV infection; chronic renal failure; nephrotic syndrome; diseases associated with treatment with immunosuppressive drugs or radiation therapy, including malignant neoplasms, leukemias, lymphomas, and Hodgkin's disease; generalized malignancy; solid organ transplantation; or multiple myeloma.

7. Inactivated poliovirus vaccine (IPV). (Minimum age: 6 weeks)

Routine vaccination:

- Administer a 4-dose series of IPV at ages 2, 4, 6 through 18 months, and 4 through 6 years. The final dose in the series should be administered on or after the fourth birthday and at least 6 months after the previous dose.

Catch-up vaccination:

- In the first 6 months of life, minimum age and minimum intervals are only recommended if the person is at risk of imminent exposure to circulating poliovirus (i.e., travel to a polio-endemic region or during an outbreak).
- If 4 or more doses are administered before age 4 years, an additional dose should be administered at age 4 through 6 years and at least 6 months after the previous dose.
- A fourth dose is not necessary if the third dose was administered at age 4 years or older and at least 6 months after the previous dose.
- If both OPV and IPV were administered as part of a series, a total of 4 doses should be administered, regardless of the child's current age. IPV is not routinely recommended for U.S. residents aged 18 years or older.
- For other catch-up guidance, see Figure 2.

8. Influenza vaccines. (Minimum age: 6 months for inactivated influenza vaccine [IIV], 2 years for live, attenuated influenza vaccine [LAIV])

Routine vaccination:

- Administer influenza vaccine annually to all children beginning at age 6 months. For most healthy, nonpregnant persons aged 2 through 49 years, either LAIV or IIV may be used. However, LAIV should NOT be administered to some persons, including 1) persons who have experienced severe allergic reactions to LAIV, any of its components, or to a previous dose of any other influenza vaccine; 2) children 2 through 17 years receiving aspirin or aspirin-containing products; 3) persons who are allergic to eggs; 4) pregnant women; 5) immunosuppressed persons; 6) children 2 through 4 years of age with asthma or who had wheezing in the past 12 months; or 7) persons who have taken influenza antiviral medications in the previous 48 hours. For all other contraindications and precautions to use of LAIV, see *MMWR* August 15, 2014 / 63(32);691-697 [40 pages] available at http://www.cdc.gov/mmwr/pdf/wk/mm6332.pdf.

For children aged 6 months through 8 years:

- For the 2014-15 season, administer 2 doses (separated by at least 4 weeks) to children who are receiving influenza vaccine for the first time. Some children in this age group who have been vaccinated previously will also need 2 doses. For additional guidance, follow dosing guidelines in the 2014-15 ACIP influenza vaccine recommendations, *MMWR* August 15, 2014 / 63(32);691-697 [40 pages] available at http://www.cdc.gov/mmwr/pdf/wk/mm6332.pdf.
- For the 2015–16 season, follow dosing guidelines in the 2015 ACIP influenza vaccine recommendations.

For persons aged 9 years and older:

- Administer 1 dose.

Footnotes — Recommended immunization schedule for persons aged 0 through 18 years—United States, 2015

For further guidance on the use of the vaccines mentioned below, see: http://www.cdc.gov/vaccines/hcp/acip-recs/index.html.
For vaccine recommendations for persons 19 years of age and older, see the Adult Immunization Schedule.

Additional information

- For contraindications and precautions to use of a vaccine and for additional information regarding that vaccine, vaccination providers should consult the relevant ACIP statement available online at http://www.cdc.gov/vaccines/hcp/acip-recs/index.html.
- For purposes of calculating intervals between doses, 4 weeks = 28 days. Intervals of 4 months or greater are determined by calendar months.
- Vaccine doses administered 4 days or less before the minimum interval are considered valid. Doses of any vaccine administered ≥5 days earlier than the minimum interval or minimum age should not be counted as valid doses and should be repeated as age-appropriate. The repeat dose should be spaced after the invalid dose by the recommended minimum interval. For further details, see *MMWR, General Recommendations on Immunization and Reports* / Vol. 60 / No. 2; Table 1. *Recommended and minimum ages and intervals between vaccine doses* available online at http://www.cdc.gov/mmwr/pdf/rr/rr6002.pdf.
- Information on travel vaccine requirements and recommendations is available at http://wwwnc.cdc.gov/travel/destinations/list.
- For vaccination of persons with primary and secondary immunodeficiencies, see Table 13, *"Vaccination of persons with primary and secondary immunodeficiencies,"* in *General Recommendations on Immunization* (ACIP), available at http://www.cdc.gov/mmwr/pdf/rr/rr6002.pdf.; and American Academy of Pediatrics. "Immunization in Special Clinical Circumstances," in Pickering LK, Baker CJ, Kimberlin DW, Long SS eds. *Red Book: 2012 report of the Committee on Infectious Diseases. 29th ed.* Elk Grove Village, IL: American Academy of Pediatrics.

1. Hepatitis B (HepB) vaccine. (Minimum age: birth)

Routine vaccination:

At birth:

- Administer monovalent HepB vaccine to all newborns before hospital discharge.
- For infants born to hepatitis B surface antigen (HBsAg)-positive mothers, administer HepB vaccine and 0.5 mL of hepatitis B immune globulin (HBIG) within 12 hours of birth. These infants should be tested for HBsAg and antibody to HBsAg (anti-HBs) 1 to 2 months after completion of the HepB series at age 9 through 18 months (preferably at the next well-child visit).
- If mother's HBsAg status is unknown, within 12 hours of birth administer HepB vaccine regardless of birth weight. For infants weighing less than 2,000 grams, administer HBIG in addition to HepB vaccine within 12 hours of birth. Determine mother's HBsAg status as soon as possible and, if mother is HBsAg-positive, also administer HBIG for infants weighing 2,000 grams or more as soon as possible, but no later than age 7 days.

Doses following the birth dose:

- The second dose should be administered at age 1 or 2 months. Monovalent HepB vaccine should be used for doses administered before age 6 weeks.
- Infants who did not receive a birth dose should receive 3 doses of a HepB-containing vaccine on a schedule of 0, 1 to 2 months, and 6 months starting as soon as feasible. See Figure 2.
- Administer the second dose 1 to 2 months after the first dose (minimum interval of 4 weeks), administer the third dose at least 8 weeks after the second dose AND at least 16 weeks after the **first** dose. The final (third or fourth) dose in the HepB vaccine series should be administered **no earlier than age 24 weeks**.
- Administration of a total of 4 doses of HepB vaccine is permitted when a combination vaccine containing HepB is administered after the birth dose.

Catch-up vaccination:

- Unvaccinated persons should complete a 3-dose series.
- A 2-dose series (doses separated by at least 4 months) of adult formulation Recombivax HB is licensed for use in children aged 11 through 15 years.
- For other catch-up guidance, see Figure 2.

2. Rotavirus (RV) vaccines. (Minimum age: 6 weeks for both RV1 [Rotarix] and RV5 [RotaTeq])

Routine vaccination:

Administer a series of RV vaccine to all infants as follows:

1. If Rotarix is used, administer a 2-dose series at 2 and 4 months of age.
2. If RotaTeq is used, administer a 3-dose series at ages 2, 4, and 6 months.
3. If any dose in the series was RotaTeq or vaccine product is unknown for any dose in the series, a total of 3 doses of RV vaccine should be administered.

Catch-up vaccination:

- The maximum age for the first dose in the series is 14 weeks, 6 days; vaccination should not be initiated for infants aged 15 weeks, 0 days or older.
- The maximum age for the final dose in the series is 8 months, 0 days.
- For other catch-up guidance, see Figure 2.

3. Diphtheria and tetanus toxoids and acellular pertussis (DTaP) vaccine. (Minimum age: 6 weeks. Exception: DTaP-IPV [Kinrix]: 4 years)

Routine vaccination:

- Administer a 5-dose series of DTaP vaccine at ages 2, 4, 6, 15 through 18 months, and 4 through 6 years. The fourth dose may be administered as early as age 12 months, provided at least 6 months have elapsed since the third dose. However, the fourth dose of DTaP need not be repeated if it was administered at least 4 months after the third dose of DTaP.

3. Diphtheria and tetanus toxoids and acellular pertussis (DTaP) vaccine (cont'd)

Catch-up vaccination:

- The fifth dose of DTaP vaccine is not necessary if the fourth dose was administered at age 4 years or older.
- For other catch-up guidance, see Figure 2.

4. Tetanus and diphtheria toxoids and acellular pertussis (Tdap) vaccine. (Minimum age: 10 years for both Boostrix and Adacel)

Routine vaccination:

- Administer 1 dose of Tdap vaccine to all adolescents aged 11 through 12 years.
- Tdap may be administered regardless of the interval since the last tetanus and diphtheria toxoid-containing vaccine.
- Administer 1 dose of Tdap vaccine to pregnant adolescents during each pregnancy (preferred during 27 through 36 weeks' gestation) regardless of time since prior Td or Tdap vaccination.

Catch-up vaccination:

- Persons aged 7 years and older who are not fully immunized with DTaP vaccine should receive Tdap vaccine as 1 dose (preferably the first) in the catch-up series; if additional doses are needed, use Td vaccine. For children 7 through 10 years who receive a dose of Tdap as part of the catch-up series, an adolescent Tdap vaccine dose at age 11 through 12 years should NOT be administered. Td should be administered instead 10 years after the Tdap dose.
- Persons aged 11 through 18 years who have not received Tdap vaccine should receive a dose followed by tetanus and diphtheria toxoid (Td) booster doses every 10 years thereafter.
- Inadvertent doses of DTaP vaccine:
  - If administered inadvertently to a child aged 7 through 10 years may count as part of the catch-up series. This dose may count as the adolescent Tdap dose, or the child can later receive a Tdap booster dose at age 11 through 12 years.
  - If administered inadvertently to an adolescent aged 11 through 18 years, the dose should be counted as the adolescent Tdap booster.
- For other catch-up guidance, see Figure 2.

5. *Haemophilus influenzae* type b (Hib) conjugate vaccine. (Minimum age: 6 weeks for PRP-T [ACTHIB, DTaP-IPV/Hib (Pentacel) and Hib-MenCY (MenHibrix)], PRP-OMP [PedvaxHIB or COMVAX], 12 months for PRP-T [Hiberix])

Routine vaccination:

- Administer a 2- or 3-dose Hib vaccine primary series and a booster dose (dose 3 or 4 depending on vaccine used in primary series) at age 12 through 15 months to complete a full Hib vaccine series.
- The primary series with ActHIB, MenHibrix, or Pentacel consists of 3 doses and should be administered at 2, 4, and 6 months of age. The primary series with PedvaxHib or COMVAX consists of 2 doses and should be administered at 2 and 4 months of age; a dose at age 6 months is not indicated.
- One booster dose (dose 3 or 4 depending on vaccine used in primary series) of any Hib vaccine should be administered at age 12 through 15 months. An exception is Hiberix vaccine. Hiberix should only be used for the booster (final) dose in children aged 12 months through 4 years who have received at least 1 prior dose of Hib-containing vaccine.
- For recommendations on the use of MenHibrix in patients at increased risk for meningococcal disease, please refer to the meningococcal vaccine footnotes and also to *MMWR* February 28, 2014 / 63(RR01);1-13, available at http://www.cdc.gov/mmwr/PDF/rr/rr6301.pdf.

For further guidance on the use of the vaccines mentioned below, see: http://www.cdc.gov/vaccines/hcp/acip-recs/index.html.

9. Measles, mumps, and rubella (MMR) vaccine. (Minimum age: 12 months for routine vaccination)

Routine vaccination:

- Administer a 2-dose series of MMR vaccine at ages 12 through 15 months and 4 through 6 years. The second dose may be administered before age 4 years, provided at least 4 weeks have elapsed since the first dose.
- Administer 1 dose of MMR vaccine to infants aged 6 through 11 months before departure from the United States for international travel. These children should be revaccinated with 2 doses of MMR vaccine, the first at age 12 through 15 months (12 months if the child remains in an area where disease risk is high), and the second dose at least 4 weeks later.
- Administer 2 doses of MMR vaccine to children aged 12 months and older before departure from the United States for international travel. The first dose should be administered on or after age 12 months and the second dose at least 4 weeks later.

Catch-up vaccination:

- Ensure that all school-aged children and adolescents have had 2 doses of MMR vaccine; the minimum interval between the 2 doses is 4 weeks.

10. Varicella (VAR) vaccine. (Minimum age: 12 months)

Routine vaccination:

- Administer a 2-dose series of VAR vaccine at ages 12 through 15 months and 4 through 6 years. The second dose may be administered before age 4 years, provided at least 3 months have elapsed since the first dose. If the second dose was administered at least 4 weeks after the first dose, it can be accepted as valid.

Catch-up vaccination:

- Ensure that all persons aged 7 through 18 years without evidence of immunity (see *MMWR* 2007 / 56 [No. RR-4], available at http://www.cdc.gov/mmwr/pdf/rr/rr5604.pdf) have 2 doses of varicella vaccine. For children aged 7 through 12 years, the recommended minimum interval between doses is 3 months (if the second dose was administered at least 4 weeks after the first dose, it can be accepted as valid); for persons aged 13 years and older, the minimum interval between doses is 4 weeks.

11. Hepatitis A (HepA) vaccine. (Minimum age: 12 months)

Routine vaccination:

- Initiate the 2-dose HepA vaccine series at 12 through 23 months; separate the 2 doses by 6 to 18 months.
- Children who have received 1 dose of HepA vaccine before age 24 months should receive a second dose 6 to 18 months after the first dose.
- For any person aged 2 years and older who has not already received the HepA vaccine series, 2 doses of HepA vaccine separated by 6 to 18 months may be administered if immunity against hepatitis A virus infection is desired.

Catch-up vaccination:

- The minimum interval between the two doses is 6 months.

Special populations:

- Administer 2 doses of HepA vaccine at least 6 months apart to previously unvaccinated persons who live in areas where vaccination programs target older children, or who are at increased risk for infection. This includes persons traveling to or working in countries that have high or intermediate endemicity of infection; men having sex with men; users of injection and non-injection illicit drugs; persons who work with HAV-infected primates or with HAV in a research laboratory; persons with clotting-factor disorders; persons with chronic liver disease; and persons who anticipate close personal contact (e.g., household or regular babysitting) with an international adoptee during the first 60 days after arrival in the United States from a country with high or intermediate endemicity. The first dose should be administered as soon as the adoption is planned, ideally 2 or more weeks before the arrival of the adoptee.

12. Human papillomavirus (HPV) vaccines. (Minimum age: 9 years for HPV2 [Cervarix] and HPV4 [Gardasil])

Routine vaccination:

- Administer a 3-dose series of HPV vaccine on a schedule of 0, 1-2, and 6 months to all adolescents aged 11 through 12 years. Either HPV4 or HPV2 may be used for females, and only HPV4 may be used for males.
- The vaccine series may be started at age 9 years.
- Administer the second dose 1 to 2 months after the first dose (minimum interval of 4 weeks); administer the third dose 24 weeks after the first dose and 16 weeks after the second dose (minimum interval of 12 weeks).

Catch-up vaccination:

- Administer the vaccine series to females (either HPV2 or HPV4) and males (HPV4) at age 13 through 18 years if not previously vaccinated.
- Use recommended routine dosing intervals (see Routine vaccination above) for vaccine series catch-up.

13. Meningococcal conjugate vaccines. (Minimum age: 6 weeks for Hib-MenCY [MenHibrix], 9 months for MenACWY-D [Menactra], 2 months for MenACWY-CRM [Menveo])

Routine vaccination:

- Administer a single dose of Menactra or Menveo vaccine at age 11 through 12 years, with a booster dose at age 16 years.
- Adolescents aged 11 through 18 years with human immunodeficiency virus (HIV) infection should receive a 2-dose primary series of Menactra or Menveo with at least 8 weeks between doses.
- For children aged 2 months through 18 years with high-risk conditions, see below.

Catch-up vaccination:

- Administer Menactra or Menveo vaccine at age 13 through 18 years if not previously vaccinated.
- If the first dose is administered at age 13 through 15 years, a booster dose should be administered at age 16 through 18 years with a minimum interval of at least 8 weeks between doses.
- If the first dose is administered at age 16 years or older, a booster dose is not needed.
- For other catch-up guidance, see Figure 2.

Vaccination of persons with high-risk conditions and other persons at increased risk of disease:

- Children with anatomic or functional asplenia (including sickle cell disease):
  1. Menveo
     - *Children who initiate vaccination at 8 weeks through 6 months:* Administer doses at 2, 4, 6, and 12 months of age.
     - *Unvaccinated children 7 through 23 months:* Administer 2 doses, with the second dose at least 12 weeks after the first dose AND after the first birthday.
     - *Children 24 months and older who have not received a complete series:* Administer 2 primary doses at least 8 weeks apart.
  2. MenHibrix
     - *Children 6 weeks through 18 months:* Administer doses at 2, 4, 6, and 12 through 15 months of age.
     - If the first dose of MenHibrix is given at or after 12 months of age, a total of 2 doses should be given at least 8 weeks apart to ensure protection against serogroups C and Y meningococcal disease.
  3. Menactra
     - *Children 24 months and older who have not received a complete series:* Administer 2 primary doses at least 8 weeks apart. If Menactra is administered to a child with asplenia (including sickle cell disease), do not administer Menactra until 2 years of age and at least 4 weeks after the completion of all PCV13 doses.
- Children with persistent complement component deficiency:
  1. Menveo
     - *Children who initiate vaccination at 8 weeks through 6 months:* Administer doses at 2, 4, 6, and 12 months of age.
     - *Unvaccinated children 7 through 23 months:* Administer 2 doses, with the second dose at least 12 weeks after the first dose AND after the first birthday.
     - *Children 24 months and older who have not received a complete series:* Administer 2 primary doses at least 8 weeks apart.
  2. MenHibrix
     - *Children 6 weeks through 18 months:* Administer doses at 2, 4, 6, and 12 through 15 months of age.
     - If the first dose of MenHibrix is given at or after 12 months of age, a total of 2 doses should be given at least 8 weeks apart to ensure protection against serogroups C and Y meningococcal disease.
  3. Menactra
     - *Children 9 through 23 months:* Administer 2 primary doses at least 12 weeks apart.
     - *Children 24 months and older who have not received a complete series:* Administer 2 primary doses at least 8 weeks apart.
- For children who travel to or reside in countries in which meningococcal disease is hyperendemic or epidemic, including countries in the African meningitis belt or the Hajj, administer an age-appropriate formulation and series of Menactra or Menveo for protection against serogroups A and W meningococcal disease. Prior receipt of MenHibrix is not sufficient for children traveling to the meningitis belt or the Hajj because it does not contain serogroups A or W.
- For children at risk during a community outbreak attributable to a vaccine serogroup, administer or complete an age- and formulation-appropriate series of MenHibrix, Menactra, or Menveo.
- For booster doses among persons with high-risk conditions, refer to *MMWR* 2013 / 62(RR02);1-22, available at http://www.cdc.gov/mmwr/preview/mmwrhtml/rr6202a1.htm.

For other catch-up recommendations for these persons, and complete information on use of meningococcal vaccines, including guidance related to vaccination of persons at increased risk of infection, see MMWR March 22, 2013 / 62(RR02);1-22, available at http://www.cdc.gov/mmwr/pdf/rr/rr6202.pdf.

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49 DOSES OF 14 VACCINES BEFORE AGE 6?
69 DOSES OF 16 VACCINES BY AGE 18?

Before you take the risk, find out what it is.

BIRTH (12 hours)
Hepatitis B

2 MONTHS
Diphtheria
Tetanus
Pertussis
Polio
HIB
Rotavirus
Hepatitis B
PCV

4 MONTHS
Diphtheria
Tetanus
Pertussis
Polio
HIB
Rotavirus
PCV

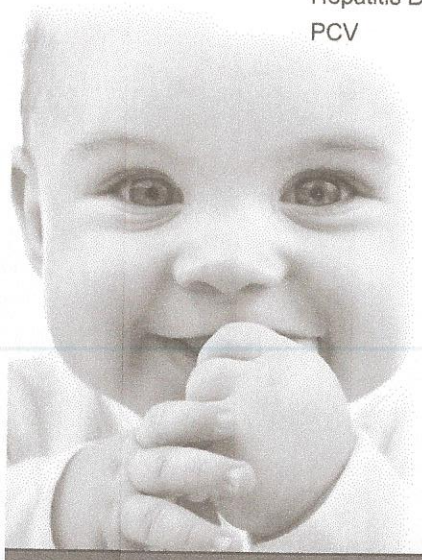
6 MONTHS
Diphtheria
Tetanus
Pertussis
Polio
Rotavirus
Hepatitis B
PCV
Influenza

7 MONTHS
Influenza

12 - 18 MONTHS
Diphtheria
Tetanus
Pertussis
Measles
Mumps
Rubella
HIB
PCV
Varicella
Hepatitis A (2)

2 - 6 YEARS
Diphtheria
Tetanus
Pertussis
Polio
Measles
Mumps
Rubella
Varicella
Influenza (5)

7-18 YEARS
Diphtheria
Tetanus
Pertussis
Influenza (12)
HPV (3)
Meningococcal (2)



VACCINE INGREDIENTS: Different vaccines contain different ingredients including lab altered live or inactivated viruses and bacteria, chemicals, metals, proteins, antibiotics and human, animal and insect DNA and RNA. Learn more at NVIC.org.

National Vaccine Information Center | 21525 Ridgetop Circle, Suite 100 | Sterling, Virginia 20166

National Vaccine Information Center
www.NVIC.org

If You Vaccinate Your Child,

Learn How to Recognize the Signs and Symptoms of Vaccine Reactions*

VACCINE REACTIONS	MOTHER'S DESCRIPTIONS
High Fever (over 103° F)	"His temperature was 105 degrees. I had to put cool towels on him to bring the fever down."
Skin (hives, rashes, swelling)	"There was a big, hot swollen lump at the site of the shot that stayed for weeks."
High Pitched Screaming	"It was a pain cry, a shrill scream and lasted for hours and nothing would help."
Collapse/Shock	"She turned white with a blue tinge around her mouth and went completely limp."
Excessive Sleepiness	"He passed out and we couldn't wake him to feed or do anything for over 12 hours."
Convulsion	"Her eyes twitched, her chin trembled, her body went rigid and then would shake."
Brain Inflammation	"He just laid in his crib with his eyes wide open then would arch his back and scream and go un conscious. Now he has seizures."
Behavior Changes	"She won't sleep or eat. She throws herself down and screams for no reason. She was sweet and happy and is now out of control. She changed into a totally different child."
Mental/Physical Regression	"My 18 month old son stopped talking and walking after those shots. He developed severe allergies, constant diarrhea, ear infections and was sick all the time."

Other reported vaccine reactions include: loss of muscle control, paralysis, regressive autism, asthma, arthritis, blood disorders, diabetes, Guillain Barre syndrome, sudden death.

Call a doctor immediately or go to an emergency room if symptoms of serious vaccine reaction complications or dramatic changes in physical, mental, or emotional behavior occur after vaccination.

NATIONAL CHILDHOOD VACCINE INJURY ACT OF 1986

Under the federal vaccine injury compensation program (VICP), more than $2.5 billon has been paid to vaccine injured individuals, as well as to families, whose children have died after vaccination in the U.S.

REPORT VACCINE REACTIONS

Serious vaccine reactions should be documented in medical records and promptly reported to the federal Vaccine Adverse Events Reporting System (VAERS).

LEARN MORE

Go to NVIC.org to learn more about signs and symptoms of infectious diseases and vaccine reactions; how to report vaccine reactions; how to apply for federal vaccine injury compensation; and how to protect your legal right to informed consent to vaccination in America.

Vaccination.

Your health. Your family. Your choice.

Is the Childhood Vaccine Schedule Safe?

An epidemic of chronic disease and disability is plaguing America's children, who are the most highly vaccinated children in the world and also among the most chronically ill and disabled. Today, the Centers for Disease Control (CDC) states that 1 child in 6 in America suffers with learning disabilities while millions more suffer with asthma, diabetes and other chronic allergic and autoimmune diseases. The epidemic of chronic disease and disability among children has increased dramatically in the past five decades.

U.S. CHILD CHRONIC DISEASE INCREASES

1976: 1 child in 30 was learning disabled	→	***2013:*** 1 child in 6 is learning disabled.
1980: 1 child in 27 had asthma	→	***2013:*** 1 child in 9 has asthma.
1990's: 1 child in 555 developed autism	→	***2013:*** 1 child in 50 develops autism.
2001: 1 child in 500 had diabetes	→	***2013:*** 1 child in 400 has diabetes.

THREE TIMES AS MANY VACCINATIONS FOR CHILDREN

1953: CDC recommended 16 doses of 4 vaccines (smallpox, DPT) between two months and age six.

1983: CDC recommended 23 doses of 7 vaccines (DPT, MMR, polio) between two months and age six.

2013: CDC recommended 49 doses of 14 vaccines between day of birth and age six and 69 doses of 16 vaccines between day of birth and age 18.

MULTIPLE VACCINATIONS GIVEN SIMULTANEOUSLY

In 1983, the CDC directed doctors to give a child no more than 4 vaccines (DPT, polio) simultaneously. By 2013, the CDC directed that a child can receive 8 or more vaccines at once.

The Institute of Medicine published a report in 2013 stating that *"key elements of the entire [child vaccine] schedule – the number, frequency, timing, order and age of administration of vaccines – have not been systematically examined in research studies."*

VACCINATIONS DURING PREGNANCY

A new CDC policy directs doctors to give pregnant women one dose of influenza vaccine in any trimester and one dose of pertussis containing Tdap vaccine after 20 weeks during every pregnancy. The U.S. Food and Drug Administration (FDA) has determined that there are no adequate, well controlled studies conducted in pregnant women to determine if it is safe for the developing fetus or pregnant woman to receive Tdap and Influenza vaccines during pregnancy.

National Vaccine Information Center

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AMA AMERICAN MEDICAL ASSOCIATION

Opinion 9.133 Routine Universal Immunization of Physicians

As professionals committed to promoting the welfare of individual patients and the health of the public and to safeguarding their own and their colleagues' well-being, physicians have an ethical responsibility to take appropriate measures to prevent the spread of infectious disease in health care settings. Conscientious participation in routine infection control practices, such as hand washing and respiratory precautions is a basic expectation of the profession. In some situations, however, routine infection control is not sufficient to protect the interests of patients, the public, and fellow health care workers.

In the context of a highly transmissible disease that poses significant medical risk for vulnerable patients or colleagues, or threatens the availability of the health care workforce, particularly a disease that has potential to become epidemic or pandemic, and for which there is an available, safe, and effective vaccine, physicians have an obligation to:

(a) Accept immunization absent a recognized medical, religious, or philosophic reason to not be immunized.

(b) Accept a decision of the medical staff leadership or health care institution, or other appropriate authority to adjust practice activities if not immunized (e.g., wear masks or refrain from direct patient care). It may be appropriate in some circumstances to inform patients about immunization status. (I, II)

Issued June 2011 based on the report "Routine Universal Immunization of Physicians for Vaccine-Preventable Disease," adopted November 2010.