

# Read the Fine Print: Vaccine Package Inserts Reveal Hundreds of Medical Conditions Linked to Vaccines



*By the Children's Health Defense Team*

In March 2015, Dr. Anthony Fauci—the career National Institutes of Health official elevated by the media to the status of COVID-19 Grand Poobah—told PBS's *Frontline* with a straight face that risks from vaccines are “almost nonmeasurable.” Fauci then proceeded to downplay every potential vaccine risk proposed by the interviewer, stating that each had “no basis in reality.” Having served at the helm of the National Institute of Allergy and Infectious Diseases (NIAID) since 1984, Fauci surely was aware then, and is aware now, that the National Vaccine Injury Compensation Program established in the late 1980s has paid out billions of dollars to the vaccine-injured: \$4.3 billion as of April 1, 2020. Did Fauci feel that he could get away with making such dismissive statements because he knew about the Harvard study from 2010 showing that fewer than 1% of vaccine adverse events get reported—and what isn't reported can't be measured?

**All package inserts (made available online by both the FDA and vaccine companies) contain a section on Postmarketing Experience (Section 6.2) that lists adverse events “spontaneously reported in the US and other countries” after the vaccine’s licensure.**

Vaccines belong to the class of pharmaceutical products called biologics, products that allergy experts widely recognize for their “potential to cause allergic hypersensitivity reactions,” among other adverse effects. Is Dr. Fauci—director of an institution focused on allergies and immunology—unaware that the package inserts of at least 22 vaccines list allergic hypersensitivity reactions as an adverse event, and

that the inserts of at least 31 vaccines list post-vaccine anaphylactic reactions?

The fact is that vaccine package inserts are one of the few available sources of detailed information that consumers can turn to when they want to sidestep official stonewalling and learn about the more than 200 adverse events reported for vaccines given to children and adolescents. All package inserts (made available online by both the FDA and vaccine companies) contain a section on Postmarketing Experience (Section 6.2) that lists adverse events “spontaneously reported in the US and other countries” after the vaccine’s licensure. Manufacturers include adverse events in the list on the basis of severity, frequency of reporting and strength of evidence for a causal relationship to the vaccine. They also include adverse events that may not have been detected during the vaccine’s clinical trials.

**... vaccines—promoted for the prevention of 13 illnesses—have yielded postmarketing reports of at least 217 adverse medical outcomes, including death.**

### *Shining a light on the fine print*

To facilitate parents’ use of the information buried in small print in the package inserts, Children’s Health Defense has conducted a comprehensive review of the adverse events reported in Section 6.2 for all vaccines currently included in the U.S. childhood and adolescent vaccine schedule. The review includes 38 vaccine brands produced by 8 different manufacturers to protect against diphtheria, *Haemophilus influenzae* type b, hepatitis A, hepatitis B, human papillomavirus, influenza, meningococcal infection, pertussis, pneumococcal infection, polio, rotavirus, tetanus and varicella (Table 1). According to the information compiled from the inserts, these vaccines—promoted for the prevention of 13 illnesses—have yielded postmarketing reports of **at least 217 adverse medical outcomes, including death** (Table 2).

There are several things to note about the information presented in Table 2. First, while we used the verbatim insert terminology for each disorder and also largely stuck to the disease groupings in the package inserts, we added two categories—allergic and autoimmune disorders—that the inserts surprisingly omit. (The

package inserts lump allergic reactions in with “immune system disorders.”) Second, there are a number of disorders that fit in more than one category; in those instances, we have included them (with an asterisk\*) in both places (while counting them once). Third, the table only includes those adverse events that manufacturers decided to report in the inserts—but other adverse events are not only possible but likely, due to the widespread problem of underreporting. Notably, none of the package inserts include any mention of prevalent, childhood-onset neurodevelopmental disorders like tics or autism that published, peer-reviewed studies have linked to vaccines.

**...the Pentacel vaccine (which contains a Hib component) can produce “invasive Hib disease”; the RotaTeq vaccine (for rotavirus) is associated with “transmission of vaccine virus strains to the unvaccinated”; and some influenza vaccines trigger influenza.**

### *Themes*

As readers peruse Table 2, they may notice the following themes:

- ▶ **Every single vaccine on the childhood/adolescent vaccine schedule is responsible for at least one adverse event.** For example, as already noted, roughly four out of five vaccines (82%) are associated with reports of anaphylactic reactions. The incidence of anaphylaxis has been climbing in the U.S. for several decades. Medications are the top known triggers of anaphylaxis, while another 39% of anaphylaxis cases are idiopathic, meaning that the cause is “unknown.”
- ▶ **Vaccines can cause the very illnesses**—or adverse consequences of those illnesses—that they are supposed to prevent. In the era of measles hype and hysteria, it is particularly important to point out that both MMR vaccines—MMR-II and ProQuad—are failing to prevent “atypical measles” (both vaccines), “measles” (ProQuad), “measles-like rash” (MMR-II) and “skin infections” (ProQuad). Likewise, the package inserts report “varicella” and “varicella-like rash” in the aftermath of vaccination with Varivax and ProQuad (which combines varicella with MMR). Equally concerning, the MMR-II and ProQuad vaccines—which

have shifted mumps from a noneventful childhood illness to a fertility-endangering condition afflicting adolescents and adults—have produced reports of serious testicular problems (epididymitis and orchitis). Table 2 also shows that the Pentacel vaccine (which contains a Hib component) can produce “invasive Hib disease”; the RotaTeq vaccine (for rotavirus) is associated with “transmission of vaccine virus strains to the unvaccinated”; and some influenza vaccines trigger influenza.

▶ **Vaccines can also cause other serious infections.**

For example, the risky MMR-II, ProQuad and Varivax trio is linked to “pneumonia” and “pulmonary congestion,” the Infanrix and Pediarix vaccines are associated with “respiratory tract infections” and seven different vaccines are associated with various forms of meningitis. Ironically (or perhaps not), pneumonia and meningitis are the targets of the pneumococcal and meningococcal vaccines.

▶ **Vaccine adverse events affect numerous body systems,** including the immune and nervous systems.

Although the longest list of adverse impacts—41—is for effects on the nervous system, the wide-ranging list also shows effects on the blood, connective tissue, ears, eyes, gastrointestinal system, heart, liver, lymph nodes, musculoskeletal system, respiratory system, skin and more.

**Dr. Fauci himself might want to take note of the fact that companies like Johnson & Johnson, one of those rushing to develop a coronavirus vaccine, have been censured by the Department of Justice for drug marketing fraud that exposed children and the elderly to serious side effects, including death.**

## **Measurable and often unsafe**

All pharmaceutical products come with potential side effects, and vaccines are no exception. For Dr. Fauci to describe the adverse events associated with vaccines as “almost nonmeasurable”—when they are not only described in package inserts but tracked in postmarketing surveillance systems such as the U.S. Vaccine Adverse Event Reporting System (VAERS), the European EudraVigilance system and the World Health Organization’s VigiBase system—is not only disingenuous but unethical. Given that Dr. Fauci’s wife is a senior NIH bioethicist, the NIAID director’s ethically murky eagerness to deemphasize the prevalence and significance of vaccine adverse events is surprising.

As the COVID-19 situation has brought Fauci into the limelight as “explainer-in-chief” of the epidemic—and proponent-in-chief of patentable vaccines that will use untested technologies while leapfrogging over ordinary vaccine development protocols—we would do well to query Fauci’s five-year-old throwaway remarks about vaccine safety. Dr. Fauci himself might want to take note of the fact that companies like Johnson & Johnson, one of those rushing to develop a coronavirus vaccine, have been censured by the Department of Justice for drug marketing fraud that exposed children and the elderly to “serious side effects, including death.”

Much has been made of Fauci’s, NIAID’s and the NIH’s cozy entanglements with Bill Gates, the Bill & Melinda Gates Foundation and the Gates-Foundation-created Coalition for Epidemic Preparedness Innovations (CEPI), particularly in light of the massive Gates Foundation and CEPI funding being directed toward coronavirus vaccines that the NIH is also supporting. Gates recently called for digital “certificates” showing who has received an eventual coronavirus vaccine and also made veiled statements that “you don’t want people moving around the world” *unless* they have received a vaccine. In that context, Fauci’s additional remarks in the 2015 *Frontline* interview take on somewhat ominous overtones. The good doctor stated that while “there’s never a situation where someone is going to tie you down and vaccinate you . . . you don’t want the respect for autonomy of people to get in the way of a public health mandate.”

**Table 1. Vaccine package inserts reviewed**

TYPE OF VACCINE	BRAND NAME	MANUFACTURER
<b>Vaccines containing diphtheria, tetanus and pertussis components</b>	<b>Adacel</b> (Tdap)	Sanofi Pasteur
	<b>Boostrix</b> (Tdap)	GlaxoSmithKline (GSK)
	<b>Daptacel</b> (DTaP)	Sanofi
	<b>Diphtheria and Tetanus Toxoids Adsorbed</b> (DT)	Sanofi
	<b>Infanrix</b> (DTaP)	GSK
	<b>Kinrix</b> (DTaP-IPV)	GSK
	<b>Pediarix</b> (DTaP-HepB-IPV)	GSK
	<b>Pentacel</b> (DTaP-IPV/Hib)	Sanofi
	<b>Quadracel</b> (DTaP-IPV)	Sanofi
	<b>Tdvax</b> (Td)	MassBiologics
<b>Tenivac</b> (Td)	Sanofi	
<b>Haemophilus influenzae type b vaccines</b>	<b>ActHIB</b> (Hib)	Sanofi
	<b>Hiberix</b> (Hib)	GSK
	<b>PedvaxHIB</b> (Hib)	Merck
<b>Hepatitis vaccines</b>	<b>Engerix-B</b> (HepB)	GSK
	<b>Havrix</b> (HepA)	GSK
	<b>Recombivax HB</b> (HepB)	Merck
	<b>Twinrix</b> (HepA/HepB)	GSK
	<b>Vaqta</b> (HepA)	Merck
<b>Human papillomavirus (HPV) vaccines</b>	<b>Gardasil</b>	Merck
	<b>Gardasil 9</b>	Merck
<b>Influenza vaccines</b>	<b>Afluria Quadrivalent</b>	Seqirus
	<b>Fluarix</b>	GSK
	<b>Flublok Quadrivalent</b> (age 18 and older)	Protein Sciences Corporation
	<b>Flucelvax</b>	Seqirus
	<b>Flulaval Quadrivalent</b>	GSK
	<b>FluMist</b>	AstraZeneca
	<b>Fluzone Quadrivalent</b>	Sanofi
<b>Meningococcal vaccines</b>	<b>Bexero</b>	GSK
	<b>Trumenba</b>	Pfizer
<b>Measles-mumps-rubella (MMR) and MMR+varicella vaccines</b>	<b>MMR-II</b> (MMR)	Merck
	<b>Proquad</b> (MMRV)	Merck
<b>Pneumococcal vaccines</b>	<b>Pevnar-13</b>	Pfizer
	<b>Pneumovax-23</b>	Merck
<b>Inactivated polio vaccine (IPV)</b>	<b>IPOL</b> (IPV)	Sanofi
<b>Rotavirus vaccines</b>	<b>Rotarix</b>	GSK
	<b>RotaTeq</b>	Merck
<b>Varicella vaccine</b>	<b>Varivax</b>	Merck

**Table 2. Adverse events reported in package inserts, by body system\***

[Note: Medical conditions with asterisks appear in more than one category.]

BODY SYSTEM	MEDICAL DISORDER	VACCINES REPORTING DISORDER
<b>Allergic (5)</b>	Allergic reactions/hypersensitivity*	ActHIB, Adacel, Afluria, Bexero, Boostrix, Daptacel, Engerix-B, Fluarix, Flublok, FluMist, Fluzone, Hiberix, Infanrix, IPOL, Kinrix, Pediarix, Pentacel, Quadracel, Recombivax, Tenivac, Trumenba, Twinrix
	Anaphylactic and anaphylactoid reactions, including shock*	ActHIB, Adacel, Afluria, Bexero, Boostrix, Daptacel, Engerix-B, Fluarix, Flublok, Flucelvax, Flulaval, FluMist, Fluzone, Havrix, Hiberix, Infanrix, IPOL, Kinrix, MMR-II, Pediarix, Pentacel, Pneumovax-23, Prevnar-13, ProQuad, Quadracel, Recombivax, RotaTeq, Tenivac, Trumenba, Twinrix, Varivax
	Angioedema*	ActHIB, Adacel, Boostrix, Daptacel, Engerix-B, Fluarix, Flucelvax, Flulaval, FluMist, Fluzone, Havrix, Hiberix, Infanrix, Kinrix, MMR-II, Pediarix, PedvaxHIB, Pneumovax-23, Prevnar-13, ProQuad, RotaTeq, Tenivac, Twinrix, Varivax
	Serum sickness*	Afluria, Engerix-B, Fluarix, Havrix, Pneumovax-23, Recombivax, Twinrix
	Urticaria* [ <i>hives</i> ]	ActHIB, Adacel, Afluria, Boostrix, DT, Engerix-B, Fluarix, Flucelvax, Flulaval, FluMist, Fluzone, Hiberix, Infanrix, IPOL, Kinrix, MMR-II, Pediarix, Pentacel, Pneumovax-23, Prevnar-13, Quadracel, Recombivax, RotaTeq, Tenivac, Twinrix
<b>Autoimmune (7)</b>	Diabetes mellitus*	MMR-II
	Guillain-Barré syndrome*	Adacel, Afluria, Engerix-B, Fluarix, Flulaval, FluMist, Fluzone, Havrix, MMR-II, PedvaxHIB, Pneumovax-23, ProQuad, Recombivax, Tenivac, Vaqta, Varivax
	Kawasaki disease* [ <i>blood vessel disease</i> ]	Rotarix, RotaTeq
	Lupus-like syndrome*	Recombivax
	Multiple sclerosis (or MS exacerbation)*	Engerix-B, Havrix, Recombivax, Twinrix
	Pancreatitis*	Gardasil/Gardasil 9, MMR-II
	Systemic lupus erythematosus*	Recombivax
<b>Blood/lymphatic system (10)</b>	Anemia, aplasic or hemolytic	Gardasil/Gardasil 9, Pneumovax-23, ProQuad, Varivax
	Epistaxis [ <i>nosebleed</i> ]	FluMist, ProQuad
	Extravasation [ <i>blood vessel leakage</i> ]	ProQuad
	Hematochezia [ <i>bloody stools</i> ]	ProQuad, Rotarix, RotaTeq
	Increased erythrocyte sedimentation rate	Recombivax
	Leukocytosis [ <i>increased white blood cells</i> ]	MMR-II, Pneumovax-23
	Lymphadenitis [ <i>swollen lymph nodes</i> ]	Boostrix, Pneumovax-23, ProQuad
	Lymphadenopathy, including regional	Boostrix, Daptacel, DT, Fluarix, Flulaval, Fluzone, Gardasil/Gardasil 9, Infanrix, IPOL, Kinrix, MMR-II, PedvaxHIB, Pneumovax-23, Prevnar-13, ProQuad, Tenivac
	Thrombocytopenia [ <i>low platelets</i> ]	Afluria, Engerix-B, Fluzone, Havrix, Infanrix, Kinrix, MMR-II, Pneumovax-23, ProQuad, Recombivax, Twinrix, Vaqta, Varivax
	Thrombocytopenic purpura, idiopathic	Gardasil/Gardasil 9, Rotarix, Twinrix, Varivax



<b>Cardiac (6)</b>	Cyanosis* [ <i>bluish discoloration, low oxygen</i> ]	Daptacel, Hiberix, Infanrix, Pediarix, Pentacel, Prevnar-13, Quadracel
	Hypotension	Adacel
	Myocarditis [ <i>heart muscle inflammation</i> ]	Adacel, Boostrix
	Palpitations	Engerix-B, Twinrix
	Pericarditis [ <i>pericardial inflammation</i> ]	FluMist
	Tachycardia [ <i>abnormally high heart rate</i> ]	Engerix-B, Fluarix, Recombivax, Twinrix
<b>Congenital (1)</b>	Congenital anomaly	Havrix
<b>Death (2)</b>	Death	Gardasil/Gardasil 9, MMR-II, Rotarix, RotaTeq
	Sudden Infant Death Syndrome (SIDS)	Infanrix
<b>Ear/labyrinth (5)</b>	Ear pain	Engerix-B, Infanrix, ProQuad, Twinrix
	Nerve deafness	MMR-II, ProQuad
	Otitis media	MMR-II
	Tinnitus	Engerix-B, Recombivax, Twinrix
	Vertigo	Engerix-B, Fluarix
<b>Eye (15)</b>	Conjunctivitis	Engerix-B, Fluarix, MMR-II, Recombivax, Twinrix
	Eye irritation	Fluarix, ProQuad
	Eye pain	Fluarix, Flulaval
	Eye redness	Fluarix
	Eye swelling	Bexero, Fluarix
	Eyelid swelling	Fluarix, ProQuad
	Keratitis [ <i>corneal inflammation</i> ]	Engerix-B
	Ocular hyperemia [ <i>eye inflammation</i> ]	Fluzone
	Ocular palsies* [ <i>nerve damage</i> ]	MMR-II, ProQuad
	Optic neuritis/neuropathy, papillitis* [ <i>inflammation of optic nerve</i> ]	Engerix-B, Fluzone, MMR-II, ProQuad, Recombivax, Twinrix
	Photophobia [ <i>light intolerance</i> ]	Flulaval
	Retinitis, necrotizing [ <i>inflammation</i> ]	MMR-II, ProQuad, Varivax
	Retrobulbar neuritis [ <i>nerve damage</i> ]	MMR-II, ProQuad
	Uveitis [ <i>eye inflammation</i> ]	Recombivax
	Visual disturbances	Engerix-B, Recombivax, Twinrix
<b>Gastrointestinal (13)</b>	Abdominal pain, discomfort	Fluarix, ProQuad
	Candidiasis*	ProQuad
	Constipation	Recombivax
	Diarrhea	Daptacel, FluMist, MMR-II, Pediarix, Pentacel
	Dyspepsia [ <i>indigestion</i> ]	Engerix-B, Twinrix
	Dysphagia [ <i>swallowing difficulties</i> ]	Flulaval
	Gastroenteritis	Rotarix, RotaTeq
	Intussusception, including recurrent/fatal	Rotarix, RotaTeq
	Mouth ulcers	ProQuad
	Nausea	Daptacel, DT, Fluarix, FluMist, Gardasil/Gardasil 9, MMR-II, Pneumovax-23, Tdvax
	Pancreatitis*	Gardasil/Gardasil 9, MMR-II
	Swelling of mouth, throat or tongue	Fluarix

	Vomiting	Flulaval, FluMist, Fluzone, Gardasil/Gardasil 9, MMR-II, Pediarix, Pentacel, Pneumovax-23, Tenivac
<b>General and injection site (20)</b>	Abnormal gait	Flulaval
	Apathy	ProQuad
	Asthenia [ <i>fatigue, weakness</i> ]	Fluarix, Flulaval, Fluzone, Gardasil/Gardasil 9, Infanrix, Pediarix, Tenivac
	Body aches	Fluarix
	Chest pain	Fluarix, Flulaval, Fluzone
	Chills	Fluarix, Gardasil/Gardasil 9, Havrix, Twinrix
	Decreased limb mobility	Pneumovax-23
	Feeling hot	Fluarix
	Fever	MMR-II, Pneumovax-23
	Injected limb—extensive swelling	ActHIB, Bexero, Hiberix
	Injection site abscess	Adacel, Daptacel, Fluarix, Flulaval, PedvaxHIB, Pentacel, Quadracel
	Injection site bruising	Adacel, Flulaval
	Injection site cellulitis	Afluria, Daptacel, Fluarix, Flulaval, Pediarix, Quadracel, Tenivac
	Injection site reactions (mass, pain, warmth)	Adacel, Afluria, Bexero, Boostrix, Daptacel, DT, Engerix-B, Fluarix, Flucelvax, Flulaval, Havrix, Hiberix, Infanrix, IPOL, Kinrix, MMR-II, Pediarix, Pentacel, Pneumovax-23, Prevnar-13, ProQuad, Quadracel, Tdvax, Tenivac, Twinrix
	Injection site rash	Daptacel, Flulaval, IPOL, Prevnar-13
	Listlessness	Quadracel
	Malaise	Gardasil/Gardasil 9, MMR-II, Pneumovax-23, Tdvax, Twinrix
	Peripheral edema	ActHIB, MMR-II, Pneumovax-23, ProQuad, Tdvax, Tenivac, Varivax
Pyrexia [ <i>fever</i> ]	Tdvax	
Swelling	MMR-II, ProQuad	
<b>Hepatobiliary/liver (3)</b>	Elevation of liver enzymes	Recombivax
	Hepatitis	Havrix, Twinrix
	Jaundice	Havrix, Twinrix
<b>Immune system (5)</b>	Allergic reactions/hypersensitivity*	ActHIB, Adacel, Afluria, Bexero, Boostrix, Daptacel, Engerix-B, Fluarix, Flublok, FluMist, Fluzone, Hiberix, Infanrix, IPOL, Kinrix, Pediarix, Pentacel, Quadracel, Recombivax, Tenivac, Trumenba, Twinrix
	Anaphylactic and anaphylactoid reactions, including shock*	ActHIB, Adacel, Afluria, Bexero, Boostrix, Daptacel, Engerix-B, Fluarix, Flublok, Flucelvax, Flulaval, FluMist, Fluzone, Havrix, Hiberix, Infanrix, IPOL, Kinrix, MMR-II, Pediarix, Pentacel, Pneumovax-23, Prevnar-13, ProQuad, Quadracel, Recombivax, RotaTeq, Tenivac, Trumenba, Twinrix, Varivax
	Angioedema,* angioneurotic edema	ActHIB, Adacel, Boostrix, Daptacel, Engerix-B, Fluarix, Flucelvax, Flulaval, FluMist, Fluzone, Havrix, Hiberix, Infanrix, Kinrix, MMR-II, Pediarix, PedvaxHIB, Pneumovax-23, Prevnar-13, ProQuad, RotaTeq, Tenivac, Twinrix, Varivax
	Edema	Adacel
	Serum sickness*	Afluria, Engerix-B, Fluarix, Havrix, Pneumovax-23, Recombivax, Twinrix

<b>Infections and infestations (29)</b>	Atypical measles	MMR-II, ProQuad
	Bronchitis	Infanrix, ProQuad
	Candidiasis*	ProQuad
	Cellulitis	Daptacel, Infanrix, Pneumovax-23, ProQuad, Tdvax, Varivax
	Early-onset Hib disease	PedvaxHIB
	Herpes simplex	ProQuad
	Herpes zoster [ <i>shingles</i> ]	Engerix-B, ProQuad, Recombivax, Twinrix, Varivax
	Infection	ProQuad
	Influenza, influenza-like illness	Afluria, Flulaval, Havrix, ProQuad
	Invasive Hib disease	Pentacel
	Kawasaki disease* [ <i>blood vessel disease</i> ]	Rotarix, RotaTeq
	Laryngitis	Flulaval
	Measles	ProQuad
	Measles-like rash	MMR-II
	Meningitis (aseptic, eosinophilic)	Engerix-B, FluMist, MMR-II, Pentacel, ProQuad, Twinrix, Varivax
	Pharyngitis	Fluarix, Varivax
	Pneumonia, pneumonitis	MMR-II, ProQuad, Varivax
	Pulmonary congestion	ProQuad
	Respiratory tract infection	Infanrix, Pediarix, ProQuad
	Rhinitis	Fluarix, Flulaval, Havrix, MMR-II, Pentacel, ProQuad
	Secondary bacterial infections (skin, tissue)	Varivax
	Sinusitis	ProQuad
	Skin infection	ProQuad
	Sore throat	MMR-II, ProQuad
	Tonsillitis	Fluarix
	Transmission of vaccine virus strains	RotaTeq
Varicella (vaccine strain)	ProQuad, Varivax	
Varicella-like rash	ProQuad	
Viral infection	Pentacel	
<b>Investigations (2)</b>	Abnormal liver function tests	Engerix-B, Twinrix
	Increased serum C-reactive protein	Pneumovax-23
<b>Metabolic (3)</b>	Decreased appetite	Pentacel
	Diabetes mellitus*	MMR-II
	Mitochondrial encephalomyopathy, Leigh syndrom exacerbation [ <i>neurometabolic</i> ]	FluMist
<b>Musculoskeletal/ connective tissue (13)</b>	Arthralgia [ <i>joint pain</i> ]	Boostrix, Engerix-B, IPOL, MMR-II, Pneumovax-23, ProQuad, Recombivax, Tdvax, Twinrix
	Arthritis	Engerix-B, Flulaval, MMR-II, Pneumovax-23, ProQuad, Recombivax, Twinrix
	Back pain	Boostrix
	Hypotonia [ <i>low muscle tone</i> ]	Daptacel, Hiberix, Infanrix, Pediarix, Prevnar-13, Quadracel
	Lupus-like syndrome*	Recombivax
	Muscle spasm	Adacel
	Muscle weakness	Engerix-B, Flulaval, Recombivax, Twinrix



	Musculoskeletal pain	ProQuad
	Musculoskeletal stiffness	Havrix
	Myalgia [ <i>muscle pain</i> ]	Boostrix, IPOL, MMR-II, ProQuad, Tdvax, Tenivac
	Myositis [ <i>muscle inflammation</i> ]	Adacel
	Pain in extremities	Fluarix, Fluzone, Pediarix, Recombivax, Tdvax, Tenivac
	Systemic lupus erythematosus*	Recombivax
<b>Nervous system (41)</b>	Acute disseminated encephalomyelitis	MMR-II, ProQuad
	Ataxia [ <i>nervous system dysfunction</i> ]	MMR-II, ProQuad, Varivax
	Bulging fontanelle	Pediarix
	Cerebellar ataxia	Vaqta
	Convulsions/seizures	ActHIB, Adacel, Afluria, Boostrix, Daptacel, DT, Fluarix, Flulaval, Fluzone, Havrix, Hiberix, IPOL, Kinrix, MMR-II, Quadracel, Recombivax, Tdvax, Twinrix, Varivax
	Depressed level of consciousness	Boostrix, Pediarix, Pentacel
	Dizziness	Fluarix, Flulaval, Fluzone, Havrix, MMR-II, ProQuad, Tdvax, Tenivac, Varivax
	Encephalitis, vaccine-induced encephalitis [ <i>brain inflammation</i> ]	Boostrix, Engerix-B, FluMist, MMR-II, Pediarix, Recombivax, Twinrix, Vaqta, Varivax
	Encephalomyelitis [brain and spinal cord]	Afluria, Fluarix, Fluzone
	Encephalopathy [ <i>brain disease</i> ]	Afluria, Engerix-B, Flulaval, Havrix, Infanrix, MMR-II, ProQuad, Twinrix
	Facial palsy, Bell's palsy	Adacel, Boostrix, Engerix-B, Fluarix, FluMist, Fluzone, ProQuad, Recombivax, Twinrix, Varivax
	Facial (or cranial) nerve paralysis	Flulaval
	Facial paresis [ <i>impaired facial movement</i> ]	Fluarix
	Febrile convulsions/seizures	Afluria, Daptacel, Fluzone, IPOL, MMR-II, PedvaxHIB, Pneumovax-23, ProQuad, Quadracel, Recombivax
	Guillain-Barré syndrome*	Adacel, Afluria, Engerix-B, Fluarix, Flulaval, FluMist, Fluzone, Havrix, MMR-II, PedvaxHIB, Pneumovax-23, ProQuad, Recombivax, Tenivac, Vaqta, Varivax
	Headache	DT, Infanrix, IPOL, MMR-II, ProQuad, Tdvax, Twinrix
	Hypoesthesia [ <i>decreased tactile sensitivity</i> ]	Adacel, Engerix-B, Fluarix, Flulaval, Havrix, Recombivax, Twinrix
	Hypokinesia [ <i>loss of muscle movement</i> ]	Flulaval
	Hypotonic-hyporesponsive episode to immunization (HHE)	Daptacel, Hiberix, Kinrix, Pediarix, Pentacel, Quadracel
	Lethargy	Pediarix
	Limb paralysis	Flulaval
	Measles inclusion body encephalitis	MMR-II, ProQuad
	Migraine	Engerix-B, Recombivax
	Multiple sclerosis (or MS exacerbation)*	Engerix-B, Havrix, Recombivax, Twinrix
	Myelitis [ <i>spinal cord disease</i> ]	Adacel, Fluarix, Fluzone, Havrix, Recombivax, Twinrix
	Neuralgia [ <i>nerve pain</i> ]	Afluria
	Neuritis (including brachial, polyneuritis)	Adacel, Afluria, Engerix-B, Fluarix, Fluzone, MMR-II, Twinrix
Neuropathy, polyneuropathy	Afluria, Engerix-B, Fluarix, Havrix, MMR-II, ProQuad, Recombivax, Twinrix	

	Ocular palsies* [ <i>nerve damage</i> ]	MMR-II, ProQuad
	Optic neuritis/neuropathy, papillitis* [ <i>inflammation of optic nerve</i> ]	Engerix-B, Fluzone, MMR-II, ProQuad, Recombivax, Twinrix
	Paralysis	Engerix-B, Twinrix
	Paresis [ <i>partial paralysis</i> ]	Engerix-B, Twinrix
	Paresthesia [ <i>abnormal skin sensations</i> ]	Adacel, Afluria, Boostrix, Engerix-B, Fluarix, Flucelvax, Flulaval, Fluzone, Havrix, IPOL, MMR-II, Pneumovax-23, ProQuad, Tenivac, Varivax
	Partial seizures, seizures	Daptacel, Engerix-B, ProQuad
	Presyncope [ <i>feeling faint</i> ]	Flucelvax
	Radiculopathy [ <i>“pinched nerve” in spine</i> ]	Pneumovax-23, Recombivax
	Somnolence	Daptacel, DT, Flulaval, Havrix, Hiberix, IPOL, Pediarix, Pentacel, Quadracel, Recombivax
	Subacute sclerosing panencephalitis	MMR-II, ProQuad
	Syncope, vasovagal syncope [ <i>fainting</i> ]	Adacel, Bexero, Boostrix, Daptacel, DT, Engerix-B, Fluarix, Flucelvax, Flulaval, Fluzone, Havrix, Hiberix, Infanrix, Kinrix, MMR-II, Pediarix, ProQuad, Recombivax, Tenivac, Trumenba
	Transverse myelitis	Afluria, Engerix-B, Fluzone, MMR-II, ProQuad, Recombivax, Twinrix, Varivax
	Tremors	Flulaval, ProQuad
<b>Psychiatric (8)</b>	Agitation	IPOL, ProQuad, Recombivax
	Crying/unusual crying	Pediarix
	Hypersomnia	ProQuad
	Insomnia	Flulaval, Pediarix
	Irritability	MMR-II, Recombivax
	Nervousness	Pediarix, ProQuad
	Restlessness	Pediarix
	Screaming	Daptacel, Pediarix, Pentacel, Quadracel
<b>Respiratory, thoracic and mediastinal (12)</b>	Apnea	Engerix-B, Hiberix, Infanrix, Kinrix, Pediarix, Pentacel, Prevnar-13
	Asthma, asthma-like symptoms	Engerix-B, Fluarix, Twinrix
	Bronchospasm	Engerix-B, Fluarix, Flulaval, MMR-II, ProQuad, Recombivax, Tenivac, Twinrix
	Cough	Fluarix, Fluzone, Infanrix, MMR-II, Pediarix, Pentacel
	Cyanosis* [ <i>bluish discoloration, low oxygen</i> ]	Daptacel, Hiberix, Infanrix, Pediarix, Pentacel, Prevnar-13, Quadracel
	Dyspnea [ <i>shortness of breath</i> ]	Fluarix, Flulaval, Fluzone, Havrix, Pediarix, Quadracel, Twinrix
	Dysphonia [ <i>vocal abnormalities</i> ]	Flulaval
	Oropharyngeal pain	Fluzone
	Respiratory distress	Fluarix
	Rhinorrhea [ <i>runny nose</i> ]	Fluzone
	Stridor [ <i>high-pitched wheezing</i> ]	Fluarix
	Throat tightness	Flulaval, Fluzone
	Wheezing	Fluzone, ProQuad
<b>Skin/ subcutaneous tissue (22)</b>	Acute hemorrhagic edema of infancy	MMR-II, ProQuad
	Alopecia [ <i>hair loss</i> ]	Engerix-B, Recombivax, Twinrix

	Ecchymoses [ <i>subcutaneous bleeding</i> ]	Engerix-B, Recombivax, Twinrix
	Eczema	Engerix-B, Recombivax, Twinrix
	Erythema [ <i>skin redness</i> ]	Fluarix, Infanrix, MMR-II, Pediarix, Pentacel, Tdvax
	Erythema multiforme [ <i>skin disorder</i> ]	Engerix-B, Fluarix, Havrix, MMR-II, Pneumovax-23, ProQuad, Prevnar-13, Recombivax, Twinrix, Varivax
	Erythema nodosum [ <i>nodules or lumps</i> ]	Engerix-B, Recombivax, Twinrix
	Exanthem [ <i>widespread rash</i> ]	Boostrix
	Facial swelling/edema	Daptacel, Fluarix, MMR-II, ProQuad, Varivax
	Hyperhydrosis [ <i>abnormal sweating</i> ]	Flulaval, Havrix, Twinrix
	Impetigo	ProQuad, Varivax
	Lichen planus [ <i>inflammatory skin rash</i> ]	Engerix-B, Twinrix
	Panniculitis [ <i>disease of fatty layer of skin</i> ]	MMR-II, ProQuad
	Parotitis [ <i>salivary gland inflammation</i> ]	MMR-II, ProQuad
	Pruritus [ <i>itchy skin</i> ]	ActHIB, Adacel, Afluria, Boostrix, Daptacel, Fluarix, Flucelvax, Flulaval, Fluzone, Infanrix, Kinrix, MMR-II, Prevnar-13, ProQuad, Tdvax, Tenivac
	Purpura [ <i>red/purple spots</i> ]	Engerix-B, MMR-II, ProQuad
	Rash	ActHIB, Adacel, Afluria, Bexero, Boostrix, Daptacel, DT, Fluarix, Flucelvax, Flulaval, FluMist, Fluzone, Hiberix, Infanrix, IPOL, MMR-II, Pediarix, Pentacel, Pneumovax-23, Prevnar-13, Quadracel, Tdvax, Tenivac
	Skin discoloration	Pentacel
	Skin induration	MMR-II, ProQuad
	Stevens-Johnson syndrome [ <i>severe skin reaction</i> ]	Engerix-B, Fluarix, Fluzone, MMR-II, ProQuad, Recombivax, Varivax
	Urticaria* [ <i>hives</i> ]	ActHIB, Adacel, Afluria, Boostrix, DT, Engerix-B, Fluarix, Flucelvax, Flulaval, FluMist, Fluzone, Hiberix, Infanrix, IPOL, Kinrix, MMR-II, Pediarix, Pentacel, Pneumovax-23, Prevnar-13, Quadracel, Recombivax, RotaTeq, Tenivac, Twinrix
	Vesiculation	MMR-II
<b>Vascular (8)</b>	Cerebrovascular accident	ProQuad, Varivax
	Flushing	Flulaval, Fluzone
	Henoch-Schönlein purpura [ <i>blood vessel inflammation</i> ]	Boostrix, Fluarix, MMR-II, ProQuad, Varivax
	Pallor	DT, Flulaval, Hiberix, Pediarix, Pentacel, Prevnar-13, Quadracel
	Petechiae [ <i>bleeding capillaries</i> ]	Pediarix, Recombivax
	Polyarteritis nodosa [ <i>damaged arteries</i> ]	Recombivax
	Renal vasculitis	Afluria
	Vasculitis	Afluria, Engerix-B, Fluarix, Fluzone, Havrix, MMR-II, Recombivax, Twinrix
<b>Urogenital (2)</b>	Epididymitis [ <i>testicular inflammation</i> ]	MMR-II, ProQuad
	Orchitis [ <i>inflammation of the testes</i> ]	MMR-II, ProQuad

\*There are several things to note about the information presented in Table 2. First, while we used the verbatim insert terminology for each disorder and also largely stuck to the disease groupings in the package inserts, we added two categories—allergic and autoimmune disorders—that the inserts surprisingly omit. (The package inserts lump allergic reactions in with “immune system disorders.”) Second, there are a number of disorders that fit in more than one category; in those instances, we have included them (with an asterisk\*) in both places (while counting them once). Third, the table only includes those adverse events that manufacturers decided to report in the inserts—but other adverse events are not only possible but likely, due to the widespread problem of underreporting. Notably, none of the package inserts include any mention of prevalent, childhood-onset neurodevelopmental disorders like tics or autism that published, peer-reviewed studies have linked to vaccines.