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YOUR FUNCTIONAL WELLNESS GUIDE

Vaccine Side Effects Reference

Natalie's Clinical Study & Findings · Side-Effect Profiles & Adverse Event Rates

This reference compiles side effect profiles and serious adverse event rates for routinely recommended US vaccines, curated and annotated through my clinical lens as a certified functional women's health educator. Data is drawn from clinical trial publications, CDC/ACIP guidance, VAERS post-licensure surveillance, and the Vaccine Safety Datalink (VSD). Use this alongside the relevant package insert (Section 6) and individual clinical context.

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SECTION 01

How to Read Frequency Terms

FREQUENCY TERM	RATE
Very Common	> 10% of recipients
Common	1–10% of recipients
Uncommon	0.1–1% of recipients
Rare	0.01–0.1% of recipients
Very Rare	< 0.01% (often expressed as per million doses)

IMPORTANT CONTEXT

Adverse event rates are population averages. Individual risk depends on age, immune status, prior reactions, pregnancy, and comorbidities. The correct clinical frame is always risk of vaccine vs. risk of disease — not vaccine vs. zero risk. Common immune-activation symptoms (sore arm, fatigue, low-grade fever) reflect a working immune response, not harm.

SECTION 02

Childhood Vaccines

Hepatitis B (HepB)

Prevents: Hepatitis B virus — acute and chronic liver infection, cirrhosis, liver cancer.

COMMON SIDE EFFECTS

Sore injection site (~30%), fatigue (~14%), headache (~13%), low-grade fever (1–6%), irritability in infants. Typically resolve in 1–2 days.

SERIOUS ADVERSE EVENTS

Anaphylaxis ~1 per 1.1 million doses. No causal link to MS, autism, or SIDS in extensive study across millions of recipients.

Rotavirus (RotaTeq, Rotarix)

Prevents: Severe diarrheal illness — rotavirus hospitalized 55,000–70,000 US infants per year pre-vaccine.

COMMON SIDE EFFECTS

Mild diarrhea (~24%), vomiting (~15%), irritability, low-grade fever, decreased appetite. Oral administration — no injection site reaction.

SERIOUS ADVERSE EVENTS

Intussusception: ~1–5 additional cases per 100,000 vaccinated infants in week 1 after dose 1. Much lower than withdrawn RotaShield. Severe allergic reaction very rare.

DTaP (Diphtheria, Tetanus, acellular Pertussis)

Prevents: Diphtheria, tetanus (lockjaw), whooping cough. Acellular formulation replaced whole-cell DTP in the 1990s — far less reactogenic.

COMMON SIDE EFFECTS

Sore arm/redness/swelling (20–40%), low-grade fever (5–15%), fussiness, drowsiness, decreased appetite. Local reactions increase with successive doses.

SERIOUS ADVERSE EVENTS

Febrile seizure (~1 in several thousand) — no long-term harm. Hypotonic-hyporesponsive episode rare. Anaphylaxis ~1 per million. Persistent inconsolable crying >3 hours: ~1 in 1,000.

Hib (Haemophilus influenzae type b)

Prevents: Hib bacterial infections — meningitis, epiglottitis, pneumonia, sepsis. Was a leading cause of childhood meningitis pre-vaccination.

COMMON SIDE EFFECTS

Sore injection site (~25%), redness (~5%), low-grade fever (~5%), irritability.

SERIOUS ADVERSE EVENTS

Anaphylaxis very rare. No causal link to other serious conditions in extensive surveillance.

Pneumococcal Conjugate (PCV13/15/20)

Prevents: Streptococcus pneumoniae — pneumonia, meningitis, bacteremia, ear infections.

COMMON SIDE EFFECTS

Sore arm (~30–60%), fever (~25% in infants), irritability, decreased appetite, drowsiness, redness or swelling at site.

SERIOUS ADVERSE EVENTS

Severe allergic reaction < 1 per million. Febrile seizure rare, especially when co-administered with flu vaccine in young children. No long-term harm from brief seizures.

Inactivated Polio Vaccine (IPV)

Prevents: Poliovirus types 1, 2, 3.

COMMON SIDE EFFECTS

Sore injection site (~15–30%), redness, low-grade fever (~5%). Among the better-tolerated childhood vaccines.

SERIOUS ADVERSE EVENTS

Severe allergic reaction extremely rare. The oral polio vaccine (OPV) carried ~1 in 2.4 million risk of vaccine-derived paralysis; not used in the US since 2000. IPV does not carry this risk.

MMR (Measles, Mumps, Rubella)

Prevents: Measles, mumps, rubella.

COMMON SIDE EFFECTS

Sore injection site, low-grade fever (~5–15%, peaks 7–12 days post-dose), mild rash (~5%), transient joint pain (~25% in adult women), swollen lymph nodes.

SERIOUS ADVERSE EVENTS

Febrile seizure ~1 per 3,000–4,000 first doses (higher with MMRV than separate MMR + varicella). Transient ITP ~1 per 30,000–40,000, usually self-resolving. Encephalitis <1 per million — far lower than measles itself (~1 per 1,000 cases). Does not cause autism.

Varicella (Chickenpox)

Prevents: Varicella zoster virus (chickenpox). Reduces but does not eliminate later shingles risk.

COMMON SIDE EFFECTS

Sore injection site (~20%), fever (~15%), mild varicella-like rash near injection site (~3%) or generalized mild rash (~1–5%) within 5–26 days.

SERIOUS ADVERSE EVENTS

Disseminated vaccine-strain varicella in severely immunocompromised patients — vaccine contraindicated in this group. Transmission to close contacts very rare and only if vaccinated person develops a rash.

Hepatitis A

Prevents: Hepatitis A virus — acute liver inflammation, typically via contaminated food or water.

COMMON SIDE EFFECTS

Sore arm (~50%), headache (~15%), loss of appetite (~10%), fatigue. Most reactions mild, lasting 1–2 days.

SERIOUS ADVERSE EVENTS

Anaphylaxis very rare. No causal link to other serious conditions.

Influenza (Annual)

Prevents: Seasonal influenza A and B viruses.

COMMON SIDE EFFECTS

Sore arm (~50%), fatigue (~10–15%), headache (~10%), muscle aches (~10%), low-grade fever (1–2%). FluMist: runny nose, congestion, mild sore throat instead.

SERIOUS ADVERSE EVENTS

Anaphylaxis ~1 per million. Guillain-Barré syndrome: ~1–2 additional cases per million doses (background rate ~10–20 per million/year). Flu illness itself increases GBS risk much more than the vaccine. Oculorespiratory syndrome rare and self-limited.

SECTION 03

Adolescent & Young Adult Vaccines

Tdap (Adolescent/Adult Booster)

Prevents: Tetanus, diphtheria, pertussis booster. Also recommended every pregnancy at 27–36 weeks to protect newborns.

COMMON SIDE EFFECTS

Sore arm (~75%), headache (~40%), fatigue (~30%), muscle aches (~20%), low-grade fever (~5%), nausea/GI upset (~10–15%). Typically last 1–3 days.

SERIOUS ADVERSE EVENTS

Severe allergic reaction < 1 per million. Brachial neuritis very rare. Arthus reaction (severe local) rare — mainly in those who received tetanus boosters too frequently.

HPV (Gardasil 9)

Prevents: 9 high-risk and wart-causing HPV types responsible for ~90% of cervical cancers, plus most anal, oropharyngeal, vulvar, vaginal, and penile cancers, and genital warts.

COMMON SIDE EFFECTS

Sore injection site (~85%), fainting in adolescents — sit or lie down 15 minutes after vaccination, headache (~30%), fatigue (~25%), low-grade fever (~10%), nausea (~5%).

SERIOUS ADVERSE EVENTS

Anaphylaxis ~1.7 per million doses. No association with autoimmune disease, infertility, premature ovarian failure, or POTS in extensive post-licensure surveillance.

Meningococcal ACWY

Prevents: Neisseria meningitidis serogroups A, C, W, Y.

COMMON SIDE EFFECTS

Sore arm (~40%), headache (~30%), fatigue (~30%), muscle aches (~20%), irritability or low-grade fever in younger children.

SERIOUS ADVERSE EVENTS

Severe allergic reaction very rare. Small historical GBS signal with Menactra not seen with current products.

Meningococcal B (Bexsero, Trumenba)

Prevents: Neisseria meningitidis serogroup B. Recommended via shared decision-making for ages 16–23.

COMMON SIDE EFFECTS

Notably reactogenic: sore arm (~85%), fatigue (~50%), muscle pain (~50%), headache (~40%), chills (~25%), fever (~5–10%), nausea (~15%). Typically 1–3 days.

SERIOUS ADVERSE EVENTS

Severe allergic reaction very rare. No other established serious adverse events in post-licensure data.

SECTION 04

Adult Vaccines

Shingrix (Recombinant Zoster Vaccine, 50+)

Prevents: Shingles (herpes zoster) and postherpetic neuralgia. 97% effective ages 50–69; 91% effective 70+. Two doses 2–6 months apart.

COMMON SIDE EFFECTS

Notably reactogenic. Sore arm (~78%), fatigue (~45%), muscle pain (~45%), headache (~38%), shivering (~27%), fever (~21%), GI symptoms (~17%). Typically 2–3 days.

SERIOUS ADVERSE EVENTS

Anaphylaxis very rare. Small post-licensure GBS signal (~3–6 additional per million in adults 65+); absolute risk very low and outweighed by shingles/PHN prevention benefit.

COVID-19 (mRNA & Novavax)

Prevents: Severe disease, hospitalization, and death from SARS-CoV-2.

COMMON SIDE EFFECTS

Sore arm (60–80%), fatigue (~50%), headache (~40%), muscle aches (~30%), chills (~20%), fever (~15% — more common after dose 2 of mRNA vaccines), joint pain, axillary lymph node swelling.

SERIOUS ADVERSE EVENTS

Anaphylaxis ~2–5 per million doses. Myocarditis/pericarditis after mRNA, mainly young males 12–29: ~10–40 per million — typically mild and self-limited; COVID infection carries meaningfully higher myocarditis risk. TTS was associated only with the discontinued J&J adenoviral vector vaccine.

Td (Tetanus, Diphtheria Booster — every 10 years)

Prevents: Maintains protection against tetanus and diphtheria.

COMMON SIDE EFFECTS

Sore arm (~60%), redness or swelling (~25%), fatigue; low-grade fever uncommon.

SERIOUS ADVERSE EVENTS

Severe allergic reaction very rare. Severe local reactions (Arthus) rare — mainly in those receiving tetanus boosters too frequently.

SECTION 05

How to Interpret These Numbers

Common Side Effects vs. Serious Adverse Events

Common side effects are immune-activation symptoms — sore arm, fatigue, low-grade fever, muscle aches. They reflect your immune system mounting a response, which is precisely the point of vaccination. They are not signs of harm and typically resolve in 1–3 days.

Serious adverse events are rare events that may require medical attention — anaphylaxis, seizures, neurological events. These are reported as rates per million doses and tracked through active surveillance via the Vaccine Safety Datalink (VSD) and passive reporting via VAERS, which is intentionally over-inclusive for signal detection.

Background Incidence Matters

If a condition occurs at a known background rate in the population, observing the same rate after vaccination is coincidence — not a vaccine signal. Real safety signals emerge when post-vaccination rates meaningfully exceed expected background.

Claims Ruled Out by Large-Scale Evidence

- Vaccines causing autism (MMR specifically, thimerosal specifically, total vaccine load — all studied in cohorts of millions and disproved)
- HPV vaccine causing infertility, premature ovarian failure, or POTS
- Aluminum adjuvants causing Alzheimer's disease
- "Too many vaccines too soon" overwhelming infant immune systems

Well-Characterized Real Risks

- Anaphylaxis to any vaccine: ~1 per million doses
- Myocarditis after mRNA COVID vaccines in young males: ~10–40 per million; typically mild; lower than COVID infection itself
- Intussusception after rotavirus: 1–5 per 100,000
- Febrile seizures after MMR or MMRV: ~1 per several thousand; no long-term harm
- Guillain-Barré syndrome after some vaccines: 1–5 additional per million; typically reversible

CLINICAL BOTTOM LINE

Most vaccine reactions are immune-activation symptoms resolving in a few days. Serious adverse events are rare and well-documented. For any specific vaccine question, the package insert (Section 6 — Adverse Reactions) is the authoritative source, followed by the CDC Vaccine Information Statement and individualized clinical judgment.

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