

- In 2004, the Environmental Protection Agency (EPA) estimated that one in every six women has mercury blood levels that could pose a risk to an unborn child.
- Mercury rapidly crosses the placenta and accumulates in the fetus at higher levels than in the mother. Two studies in 2012 showed that a mother's mercury exposure is linked to attention problems in her children.
- Scientific studies have documented that ethylmercury used in vaccines crosses into the infant brain and could impact critical stages of brain development.
- It is inconsistent to recommend vaccines containing ethylmercury when also counseling pregnant women to avoid seafood high in methylmercury due to the known harmful effects mercury can have on the developing fetus.
- Thimerosal-containing flu vaccines contain 250 times the mercury level the EPA uses to classify hazardous waste. Unused thimerosal-containing flu vaccine should be returned to the manufacturer for appropriate disposal.
- An Australian study found one in every 110 children under the age of 5 had convulsions following vaccination with the FLUVAX H1N1 vaccine in 2009. Additional research found a spike in cases of narcolepsy in children associated with the H1N1 vaccine.

For complete references, please visit our website at www.worldmercuryproject.org/flufacts

Vision

A world where mercury is no longer a threat to the health of our planet and people.

Mission

We will work aggressively to reduce exposure to all sources of mercury, hold those accountable who failed to protect our planet and people from unnecessary exposure, restore health to those who have been harmed, and make sure this tragedy never happens again.

How to Get Involved

Sign up for free updates at
www.worldmercuryproject.org

Become a lifelong member of
World Mercury Project for just \$10.00

Help us to get the word out regarding
the dangers of mercury using social media

Support our efforts through a generous
tax deductible donation



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Contact us to volunteer or for additional information

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Flu Vaccines in Pregnancy and Childhood
what you *need* to know

You want to do *everything*
right for your child, and would
never knowingly allow someone to inject a
neurotoxin into your infant. Before getting
a flu shot, you need to know this:

MERCURY *is*
a NEUROTOXIN



The Food and Drug Administration (FDA) warns pregnant women and young children not to eat fish containing high levels of methylmercury. Yet the Centers for Disease Control and Prevention (CDC) recommends pregnant women and infants get influenza vaccines, many of which contain ethylmercury from the preservative thimerosal. Receiving them may result in mercury exposures exceeding the Environmental Protection Agency (EPA) recommended maximum levels.

World Mercury Project is deeply concerned that the risks of getting mercury-containing seasonal influenza vaccines may outweigh the benefits for pregnant women, infants and children. Mercury is known to be highly toxic to brain tissue and can impact critical stages of brain development.

A 2017 CDC study links miscarriage to flu vaccines, particularly in the first trimester. Pregnant women vaccinated in the 2010/2011 and 2011/2012 flu seasons had two times greater odds of having a miscarriage within 28 days of receiving the vaccine. In women who had received the H1N1 vaccine in the previous flu season, the odds of having a miscarriage within 28 days were 7.7 times greater than in women who did not receive a flu shot during their pregnancy.

A study published in 2016 that looked at the safety of flu vaccines found a moderately elevated risk for major birth defects in infants born to women who had received a flu vaccine during the first trimester of pregnancy. A study published in 2017 found an elevated risk of autism spectrum disorders in children whose mothers had a first trimester flu shot.

Flu vaccine administration is documented to cause an inflammatory response in pregnant women. Recent research found inflammation during pregnancy is associated with the development of autism spectrum disorders.

A large study in approximately 50,000 pregnant women over five flu seasons found no difference in the risk for developing influenza or similar illnesses between those who received the influenza vaccine during pregnancy and those who did not.

An independent 2014 review found no randomized controlled trials assessing vaccination in pregnant women. It states, “The only evidence available comes from observational studies with modest methodological quality. On this basis, vaccination shows very limited effects.”

Influenza vaccines — United States, 2017–18 influenza season*

Trade name Manufacturer	Presentation	Age indication	Mercury (from thimerosal, µg/0.5 mL)
Inactivated influenza vaccines, quadrivalent (IIV4s), standard-dose†			
Afluria Seqirus	0.5 mL prefilled syringe	≥18 years	NR
	5.0 mL multi-dose vial	≥18 years (by needle/syringe) 18 through 64 years (by jet injector)	24.5
Fluarix GlaxoSmithKline	0.5 mL prefilled syringe	≥3 years	NR
FluLaval ID Biomedical Corp. of Quebec (distributed by GlaxoSmithKline)	0.5 mL prefilled syringe	≥6 months	NR
	5.0 mL multi-dose vial	≥6 months	<25
Fluzone Sanofi Pasteur	0.25 mL prefilled syringe	6 through 35 months	NR
	0.5 mL prefilled syringe	≥3 years	NR
	0.5 mL single-dose vial	≥3 years	NR
	5.0 mL multi-dose vial	≥6 months	25
Inactivated influenza vaccine, quadrivalent (cIIV4), standard-dose, † cell culture-based			
Flucelvax Seqirus	0.5 mL prefilled syringe	≥4 years	NR
	5.0 mL multi-dose vial	≥4 years	25
Inactivated influenza vaccine, quadrivalent (IIV4), standard-dose, intradermal¶			
Fluzone Intradermal Sanofi Pasteur	0.1 mL single-dose prefilled microinjection system	18 through 64 years	NR
Inactivated Influenza Vaccines, trivalent (IIV3s), standard-dose			
Afluria Seqirus	0.5 mL prefilled syringe	≥5 years	NR
	5.0 mL multi-dose vial	≥5 years (by needle/syringe) 18 through 64 years (by jet injector)	24.5
Fluvirin Seqirus	0.5 mL prefilled syringe	≥4 years	≤1
	5.0 mL multi-dose vial	≥4 years	25
Recombinant Influenza Vaccine, quadrivalent (RIV4)¶¶			
Flublok Protein Sciences	0.5 mL prefilled syringe	≥18 years	NR
Recombinant Influenza Vaccine, quadrivalent (RIV4)¶¶			
Flublok Protein Sciences	0.5 mL single-dose vial	≥18 years	NR

If You Are Pregnant or Have Small Children . . .

- If you decide to vaccinate, insist on mercury-free influenza vaccines for yourself and your children and do not get a flu vaccine the same day as other vaccines.
- Do not let yourself be pressured into receiving a vaccine that you don’t want; should you choose to vaccinate, insist that your doctor or pharmacist find you a mercury-free vaccine.
- If mercury-free vaccines are unavailable, look at the evidence and decide if the influenza virus is a significant concern for your family.
- Also, consider the evidence regarding the effectiveness of the flu vaccine in actually preventing influenza. For information visit www.summaries.cochrane.org

More Vaccine Facts to Know...

All vaccines, with or without mercury, pose health risks. However, the influenza vaccine is of great concern, as many brands contain high levels of mercury in their multi-dose vials. Be sure to read package inserts for any vaccine prior to getting vaccinated.

According to flu vaccine package inserts, “Safety and effectiveness has not been established in pregnant women or nursing mothers and should only be given to a pregnant woman if clearly needed.”

A study that compared children who received flu vaccine to those who did not found no significant difference in the rate of influenza between the active and placebo groups. It also found that the group of children who received the flu vaccine had a 4.4 times relative risk of non-influenza respiratory tract infections.

A review in the medical journal *The Lancet* found a lack of health benefits from influenza vaccine in children under two along with significantly increased rates of vaccine-related adverse events.

Tips for Preventing the Flu

Simple techniques such as avoiding those with flu-like illnesses, eating a healthy diet and good hand washing can prevent many cases of flu. If you do contract influenza, optimizing vitamin D levels, fluid intake and rest can boost immune function.