

Understanding Formaldehyde in Vaccines



What is formaldehyde and why is it in some vaccines?

Formaldehyde is a substance that is made by our bodies and is also found in the environment. Our bodies use it to help build important things like DNA and proteins. We naturally make and break down formaldehyde every day as part of normal, healthy metabolism. In some vaccines, formaldehyde is used to inactivate the viruses or toxins so they cannot cause illness while teaching the immune system how to protect the body. After the vaccine is made, it goes through several purification steps. Only a very tiny amount of formaldehyde remains—much less than what our bodies naturally produce. Formaldehyde has been used safely in vaccines for more than 80 years and plays an important role in keeping vaccines safe and effective.

How much formaldehyde do vaccines contain and is it safe?

The small amount of formaldehyde in vaccines is much lower than what the body naturally produces and encounters. We are exposed to formaldehyde every day through the air we breathe, both indoors and outdoors. It is also present in many foods we eat including fruits, vegetables, meats, and fish, as well as breast milk and formula. In fact, a newborn baby's body naturally contains more formaldehyde than they will receive from vaccines. Because the human body produces formaldehyde, it easily processes and eliminates the tiny amount of formaldehyde it encounters from vaccines. Vaccines are carefully regulated and tested before they are approved, ensuring that all ingredients are safe for both children and adults.

What should parents remember regarding formaldehyde in vaccines?

Formaldehyde is a necessary component of vaccines to make them safe as they allow the immune system to learn how to protect the body from serious, life-threatening illnesses. Almost all formaldehyde is removed before a vaccine is finished, and the tiny amount that remains is far below harmful levels, making it very safe.

Texas Children's Hospital is dedicated to providing every child and woman with the highest-quality medical care—rooted in compassion, respect, and the belief that every family deserves to feel heard and supported. If you have additional questions about formaldehyde in vaccines, please speak with your child's pediatrician.