

Ask the Pediatrician: Why should newborns get a vitamin K shot?

March 7 2022, by Dr. Ivan L. Hand



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A: There's a lot going on when your baby is born. They're weighed and measured. Their noses are suctioned out and their vital signs are tested. They may have ointment or drops put in their eyes. They get a complete

checkup by a pediatrician.

Most newborns get their first hepatitis B vaccine in the hospital, and they also routinely get a [vitamin K](#) shot.

Vitamin K is a fat-soluble nutrient that helps our bodies make blood clots. We need blood clots to stop bleeding. Vitamin K is important for keeping bones healthy, too.

Adults and [older children](#) get vitamin K from food such as green, leafy vegetables, meat, dairy and eggs. The [healthy bacteria](#) in our intestines, which make up our microbiome, also produce some vitamin K.

Babies, though, have very little vitamin K in their bodies at birth. This puts them at risk for bleeding. Fortunately, it's easy to prevent vitamin K deficiency bleeding with a vitamin K shot. The injection is given in your baby's thigh within six hours of birth.

Babies need vitamin K because they don't get much from the mother during pregnancy. Unlike many other nutrients, vitamin K doesn't pass through the placenta very easily. Babies' intestines don't have very many bacteria yet, so their bodies can't make enough vitamin K.

Newborns who don't get a vitamin K shot and are low on this vitamin are at risk of vitamin K deficiency bleeding. This happens when a baby's blood can't make clots, and their body can't stop bleeding.

The bleeding can happen on the outside of the body. It can also happen internally. A baby could be bleeding into their intestines or brain before their parents know anything is wrong. Brain bleeding happens in about half of all [babies](#) who develop this [vitamin deficiency](#) bleeding, and it can lead to brain damage or death.

There are three types of vitamin K deficiency bleeding:

- **Early-onset:** This begins within the first 24 hours after birth. It usually happens when the mother is taking certain medications that interfere with vitamin K.
- **Classical:** This happens between two days and one week after birth. Doctors don't know exactly what causes most of these cases. Early-onset and classical [vitamin k](#) deficiency bleeding occur in 1 in 60 to 1 in 250 newborns.
- **Late-onset:** This happens between one week and six months after birth. It's rarer than early-onset or classical vitamin k deficiency bleeding, occurring in 1 in 14,000 to 1 in 25,000 babies. Infants who didn't get a vitamin K shot at birth are 81 times more likely to develop late-onset deficiency bleeding than babies who do get the shot.

Cases of this deficiency bleeding seem to be increasing. This is partly because more parents are refusing the vitamin K shot for their newborns. This deficiency bleeding is fairly rare, so many parents aren't aware of how dangerous the effects of this disease can be.

Vitamin K shots are very safe. The vitamin K from the injection is stored in your baby's liver and released slowly over months. This gives your baby the vitamin K they need until they can start getting it from solid food and making it themselves.

You may have heard about a study from the 1990s about a possible link between the vitamin K shot and developing childhood cancer. This didn't only worry parents; doctors and scientists were concerned too. Since then, experts have done many different kinds of studies to verify this link. None of the studies have ever been able to find that link again.

Some parents may ask for oral vitamin K instead of the shot. But babies can't absorb the oral form very well, so it doesn't work well to prevent this deficiency bleeding. A vitamin K shot is the safest and best option for all newborns.

Breast milk does give your baby a little bit of vitamin K. But it's not enough to prevent this bleeding. Babies who are exclusively breastfed are at higher risk of developing this bleeding because their vitamin K levels are low.

This all changes when your baby is old enough to start eating solid foods, usually between 4 and 6 months of age. The bacteria in your baby's intestines will also start making vitamin K once they're eating solid foods.

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