

Informed Consent for Vitamin K Injection

What is Vitamin K?

Vitamin K is a fat-soluble vitamin typically present in the body that helps support the liver's ability to produce blood clotting factors. It is absorbed through the small intestine with dietary fat and transported to the liver for storage. There are two types of naturally occurring vitamin K:

- Vitamin K1 (phylloquinone) is found in plants, especially leafy green vegetables.
- Vitamin K2 (menaquinone) is formed by bacteria living in the body's intestinal tracts and is also found in fermented foods and animal foods.

Very little vitamin K circulates in the bloodstream and is metabolized very quickly. About 20% of oral intake is excreted in the urine, while up to 50% is excreted in the feces. The body is able to recycle and reuse some of the vitamin K many times over. Therefore, we only need a small amount of vitamin K to help the body produce sufficient clotting factors. If vitamin K levels drop and the clotting factors cannot be activated, we will begin to bleed spontaneously.

Vitamin K Deficiency

All babies are born with levels of vitamin K that are 30 to 60% lower than that of adults. Currently, this is seen and treated as a deficiency rather than as a normal occurrence. Because of the lower levels of vitamin K, babies are more susceptible to experiencing uncontrollable bleeding, which is also referred to as Vitamin K Deficiency Bleeding (VKDB) or Hemorrhagic Disease of the Newborn.

Why is Vitamin K given to my newborn?

The vitamin K injection is a routine procedure, offered to all newborns in the first few hours after birth. This injection serves as a prophylaxis, or prevention, of VKDB, which is a hemorrhage that occurs in babies during the first 12 weeks after birth. This injection provides the baby with a boost vitamin K so that his liver can produce the clotting factors necessary for preventing bleeding.

VKDB is divided into three primary categories, based on the time at which symptoms appear:

- Early VKDB occurs during the first 24 hours after birth. It is very rare, and bleeding usually is isolated to the skin, brain, and abdomen.
- Classic VKDB occurs between the first 24 hours and 7 days after birth (most commonly on days 2 and 3). The most common form, bleeding usually occurs in the gastrointestinal system, umbilical cord site, skin, nose, and circumcision site.
- Late VKDB usually occurs between 2 and 12 weeks after birth (most commonly between weeks 3 and 8), but may occur as late as six months after birth. Bleeding is usually present in the brain, skin, and gastrointestinal tract.

How common is VKDB?

The incidence of early and classic VKDB for newborns is 1 in 60 to 1 in 250, although the risk is much higher if the mother takes certain medications (such as seizure medications) and does not supplement with vitamin K.

The occurrence of late VKDB ranges between 0.05% to 0.02%, or 1 in 15,000-20,000 newborns.

What does research say about Vitamin K?

A baby who does not have enough Vitamin K can start bleeding spontaneously, without warning. Late bleeding is the most dangerous kind, because it often starts out as bleeding in the brain. These babies do not have any type of head trauma—they simply start bleeding because they cannot clot anymore. While late bleeds are rare, they can easily be prevented with Vitamin K.

Late bleeds happen to:

- 4 to 7 babies out of every 100,000 who do not receive any Vitamin K at birth; more common in Asian countries

- 0 to 0.9 babies out of every 100,000 who receive 2 mg of oral Vitamin K1 after birth, at 4 to 6 days, and at 4 to 6 weeks OR who receive 2 mg of oral Vitamin K1 after birth and 1 mg oral Vitamin K1 every week for 3 months
- 0 to 0.4 babies out of every 100,000 who receive 1 mg injectable Vitamin K1 after birth

While vitamin k1 does not appear to pass through the placental and breastmilk barriers very well, recent research shows that vitamin k2 does pass quite easily through both of those barriers. It also confirms that maternal supplementation with vitamin K1 (either through supplements or dietary changes) increases the amount of vitamin k2 present in the breastmilk. Colostrum, which is produced for the first few days after birth (when the baby's immature gut does not have enough gut bacteria to begin producing his own vitamin k) also contains higher amounts of vitamin k than mature milk does.

How is Vitamin K given?

The standard and most common way of administering vitamin K to a newborn is by giving an injection into the baby's thigh within six hours after birth. This method is the most well-researched and recommended by health care providers and researchers as being the most effective. Alternatively, oral drops of vitamin k may be given as one dose of 1 mg or as a 3-dose regimen of 2 mg oral Vitamin K1 (at birth, between 2 and 6 days, and 4 to 6 weeks), which also lowers the chance of VKDB to less than 1 in 100,000 births.

Who should not take Vitamin K?

It is recommended that all newborns be given the vitamin K injection within six hours after birth for the best protection against VKDB.

What are the pros to Vitamin K?

- Vitamin K injection reduces an infant's chance of developing VKDB to 0 to 0.4 babies out of every 100,000; Oral vitamin K reduces baby's risk to 0 to 0.9 babies out of every 100,000

- It is a one time deal- no schedules or dosages to remember later on
- It has very few known side effects

What are the cons to Vitamin K?

- It does cause discomfort to the baby
- Some potential side effects include pain and swelling in the area of injection, and an increased risk of developing jaundice
- Baby may have an allergic reaction (very rare)

What happens if I decline Vitamin K?

If you decline the vitamin K injection and/or the oral vitamin K drops, I will still continue your care as normal. Your baby will be at a higher risk of bleeding during the first few weeks and months, therefore it is very important that he is monitored a little more closely on a regular basis to ensure he is all right. Should he develop VKDB, he should be brought to the hospital immediately where he will be given vitamin k to help his blood to clot.

Informed Consent

Please print your name and date and sign in the appropriate areas.

I have read and understand the above information regarding Vitamin K and my newborn. I am aware of my choices and options and have had the opportunity to ask my midwife all the questions I have regarding Vitamin K.

I agree to give my baby the vitamin K injection within six hours after birth. ☐

I decline the vitamin K injection. ☐

I decline the vitamin K injection, but want to do the oral method instead. ☐

I decline both the vitamin K injection and the oral vitamin K.

☐

Today's Date

Mother's name

Mother's signature

Witness' name

Witness' signature

Midwife's signature
