Vitamin K for Newborns
Information, Authorization, and Waiver

Why are babies given a vitamin K injection?
Vitamin K Deficiency Bleeding (VKDB), a clotting disorder, causes spontaneous, uncontrolled bleeding which can cause death or permanent brain damage. Intramuscular injection of vitamin K prevents VKDB in almost all babies.

What are the chances of my baby getting VKDB?
Very slim. The majority of babies will do fine without it. However, it is impossible to predict which healthy baby will later be stricken with VKDB, and this is the basis for injecting all babies. There are several different estimates of the risk of the healthy, breast fed infant developing VKDB ranging from one in 5,000 to one in 25,000. In babies that develop VKDB, the overall death rate in affected babies is 14-19 percent, and 21-40 percent of the survivors have long-term neurological handicaps. Intramuscular administration (injection) of vitamin K does not provide complete protection from VKDB. The incidence rate of VKDB among babies given vitamin K by injection after birth is approximately 1 in 400,000 infants.

What are the risks of getting the injection?
Potential risks of vitamin K injection are jaundice, flushing, rash, or a mild reaction at the injection site. Because the skin is broken when an injection is given, infection is possible, but exceedingly rare. Also, because a foreign substance is being injected, there is the risk of anaphylactic shock, a profound allergic reaction that can cause death. This is very rare. Other risks are hypothetical and require some background information:

The level of vitamin K in newborns is much lower than that of children and adults, and it usually decreases further after birth. In fact, all mammals are born with lower levels than their mothers. In addition, breastmilk contains only a small amount of vitamin K. The healthy breastfed newborn who does not receive vitamin K supplementation has low vitamin K levels for the first few weeks to months of life. Despite the fact that all this is characteristic of the normal newborn period it is still referred to as a deficiency. Babies have low levels of vitamin K relative to adult levels. Babies also have large heads relative to adult head size, but this is not considered bad. It is considered good, because the human brain needs to be large at birth. ***It is not known why babies are born with low vitamin K levels.*** This has led many researchers, midwives, and parents to believe that there is a good reason for lower vitamin K levels in newborns. Some researchers suggest that a low vitamin K level is protective against tumor formation and cancer, but the evidence to date is inconclusive. It is unknown what risk, if any, there is in exposing the newborn to an unnaturally high concentration of vitamin K. ***Therefore, by administering vitamin K to normal infants we may be actually causing other problems we don't yet understand.***

Are there more natural ways to prevent VKDB?
Not that we are currently aware of. During pregnancy, very little vitamin K crosses the placenta. Even if you take huge quantities (5000 mcg) of a supplement, vitamin K will only be found in small quantities in breastmilk. Likewise, high vitamin K foods and herbs taken at 670% of the RDA make no difference. Adults produce vitamin K in the large intestine, but the vitamin K produced in the newborn's intestine does not appear to be usable by the baby until he or she is 4-6 months old, and does not prevent VKDB.

What about oral vitamin K?
Studies have found that in order for oral vitamin K to be as effective as injectable vitamin K, babies must receive 2 mg orally at birth, and 1 mg orally each week for the first three months. A single dose of oral vitamin K at birth is not effective, and 3 separate oral doses of vitamin K is not effective. A disadvantage of using oral vitamin K is that some babies may not absorb it into their systems well. Many babies spit up the oral vitamin K, which makes it impossible to properly dose the baby. Also, it may be difficult to convince a pediatrician to prescribe it for you because it is not commonly requested by parents in this area, and the pediatrician may not be familiar with the effectiveness or the dosage. For these reasons, we do not recommend oral vitamin K.

What are my options?

1. **Give the baby an injection of vitamin K soon after birth.**
   - Your midwife will give your baby the injection within 2-3 hours of birth. We use the preparation called Phytonadione because the incidence of jaundice is lower than with other kinds. The standard dosage is 0.5-1 milligram.

2. **Give the baby oral vitamin K.**
   Because we have seen many problems with this option, we no longer recommend it. First, it takes many doses to be effective, and many parents find they do not want to keep up the schedule. Second, vitamin K is very bitter, and most babies will spit it up. In this case, what do you do? They haven't kept the dose down, so it won't be effective.

However, they may have kept some down, so you don't know how much to give them to make up for what they spit up. If you do give them more, you risk overdosing.

- Get a prescription for oral vitamin K from your pediatrician. Many pharmacies will not have vitamin K so you will probably have to get it from a hospital pharmacy. The standard oral dosage at birth is 2 milligrams.
- Pick up the vitamin K two weeks before your due date. Put it with your birth kit where the midwives will have easy access to it.
- Your midwife will give your baby the first dose, you will be responsible for administering subsequent doses.

3. **Wait and see if a hemorrhage develops, and then treat it with administration of vitamin K.** Get care for your baby *immediately* if any symptoms develop. ***Remind your baby's health care provider that the baby was not given vitamin K. Because VKDB is so rare, many care providers may not have enough experience to recognize it.*** If a baby is treated with a vitamin K injection immediately damage may be avoided. However, it may be too late to completely reverse the condition. In addition, some babies who develop VKDB will have no symptoms until brain damage has occurred. If you choose this option, be aware of the signs and symptoms of VKDB. Some of the most common signs are:

- Bruises. Normal newborns should not have unexplained bruises.
- Bleeding from the mouth, nose, ears, umbilicus, or other sites. *Normal newborns do not bleed easily.*
- Blood in the urine, stool, or vomit. Blood in the stool may appear as a faint red "halo" around wet parts of the diaper.
- Poor appetite, difficulty breathing, unusual sleepiness, vomiting
- Prolonged bleeding from puncture sites (heel prick or injections) or circumcision.
- Irritability, agitation, screaming, touch sensitivity, spasms.
- Fontanel (soft spot) is bulging or tight.
- Unusual posture.

Please indicate which option you choose for your baby and sign:

Vitamin K injection:	**Oral vitamin K:**	**Watch and wait:**
❑ I would like my baby to have the vitamin K injection. I understand that there are known and unknown risks with the vitamin K injection, and I release and hold harmless my midwife and BetterBirth$_{LLC}$, from any complications that may occur. _____ Signature _____ Date _____ Witness	❑ I would like my baby to have oral vitamin K. I understand that it is my responsibility to contact a pediatrician and obtain the vitamin K. I understand that my baby must receive 2 mg orally at birth, and 1 mg orally each week for the first three months in order for it to be as effective as the vitamin K injection. I understand that a midwife will give my baby the first dose soon after birth, but that I am responsible for administering subsequent doses. I understand that there may be unknown risks to high vitamin K concentrations, and I release and hold harmless my midwife and BetterBirth$_{LLC}$, from any complications that may occur. _____ Signature _____ Date _____ Witness	❑ I do not want my baby to have vitamin K. I prefer the wait and see approach. I accept the risks and release and hold harmless my midwife and BetterBirth$_{LLC}$ from the consequences of this decision. _____ Signature _____ Date _____ Witness