



# The birth tribe

## Midwifery Services

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## VITAMIN K ADMINISTRATION

Babies, like adults, can have abnormal bleeding for a variety of different reasons. The healthy newborn's clotting system is immature, partially because the liver is not fully developed, and because newborns have low levels of vitamin K which assist the newborn in clotting blood effectively. Vitamin K-dependent coagulation factors drop significantly following birth, particularly between 48 to 72 hours of life, yet return to birth levels by 7 to 10 days of age. A baby may be at risk for vitamin K deficiency bleeding (VKDB) if birth was challenging, bruising is present, or following circumcision. For these reasons, the American Academy of Pediatrics has recommended the supplementation of all newborn babies with vitamin K since 1961.

### **What is Vitamin K Deficiency Bleeding (VKDB)?**

Vitamin K Deficiency Bleeding (VKDB) is bleeding that occurs due to a lack of adequate vitamin K in the newborn's bloodstream. It may be due to abnormally low vitamin K concentration in breast milk, poor feeding, a special diet, a hereditary disorder, a birth defect, or certain medications.

Early-onset VKDB occurs within the first 24 hours and intracranial bleeding is the most common manifestation. It is most often related to maternal drug ingestion during pregnancy such as anticonvulsants, tuberculostatic drugs, or antibiotics. The incidence of this problem is very low even when no supplementary vitamin K is given, with only a few showing symptoms even in high-risk groups.

Classical VKDB occurs between 2 and 7 days of life, and most cases become obvious on days 3 to 5. These babies have unusually low vitamin K levels, resulting in spontaneous or prolonged bleeding in the gastrointestinal tract, umbilicus, ear, nose and throat, with needle pricks or circumcision, or have intracranial bleeding. It is usually prompted by delayed onset of feeding, inadequate intake or marginal vitamin K content in the mother's breast milk. The incidence of classical VKDB in those babies not receiving vitamin K prophylaxis varies widely among different studies but is generally considered to be 0.01 to 1.5%.

Late onset VKDB appears between 2 weeks and 6 months, usually presenting between 2 and 8 weeks, in 4.4 to 7.2 per 100,000 newborns. Deficiencies typically result from insufficient intake and absorption in the breastfed infant related to a low maternal supply. However, late onset VKDB may also result from cholestatic jaundice, cystic fibrosis and other pathology. Vitamin K supplementation prevents the development of late VKDB in infants, with the rare exception of those with severe malabsorption syndromes (APA, 2003).



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### What are the Risks of Vitamin K Supplementation?

Early studies questioned an association between intramuscular vitamin K administration in newborns and an increased incidence of childhood cancer. A large number of subsequent studies have failed to show this relationship. The American Academy of Pediatrics has concluded that there is no association between the intramuscular administration of vitamin K and childhood cancer or leukemia (APA, 2003).

Many parents question, "If babies are routinely born with 'insufficient' amounts of vitamin K, then there must be a creative purpose for this." This is a unanswered mystery even researchers are challenged by, as evidence is quite conclusive that the benefits of vitamin K supplementation outweigh the risks as we understand them today.

### Supplemental Vitamin K

To establish an optimal level of vitamin K for baby's needs and thus decreasing the risk of VKDB, be mindful of eating vitamin K throughout your pregnancy and beyond. Bananas and spinach are excellent sources of vitamin K. A supplement of 3 grams alfalfa tablets daily, beginning 4 to 6 weeks prior to term may also be beneficial. Quinone, an oral, oil-based vitamin K supplement is another option. Supplementation may be continued throughout breastfeeding.

### Vitamin K's relationship to circumcision

When circumcision is planned, note that the Jewish tradition of waiting until the eighth day to perform the Bris (ritual circumcision) makes sense physiologically, as this coincides with the time when newborn VK levels reach an optimum range. Therefore, if circumcision is desired, waiting until the eighth day will offer the greatest protection from VKDB. If circumcision is planned, we recommend you consider a vitamin K injection, as many pediatricians will refuse circumcision unless a vitamin K injection was given at the time of birth.

### References

1. American Academy of Pediatrics. (1961). "Report on Committee on Nutrition: Vitamin K Compounds and the Water-Soluble Analogues." *Pediatrics* 28: 501-507. Free full text.
2. American Academy of Pediatrics (2003). "Controversies concerning vitamin K and the newborn. American Academy of Pediatrics Committee on Fetus and Newborn." *Pediatrics* 112(1 Pt 1): 191-192.
3. Bolisetty, S., J. M. Gupta, et al. (1998). "Vitamin K in preterm breastmilk with maternal supplementation." *Acta Paediatr* 87(9): 960-962. [Click here.](#)

Check out The Vitamin K Article on EvidenceBasedBirth.com

<https://evidencebasedbirth.com/evidence-for-the-vitamin-k-shot-in-newborns/>



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### VITAMIN K ADMINISTRATION INFORMED CONSENT

**Consent:**

I have read and understand the information provided and have had an opportunity to ask questions. I understand that as a standard of care, intramuscular injectable vitamin k is highly recommended immediately following birth. I have been provided with resources for further research and education. I will in no way hold the Midwives at The Birth Tribe liable for my decision. I am aware of the risks of refusing vitamin K as well as receiving it. I am responsible for and have freely chosen to take the following action:

**Initial** next to your decision:

\_\_\_\_\_ I have chosen to have the recommended intramuscular injectable vitamin K administered to my newborn at the time of birth by my Midwife

\_\_\_\_\_ I refuse vitamin K administration to my newborn

\_\_\_\_\_ I have chosen to administer oral vitamin K to my newborn on my own terms

Date of Consent: \_\_\_\_\_

Client's Printed Name: \_\_\_\_\_

Client's Signature: \_\_\_\_\_

Midwife's Signature: \_\_\_\_\_