



### Q & A

**Question: What is Vitamin K? Why is it given to babies shortly after birth?**

**Answer:** Vitamin K is a vitamin that is needed in order for blood to clot. About 90% of our Vitamin K comes from food, while 10% comes from bacteria in our digestive tract.<sup>1,2,3</sup> Babies are born with very limited amounts of Vitamin K. Formula is fortified with Vitamin K; however, there is very little Vitamin K in human milk.<sup>2,4</sup> Babies who are exclusively breastfed will have low Vitamin K levels until they start eating solid foods or are given Vitamin K supplements.

**Question: What is Vitamin K Deficiency Bleeding?**

**Answer:** Babies with low levels of Vitamin K can start bleeding without warning. Vitamin K Deficiency Bleeding (VKDB) can occur spontaneously (without any underlying trauma) and can cause vague symptoms until the baby is quite sick.<sup>2</sup> Three types of VKDB can occur: shortly after birth (early VKDB), in the 1st week of life (classical VKDB), and from week 2 until 6 months (late VKDB). Late VKDB is dangerous because it often starts out as bleeding in the brain, which can cause death or brain damage.

**Question: How often does late VKDB happen?**

**Answer:** Late VKDB is rare, but can be prevented with Vitamin K. Late VKDB happens in:

- 4-7 babies per 100,000 who do not receive any Vitamin K; rates as high as 72 per 100,000 were reported in Thailand.<sup>5,6</sup> Higher rates in East Asian countries may be due to diet, family history, and gallbladder disease (impacts absorption of Vitamin K).<sup>6,7</sup>
- 0-0.9 babies per 100,000 who receive a 3-dose regimen of oral Vitamin K (2 mg at birth, at 4-6 days, and at 4-6 weeks OR 2 mg at birth and 1 mg weekly for 3 months).<sup>2</sup>
- 0-0.4 babies per 100,000 who receive a 1 mg Vitamin K injection at birth.<sup>2</sup>

**Question: What are the benefits and risks of Vitamin K supplementation to prevent VKDB?**

**Answer:** The most common form of Vitamin K supplementation for newborns is an injection of Vitamin K through a shot into the thigh muscle. The benefit is protection against classical and late VKDB. Risks include pain at the injection site, bruising, and swelling.<sup>1,8</sup>

In some countries, infants may receive a series of Vitamin K oral drops. Evidence shows that drops are almost as effective as the Vitamin K shot.<sup>6</sup> However, unlike the Vitamin K shot, there are more chances for missed doses, or the baby spitting up the dose or not absorbing it.<sup>2,8</sup> In the U.S., there are no FDA-approved oral Vitamin K drops for infants, so parents interested in this option can only access Vitamin K supplements that are unregulated.

### Vitamin K: Myths vs. Facts

**Myth:** Vitamin K is unnecessary if you have a gentle birth, or if you do not plan to circumcise.

**Fact:** VKDB, while rare, can happen to any baby.<sup>2</sup> The most commonly affected babies are those who are exclusively breastfed and do not receive Vitamin K supplementation.

**Myth:** The Vitamin K shot causes leukemia.

**Fact:** Research has shown that the shot does not cause leukemia.<sup>2</sup> This myth is based on a single study published in 1992. In the 30+ years since, researchers have never been able to reproduce the same result. After lengthy investigations by researchers worldwide, this single study's findings were rejected by medical organizations in the late 1990s.

**Myth:** You do not need Vitamin K if you use delayed cord clamping.

**Fact:** There is little-to-no Vitamin K in cord blood.<sup>2</sup> Vitamin K does not easily pass across the placenta to baby, so delayed cord clamping does not offer protection against VKDB. For this same reason, taking extra Vitamin K during pregnancy has not been shown to prevent VKDB.

**Myth:** The shot is full of toxins.

**Fact:** The ingredients in the Vitamin K shot are safe for babies,<sup>9</sup> and you can request a preservative-free version of the shot.

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“The main risk factors for Vitamin K Deficiency bleeding are exclusive breastfeeding and not receiving supplemental Vitamin K after birth.”

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