

# HONEYCOMB MIDWIVES



## Vitamin K Administration to the Newborn

Vitamin K is necessary for blood clotting when a person is, for any reason, bleeding. Vitamin K is made in the intestines by the good bacteria (gut flora) that grows there, and can be ingested in food.

Babies are low in vitamin K because their gut flora is not developed at birth, and breast milk is naturally very low in vitamin K. They can't produce levels comparable to adult concentrations until about 6 months of age. Without sufficient vitamin K levels blood cannot clot and spontaneous, life-threatening bleeds can occur.

This is called vitamin K deficiency bleeding (VKDB).

### Causes of VKDB

VKDB can be linked to conditions that already exist in a newborn, for example: cystic fibrosis, medications taken in pregnancy, poor or late onset of feeding, birth trauma (vacuum or forceps delivery), prematurity, malabsorption of vitamin K or surgical procedures such as circumcision. **VKDB can also occur with no known cause or risk factor.**

There are three patterns that VKDB follows:

#### **Early Onset**

Occurs within the first 24 hours of life. It is linked to those babies who were exposed to some types of medications in-utero, for example: some blood thinners, epilepsy medication, and medication to treat tuberculosis.

#### **Classic Onset**

Occurs within 2-7 days of life. Vitamin K levels are naturally lowest at this point and bleeding has been linked to poor feeding patterns.

#### **Late Onset**

Occurs between 3-8 weeks of life. It is linked to those babies at higher risk because of cystic fibrosis, chronic diarrhea, bowel disease or gallbladder disease.

### Implications

Any type of bleeding that cannot be stopped is dangerous. The most worrisome bleeding happens in the brain or the belly where it can't be seen. Often, by the time symptoms appear it is too late to prevent permanent damage or death.

Classic onset is the most common form of VKDB, affecting up to 0.44% of babies who aren't treated with vitamin K at birth. Mortality rate is very low in North America as bleeding is more easily recognized and treatment is readily available.

Late onset VKDB is the most dangerous with a mortality rate of 20%, and a neurological impairment rate of 40%. When vitamin K isn't administered at birth, around 4-10 infants out of 100,000 are affected.

#### Prophylactic (Preventative) Treatment

In Alberta, vitamin K can be routinely given to newborns as an injection into the thigh. Vitamin K can also be given orally however it must be ordered from outside Canada and given to the baby by the parents this way. When newborns are given three oral doses (birth, one week, four weeks) incidence of VKDB lowers to around 1-6 in 100,000. When Vitamin K is given once by injection, incidence of VKDB lowers to nearly zero.

\*\* Virtually all cases of VKDB occur in babies who are exclusively breast-fed and who haven't received the vitamin K shot at birth.

#### Risks of vitamin K administration:

There are no known risks of vitamin K given at birth. There was a study in the 90's linking vitamin K administration to childhood leukemia that has since been disproven.

There is a small chance of bruising or infection at the injection site.

This hand-out is not meant to replace discussion with your midwife, rather, it is to act as a tool to facilitate informed choice. Talk to your midwife about your options and your thoughts.

#### References:

- Dekker, R. (2014). *Evidence for the vitamin k shot in newborns*. Retrieved from: [www.evidencebasedbirth.com](http://www.evidencebasedbirth.com)
- Enkin, M. et.al. (2000) *A Guide to Effective Care in Pregnancy and childbirth. Third Edition*. Oxford. p.157-158.
- Puckett, R.M., Offringa, M. (2000). *Prophylactic vitamin K for vitamin K deficiency bleeding in neonates*. Cochrane Database of Systematic Reviews. Issue 4.