# *Briar Hill Midwives*

## *Information on Vitamin K*

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In Alberta, it is standard practice to give all newborns prophylactic vitamin K within the first few hours of birth. The purpose of this treatment is to prevent Vitamin K Deficiency Bleeding (VKDB) formally called Hemorrhagic Disease of the Newborn, a rare but dangerous condition, which can cause internal bleeding leading to death. There are 3 categories; early VKDB (in the first 24 hours), classic VKDB (1-7 days following birth), and late VKDB (2 weeks to 6 months of life – most common).

Vitamin K is a fat soluble vitamin that plays an important role in blood clotting. Older children and adults get most of their vitamin K from Bacteria in their gut and in their diet. Normal healthy newborns have relatively small amounts of vitamin K in their blood in comparison and begin to acquire the bacteria that produce vitamin K within a few days of ingesting milk. Unfortunately breastfed babies are more susceptible to VKDB than formula fed babies as formula contains higher doses of vitamin K than does breastmilk.

Because of newborns' low levels of Vitamin K, if bleeding does occur, it may take longer for clotting to occur. Birth trauma, prematurity or low birth weight, delayed or inadequate feeding, mothers taking anti-convulsants, anti-coagulants, tuberculosis and/or antibiotic medication increase the risk of VKBD. Most babies, however, who develop VKDB are otherwise healthy, breastfed babies who are born at term. Unfortunately it is difficult to determine whether or not an infant is susceptible to VKDB as most often when the deficiency is discovered it may be too late to treat successfully. Without prophylaxis, the incidence of newborns who suffer from VDKB is 4 - 10 per 100 000. Prophylactic uses of vitamin K significantly decrease the incidence of VKDB to 0.4 and 0.7 per 100, 000 newborns per year. A review of the literature by many authors has noted that administration of Vitamin K to newborns has not been correlated with childhood cancer.

In Alberta, vitamin K is given via an intramuscular injection. The current standard for Vitamin K is phytonadione, a lipid (fat) – soluble, synthetic form of vitamin K. There are preparations available for oral dosage in other countries; however it is not currently approved in North America due to the questionable effectiveness. The current recommendation of the Canadian Paediatric Society and the American Academy of Pediatrics is for the intramuscular route of vitamin K to be given within 6 hours of birth. If you choose to accept vitamin K for your baby, an intramuscular injection of 1mg will be given into your baby's thigh shortly after birth. The injection stings for a few seconds but does not have any known serious side effects.

If you choose not to give your baby vitamin K, you should be aware of the signs and symptoms of VKDB and call your caregiver if you observe any of them. They are:

- Unexplained Bruises
- Bleeding from the mouth, nose, umbilicus, or other sites
- Hematomas
- Blood in the urine or stool
- Prolonged bleeding from puncture sites (heel prick, injections)
- Prolonged bleeding from circumcision

Unfortunately, it is possible that internal bleeding, such as in the brain or lungs, may not be evident before it has caused permanent damage or death.

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