

Prevention of hemorrhagic disease of the newborn due to vitamin K deficiency

Vitamin K plays an important role in coagulation by activating several coagulation factors in the blood. Vitamin K is also important for the metabolism of the bones, blood vessels and cells. Amongst adults, the main source of vitamin K is through diet. The remaining required vitamin K is produced by the intestinal flora, contributing around 10% of the blood's requirements in vitamin K.

Vitamin K levels are very low in newborns at the time of birth. This is due to the absence of intestinal flora, since the intestines are sterile at the time of birth, as well as the fact that vitamin K does not pass readily through the placental barrier. The vast majority of babies who are born healthy and at term will not have a problem due to their vitamin K deficiency. However, 4 to 7 in 100 000 babies will suffer a hemorrhage due to the deficiency. This hemorrhage can range from bruising to a digestive system hemorrhage to a hemorrhage in the brain, which is the most severe form. The hemorrhage has 3 forms: early (within the first 24 hours), classic (in the first week), or late (up to 8 weeks).

For the past several decades, newborns have received a dose of vitamin K by intramuscular injection in the hours following birth, in order to prevent hemorrhagic disease of the newborn. This reduces the chances of the disease to 0.25 per 100 000 babies. Research has shown that intramuscular injection is the most effective way of protecting babies, especially against the late form of the disease. The injectable form of vitamin K is the only form approved for use in Canada. The Canadian Pediatric Society (CPS) and many other organisations across the globe recommend that vitamin K be injected in the 1st 6 hours of life due to the well-known risks associated with hemorrhagic disease of the newborn and the inability of professionals to be able to predict which babies will be affected. Hospital protocols include a systematic injection of vitamin k for each newborn. Midwifery philosophy includes an informed choice process and respect for parental wishes on this subject.

There is currently no known association between the administration of vitamin K and childhood health problems. However, the CPS recognizes that possible psychological impacts for babies and their parents are not well understood. Your midwife may suggest ways to reduce these possible impacts. Babies who will undergo a surgical intervention, however small (frenectomy, circumcision, etc.), will benefit particularly from receiving vitamin K.

If your baby does not receive vitamin K, consult your midwife (or doctor) immediately if you notice bruising, petechiae or bleeding during the first 2 months of life. It is important to mention that your baby did not receive vitamin K.