

# What do I need to know about VITAMIN K?

Prepared in cooperation with Women's Health Action  
[www.womens-health.org.nz](http://www.womens-health.org.nz)



**V**itamin K is a fat-soluble vitamin that plays a role in the process of blood clotting. It occurs naturally in the intestine or gut where it is produced by bacteria. Our bodies also get Vitamin K from the food we eat (see list on page 10).

The level of Vitamin K in the blood of newborn babies is between 30% to 60% of that of adults and these levels steadily rise during the first weeks of life. Most healthy, breastfed babies will have blood levels of Vitamin K close to those of an adult within six weeks.

The reason for lower levels at birth is not known. Over time this so called 'deficiency' of Vitamin K has come to be seen as a flaw in human physiology that needs to be corrected. However, some have speculated that babies' level of Vitamin K may serve to prevent the development of clotting problems during birth and in the

first few weeks of life. Others have suggested that low Vitamin K levels are useful for the unborn baby during periods of rapid cell division and rapid turnover. A baby's gut is sterile at birth because they haven't yet eaten anything. Until bacterial activity in the gut starts to produce Vitamin K newborn babies' only source of this vitamin is milk.

## What is VKDB?

In a very small percentage of babies, low levels of Vitamin K in the blood can result in a bleeding disorder

known as Vitamin K deficiency bleeding (VKDB). There are three categories of VKDB.

**EARLY** VKDB is rare, and only occurs during the first 48 hours after birth. It is almost exclusively attributed to anticonvulsants (drugs which prevent fits or seizures) taken by mothers during pregnancy.

**CLASSIC** VKDB is the most common form and occurs in the first week of life in 2.5 to 15 per 1000 newborns. It is associated with inadequate intake of Vitamin K as a result of a delay in feeding or an inadequate volume of breastmilk.

**Late** VKDB is very rare and occurs in infants between two and 12 weeks in 4.4 to 7.2 per 100,000 babies. Almost half these babies will suffer permanent brain damage or death. Most of these babies have cholestatic liver disease or cystic fibrosis.

**As parents, it is  
YOUR CHOICE  
whether or not to give  
Vitamin K to YOUR  
BABY.**

## Which babies are at greater risk of VKDB?

It is not possible to know exactly which babies will develop VKDB, although some factors have been identified that put babies at a greater risk. These include babies whose mothers have taken certain types of medication during pregnancy (eg anticoagulants or drugs for tuberculosis) and babies with liver disease or cystic fibrosis and those who have trouble absorbing food.

Babies who are not breastfed at birth and those who do not get unrestricted access to breastmilk in the first days following birth are also at increased risk.

This is because they may not receive the higher levels of Vitamin K present in colostrum and, once breastfeeding is established, in the hind milk that is produced later in each feed.

Restricted feeding routines prolong the time it takes to establish the baby's intestinal bacteria which

produce Vitamin K and reduces baby's access to breastmilk with high fat content.

## Why give Vit K to babies?

Because newborn babies have naturally lower levels of Vitamin K in their blood compared with adults, extra Vitamin K can be given to help prevent VKDB. If extra Vitamin K is given to newborn babies, very few will develop VKDB.

## How is Vit K given?

The Vitamin K product available in New Zealand is called Konakion MM and can be given as drops in baby's mouth or by injection into baby's thigh muscle. If you choose to give your baby Vitamin K orally, the Ministry of Health recommends three separate doses — soon after birth, again between three and five days and the final dose when baby is between four and six weeks old.

If you choose to give the Vitamin K by injection, your baby will be given a single dose soon after birth.



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## Is Vitamin K safe?

Two large studies conducted in Britain in the early 1990s suggested an increase in the incidence of leukaemia and other childhood cancers in children who had received an injection of Vitamin K at birth. These studies found no increased risk of cancer in children who received oral Vitamin K.

Further studies carried out in Europe found no increase in the incidence of childhood cancers in children who had received a Vitamin K injection at birth. In 1998 a pooled analysis of data from six studies commissioned by the UK Department of Health also found no association between childhood cancer and children given a Vitamin K injection at birth. Some researchers and medical specialists believe that the possibility of a link between Vitamin K and an increased risk of childhood leukaemia cannot be excluded.

As with all injections, there are also relatively rare risks associated with the injection which include infection or irritation of the nerve and muscle damage due because the injection must be given deeply into the muscle.

Because of concerns about Vitamin K, some parents use herbal or homoeopathic treatments instead. If you consider using an alternative, you are advised to consult a registered homoeopath or naturopath. At present there is no evidence that any alternative health care practices are effective in preventing VKDB.

## Possible signs of VKDB

If your baby has any of these signs:

- BLEEDING from the umbilicus
- BLOOD oozing from the nose
- UNUSUAL bruising of the skin
- BLOOD in baby's bowel motions (poos) or urine

... or any other signs of bleeding or bruising, your baby may have VKDB. Baby should be seen straight away by your Lead Maternity Carer (LMC), doctor or a doctor at an Accident and Emergency Clinic. It is important to tell them whether or not your baby has had Vitamin K, either orally or by injection.

## Foods rich in Vitamin K include:

- Green leafy vegetables — lettuce, broccoli, spinach, parsley, watercress
- Alfalfa
- Whole grain cereals
- Olive oil and fish liver oils
- Dairy products — milk, cheese
- Kelp



In 2000, New Zealand health professionals reached an agreement that supported the use of Vitamin K for all babies to prevent VKDB ([www.medsafe.govt.nz/profs/puarticles/vitk.htm](http://www.medsafe.govt.nz/profs/puarticles/vitk.htm)). Find out more about Vitamin K from your LMC, doctor or a Hauora or Pacific Well Child Service, or visit the Parents Centres website at [www.parentscentre.org.nz](http://www.parentscentre.org.nz)