

# Vitamin K deficiency of the newborn:

## A guide for new parents



## What is Vitamin K?

Vitamin K is a vitamin, which occurs naturally in food especially in liver and some vegetables. We all need vitamin K. It helps to make blood clot in order to prevent bleeding.

During early infancy when fed entirely on milk, babies have very little vitamin K. A very small number of babies suffer bleeding due to vitamin K deficiency. This is called Vitamin K Deficiency Bleeding or VKDB for short. This risk of bleeding is effectively removed when sufficient extra vitamin K is given to babies.

## What is Vitamin VKDB?

This is a rare condition that affects approximately one in 10,000 babies. If it does occur there can be serious consequences. It results in bruising/bleeding or brain haemorrhage and can be fatal.

Bleeding in the first 24 hours after birth is a particular risk to babies of mothers on certain drugs, such as anti-convulsants.

Bleeding after 24 hours following birth is more common and babies at greater risk are those who:

- are premature
- had a complicated delivery e.g. a forceps delivery
- have liver disease that may show as prolonged jaundice or as other symptoms, such as pale stools or dark urine
- fail to take or find hard to absorb feeds
- are ill for other reasons
- have bleeding or spontaneous bruising in early infancy.

Some babies who do not fall into any of the high risk groups above will develop VKDB. The Department of Health recommends that all newborn babies are given a vitamin K supplement at birth to help protect against this condition.

## Are there any risks?

In the past there were concerns over the possible link between giving vitamin K to newborn babies and leukaemia or cancer in childhood. However a careful review of data from the UK Children's Cancer Study Group in 2003 found no evidence that this influences the risk of children developing leukaemia or any other cancer.

## How is it given?

There are two different ways in which your child can receive vitamin K. Either by injection or mouth.

### By injection

Intra muscular (IM) injection of vitamin K (Konakian M M paediatric) prevents VKDB in virtually all babies. One dose is given at birth by the midwife. It does not need to be repeated.

### By mouth

This method can be as effective but it requires more than one dose.

- two doses are advised for all babies the first dose in the first 72 hours and the second at one week of age.
- for exclusively breastfed babies it is recommended that a third dose of 2mg Konakian M M be given at one month of age.

### It is essential that all doses are given.

If you chose for your baby to have vitamin K given by mouth, the second and third doses will be prescribed in hospital and given to you to take home.

Vitamin K is added to artificial milk.

### Breastfeeding and VKDB

Breastfeeding gives babies the best start in life. Breast milk has many health benefits both for mother and baby. Exclusive breastfeeding for the first four to six months gives your baby the best chance of avoiding allergies in later life. Babies who are breastfed for the first three months of life continue to have lower rates of infection in the first year of life.

The only reason that breastfed babies are at greater risk of vitamin K deficiency is that vitamin K is added to artificial milk. Artificial milk cannot match the benefits and advantages of breast milk. Breast is always best so it is not advised to give artificial milk for the added vitamin K.

## Does my baby have to have vitamin K?

All parents have a choice. However it is strongly advised you allow your baby to be given vitamin K as it lowers the risk of permanent handicap or death in healthy babies. If you have any further questions you can ask a midwife, paediatrician or nurse.

## Are there any alternatives to vitamin K?

There are no alternatives to the prescribed dose of vitamin K. If you choose not to give your baby vitamin K then you need to monitor your baby closely for signs of VKDB.

## What are the symptoms of VKDB?

Many babies who later suffer bleeding in the brain have already had bleeds from the skin, nose or mouth. Minor bleeds or bruising anytime in the first six months must be looked at urgently.

Any baby who is still jaundiced after two weeks of age must be seen by a doctor or health visitor – especially if they are not gaining weight, have pale stools and dark urine or are ill in any way.

## References

Department of Health. 2006. Pregnancy Book. DOH.

Fear NT, Roman E, Ansell P, Simpson J, Day N, Eden OB. Vitamin K and childhood cancer: a report from the United Kingdom Childhood Cancer Study, *British Journal of Cancer* (2003) Oct 6; 89(7):1228-31.

Roche Products Ltd. 2005. Konakion MM Ampoules and Konakion Paediatric Ampoules. Welwyn Garden City. Roche Products Ltd.

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