

Protect Babies from Life-threatening Bleeding — Talk to Expectant Parents about the Benefits of the Vitamin K Shot for Newborns



Although the Vitamin K shot is safe and, as recommended by the American Academy of Pediatrics, has been routinely given to newborns at birth since 1961, some parents refuse the shot due to myths and misperceptions about its safety. This puts babies at risk for dangerous bleeding which can lead to brain damage and even death. **As a healthcare provider, you are in a unique position to debunk these myths and misperceptions. Provide reliable information to parents about the benefits of Vitamin K so that they can make the most informed choices about their child’s medical care and protect them from potentially devastating health consequences.**

- Talk to expectant parents about the benefits of a single Vitamin K shot after birth **before** they get to the delivery room.
- Encourage expectant parents to protect their newborn by making sure he or she gets the shot after birth.

Purpose of Vitamin K

Vitamin K refers to a group of structurally similar fat-soluble molecules that are primarily involved in the synthetic pathways of a number of clotting factors. Vitamin K is also involved in bone metabolism.

Sources of Vitamin K

Adults get vitamin K from food — mainly leafy green vegetables — and from bacterial synthesis in the gut. Babies have very little vitamin K in their bodies at birth because only small amounts of the vitamin pass through the placenta. Also, the bacteria that produce the vitamin in the newborn’s intestines are not yet present. Breast milk contains only low levels of vitamin K, and it may take weeks to months for the infant’s ‘sterile’ gut to become established and functional. Infants are therefore predisposed to having low vitamin K levels, resulting in low levels of vitamin K-dependent clotting factors, and an increased risk for bleeding, termed vitamin K deficiency bleeding.

What is vitamin K deficiency bleeding (VKDB)?

Infants who do not receive the vitamin K shot are at risk for developing VKDB.

VKDB can be classified according to the time of presentation after birth into early (0–24 hours), classical (1–7 days) and late (2–12 weeks) VKDB. Early VKDB is severe, and is mainly found in infants whose mothers used certain medications during pregnancy that interfere with vitamin K metabolism, such as certain anticonvulsants or isoniazid. Classical VKDB is typically characterized by bruising or bleeding from the umbilicus. Late VKDB is the most concerning type — this bleeding occurs up to 6 months of age in previously healthy infants, and between 30–60% of late VKDB presents as an intracranial bleed. This life-threatening complication tends to occur in exclusively breastfed infants who have received no or inadequate vitamin K prophylaxis; warning bleeds before an initial severe event are rare.

Infants who do not get the vitamin K shot at birth are at 81 times greater risk for developing VKDB than infants who do get the shot. VKDB is effectively prevented by the vitamin K shot — incidence of late VKDB, the most concerning type, falls to less than 1/100,000 infants when vitamin K is given at birth.

What are the warning signs of VKDB?

In the majority of cases of VKDB, there are **NO WARNING SIGNS** at all before a life-threatening bleed occurs. Infants who do not get vitamin K at birth might develop any of these signs of VKDB:

- Bulging fontanelles
- Diffused bruising and ecchymosis
- Feeding intolerance, irritabilities
- Epistaxis
- Jaundice and pallor

How can I prevent VKDB?

Make sure all newborns receive vitamin K prophylaxis. Administration of vitamin K (1 mg) after birth can prevent intracranial bleeding and other hemorrhagic manifestations.

Is Vitamin K safe?

A study from the early 1990's found a possible link between intramuscular vitamin K administration and leukemia. Multiple follow-up studies did not confirm these findings.

Where can I get more information?

For more information, please visit our website at:

<http://www.cdc.gov/mmwr/preview/mmwrhtml/mm6245a4.htm>

<http://www.cdc.gov/ncbddd/blooddisorders/index.html>



National Center on Birth Defects and Developmental Disabilities

For more information please contact the Centers for Disease Control and Prevention

1600 Clifton Road NE, Atlanta, GA 30333

Telephone: 1-800-CDC-INFO (232-4636)/TTY: 1-888-232-6348

Email: cdcinfo@cdc.gov Web: www.cdc.gov