



February 20, 2017

Kaiser Permanente Support for HB 2644

Members of the House Health Care Committee:

Kaiser Permanente urges your yes vote on HB 2644. Vitamin K is a vital medication for newborns and is a required co-factor in the blood clotting process of humans. Vitamin K administered by injection shortly after birth helps prevent catastrophic bleeding in newborns. Without it, blood does not clot appropriately and significant bruising and bleeding can occur with the most innocent of mild traumas to the body. Serious bleeding in newborns often happens in the brain and intestines leading to serious morbidity and mortality. The most effective way to deliver vitamin K to newborns is by injection immediately after birth.

Children and adults obtain adequate vitamin K levels from the bacteria that live in their intestines and from their varied diets. Before birth, babies receive very little vitamin K across the placenta. Because newborns, especially those born by c-section, are born with sterile GI tracts, and their diets are not rich in vitamin K, they are at great risk for bleeding without an initial dose of injected vitamin K. While formula is fortified with vitamin K, breastmilk is not rich in vitamin K. Regardless, a newborn's oral intake of breastmilk or formula is quite limited in the first few days of life. A single injection of vitamin K at birth can prevent serious bruising and bleeding for babies.

There are three phases of vitamin K deficiency. Early onset deficient bleeding happens within the first 24 hours of life. Twenty-five percent of this bleeding happens in the brain which can lead to life-long problems with brain functioning. Classic vitamin K deficient bleeding happens at 1-4 weeks of life. Late onset deficient bleeding develops between 3 weeks and 8 months of life. Up to fifty percent of these bleeding episodes are in the brain and lead to seizures, vomiting and often a lifetime of some form of altered brain capacity or functions.

This type of catastrophic bleeding is on the rise in the United States and is most likely related to increased parental refusal of vitamin K injection for their newborns followed by exclusive breastfeeding. To prevent vitamin K deficient bleeding, the American Academy of Pediatrics recommends administration of vitamin K by injection at birth and supplementing infant formulas with vitamin K. Kaiser Permanente supports and follows these recommendations as well to protect all newborns.

An oral vitamin K preparation is not commercially available in the United States but has been used in some babies. It is not as effective as injected vitamin K. Oral dosing also requires repeated doses which are likely to be forgotten thus rendering this form of vitamin K much less effective and puts newborns at unnecessary risk for vitamin K deficient bleeding.

Sincerely,

**Lisa Bisgard, MD**  
Chief of Pediatrics