

## GUIDELINE FOR NEWBORN ADMINISTRATION OF VITAMIN K

The routine administration of Vitamin K to all neonates is a source of controversy in the midwifery literature. This guideline is intended to provide the midwife with a guide for practice as it relates to Vitamin K administration, and is based on the available evidence.

### Definition of Vitamin K Deficiency

Babies are born with low plasma concentrations of vitamin K and thus a low level of vitamin K dependent coagulation factors. These low levels can result in vitamin K deficiency bleeding (VKDB).

### Incidence of VKDB in untreated babies:

Early VKDB (first week of life):	0.4 to 1.7 %
Disabling or fatal hemorrhage:	2.2 per 100 000 births
Late VKDB (weeks 2-12 of life):	4.4 to 10.5 per 100 000 births

The administration of Vitamin K to newborns has virtually eliminated the incidence of VKDB.

### Risks factors for VKDB

#### Pregnancy

- high degree of albuminuria in the mother
- mothers who have been taking medications associated with a high risk of bleeding in the newborn period (anti-convulsant agents, warfarin and anti-tuberculosis drugs)

#### Labour

- asphyxia during birth
- prolonged labour
- complicated deliveries e.g. caesarean section, forceps

#### Newborn

- exclusive breastfeeding in babies who have not received Vitamin K
- premature babies who demonstrate feeding or absorption problems
- babies who demonstrate bleeding or spontaneous bruising in early infancy
- (Late onset) babies with fat malabsorption defects e.g. cystic fibrosis

### Signs and symptoms of VKDB

- symptoms of liver disease e.g. prolonged jaundice, pale stools, dark urine
- unexpected bleeding
- gastrointestinal hemorrhage
- ecchymosis
- intracranial damage

### Risks of administration of vitamin K

- IM injection may cause discomfort to newborn and parent

### Benefits of administration of vitamin K

- reduced incidence of VKDB

### Management Options

1. Administration of Vitamin K to all babies
  - a. *Intramuscular injection (within 6 hours of birth):*
    - 0.5 mg (birth weight  $\leq$  1500g)
    - 1.0 mg (birth weight  $\geq$  1500 g)
  - b. *Oral administration:*
    - first dose (within 6 hours of birth): 2.0 mg
    - second dose (7 to 10 days of birth): 2.0 mg
    - third dose (28 to 40 days of birth): 2.0 mg
2. Administration to at-risk babies only

### Midwife's Responsibilities

1. Develop practice protocol that explains the midwife's usual practice.
2. Using the principles of informed choice, discuss vitamin K administration including risk factors for VKDB, criteria for administration, routes of administration, VKDB warning signs.
3. Record discussion and resulting decision.
4. If choosing oral administration to the newborn, the midwife (or her delegate) will administer all doses.

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