

AquaMEPHYTON injection is a yellow, sterile, aqueous colloidal solution of vitamin K1, with a pH of 5.0 to 7.0, available for injection by the intravenous, intramuscular, and subcutaneous routes. Phytonadione is a vitamin, which is a clear, yellow to amber, viscous, odorless or nearlyodorless liquid. It is insoluble in water, soluble in chloroform and slightly soluble in ethanol. It has a molecular weight of 450.70. Phytonadione is 2-methyl-3-phytyl-1,4-naphthoquinone.

Common risk factors that reduce Vitamin K in newborns include but are not limited to:

- The use of forceps in delivery of newborn, which can cause physical trauma of the newborn.
- Vacuum extraction, which can also cause physical trauma, bruising and bleeding in the brain.
- Drugs which are commonly injected in epidurals and spinal anesthesia have the possible side effect of causing bleeding in the newborn's brain.
- Circumcision is still a risk factor for excessive newborn bleeding.

Most health care professionals agree that if a baby has a traumatic birth that causes bruising or if a newborn shows signs of clotting difficulties, then it makes sense to administer vitamin K in a timely fashion to prevent hemorrhagic disease of the newborn. (HDN)

The newborn has a sterile intestine at birth, hence, the newborn does not possess the intestinal bacteria that manufactures vitamin K which is necessary for the formation of clotting factors. This makes the newborn prone to bleeding. As a preventive measure, .5 (preterm) and 1 mg (full term) Vitamin K or aquamephyton is injected IM in the newborn's vastus lateralis (lateral anterior thigh) muscle.

Other Signs Suggesting Need for Vitamin K:

- bleeding from the umbilicus, nose, mouth, ears, urinary tract or rectum
- any bruise not related to a known trauma
- pinpoint bruises called petechiae
- black tarry stools after meconium has already been expelled
- black vomit
- bleeding longer than 6 minutes from a blood sampling site even after there has been pressure on the wound
- symptoms of intracranial bleeding including paleness, glassy eyed look, irritability or high pitched crying, loss of appetite, vomiting, fever, prolonged jaundice.

CLINICAL PHARMACOLOGY

AquaMEPHYTON aqueous colloidal solution of vitamin K1 for parenteral injection, possesses the same type and degree of activity as does naturally-occurring vitamin K, which is necessary for the production via the liver of active prothrombin (factor II), proconvertin (factor VII), plasmathromboplastin component (factor IX), and Stuart factor (factor X). The prothrombin test is sensitive to the levels of three of these four factors — II, VII, and X. Vitamin K is an essential cofactor for a microsomal enzyme that catalyzes the post-translational carboxylation of multiple, specific, peptide-bound glutamic acid residues in inactive hepatic precursors of factors II, VII, IX,

AquaMEPHYTON® (Phytonadione)

9073025 and X. The resulting gamma-carboxyglutamic acid residues convert the precursors into active coagulation factors that are subsequently secreted by liver cells into the blood. Phytonadione is readily absorbed following intramuscular administration. After absorption, phytonadione is initially concentrated in the liver, but the concentration declines rapidly. Very little vitamin K accumulates in tissues. Little is known about the metabolic fate of vitamin K. Almost no free unmetabolized vitamin K appears in bile or urine.

In normal animals and humans, phytonadione is virtually devoid of pharmacodynamic activity. However, in animals and humans deficient in vitamin K, the pharmacological action of vitamin K is related to its

normal physiological function, that is, to promote the hepatic biosynthesis of vitamin K dependent clotting factors.

The action of the aqueous colloidal solution, when administered intravenously, is generally detectable within an hour or two and hemorrhage is usually controlled within 3 to 6 hours. A normal prothrombin level may often be obtained in 12 to 14 hours.

In the prophylaxis and treatment of hemorrhagic disease of the newborn, phytonadione has demonstrated a greater margin of safety than that of the water-soluble vitamin K analogues.

How to use Aqua-Mephyton Inj

This medication is given by injection under the skin or into a muscle or vein by a health care professional. If this medication is given into a vein, it should be injected very slowly (no more than 1 milligram per minute) to reduce the risk of serious side effects. Dosage is based on medical condition and response to treatment.

Before using vitamin K, tell your health care provider or pharmacist if you are allergic to it; or if you have any other allergies. This product may contain inactive ingredients, which can cause allergic reactions or other problems. Talk to your pharmacist for more details.

Before using this medication, tell your health care provider or pharmacist your medical history, especially of: blood disorders, kidney disease, liver disease.

This product may contain aluminum, which can infrequently build up to dangerous levels in the body.

The risk may be increased if this product is used for an extended time, especially in people with kidney disease. Tell your health care provider immediately if you notice any symptoms of too much aluminum in the body such as muscle weakness, bone pain, or mental changes.

The injectable form of vitamin K can rarely cause severe (sometimes fatal) allergic reactions when given by injection into a muscle or vein. Therefore, vitamin K should be injected into a muscle or vein only when it cannot be given by injection under the skin or taken by mouth, or when your doctor has judged that the benefit is greater than the risk. Seek immediate medical attention if you experience symptoms of an allergic reaction such as rash, itching, swelling, dizziness, or trouble breathing.

Pain, swelling, or soreness at the injection site may occur. Temporary flushing, taste changes, dizziness, rapid heartbeat, sweating, shortness of breath, or bluish lips/skin/nails may also infrequently occur. If any of these effects persist or worsen, tell your doctor or pharmacist promptly.

Remember that your doctor has prescribed this medication because he or she has judged that the benefit to you is greater than the risk of side effects. Many people using this medication do not have serious side effects.

A very serious allergic reaction to this drug is rare. However, get medical help right away if you notice any symptoms of a serious allergic reaction, including: rash, itching/swelling (especially of the face/tongue/throat), severe dizziness, trouble breathing.

This is not a complete list of possible side effects. If you notice other effects not listed above, contact your doctor or pharmacist.

In the US -

Call your doctor or health care provider for medical advice about side effects. You may report side effects to FDA at 1-800-FDA-1088.

Drug interactions may change how your medications work or increase your risk for serious side effects.

This document does not contain all possible drug interactions. Keep a list of all the products you use (including prescription/nonprescription drugs and herbal products) and share it with your health care provider and pharmacist.

Some products that may interact with this drug include: "blood thinners" (e.g., warfarin), aspirin, nonsteroidal anti-inflammatory drugs-NSAIDs (e.g., ibuprofen, naproxen).

Hemolysis, jaundice, and hyperbilirubinemia in newborns, particularly in premature infants, may be related to the dose of AquaMEPHYTON. Therefore, the recommended dose should not be exceeded.

If overdose is suspected, contact your local poison control center or emergency room immediately. US residents can call the US National Poison Hotline at 1-800-222-1222. Canada residents can call a provincial poison control center.

Potential exists for the newborn to experience hypersensitivity to any component of this medication. Hemolysis, jaundice, and hyperbilirubinemia in newborns, particularly in premature infants, may be related to the dose of AquaMEPHYTON. Therefore, the recommended dose should not be exceeded.

Each milliliter contains: Phytonadione 2 mg or 10 mg

Inactive ingredients:

Polyoxyethylated fatty acid derivative 70 mg

Dextrose..... 37.5 mg

Water for Injection, q.s. 1 mL

Added as preservative: Benzyl alcohol 0.9%

I have read and understand the above information concerning the use of AquaMEPHYTON aqueous colloidal solution of vitamin K1 for newborns. I have had an opportunity to have my questions answered. I have had the opportunity to seek further information to make an informed decision.

_____ I choose NOT to have AquaMEPHYTON aqueous colloidal solution of vitamin K1 administered to my newborn.

_____ I choose to HAVE AquaMEPHYTON aqueous colloidal solution of vitamin K1 administered to my newborn.

_____ I choose to have AquaMEPHYTON aqueous colloidal solution of vitamin K1 administered by IM INJECTION to my newborn.

_____ I choose to have AquaMEPHYTON aqueous colloidal solution of vitamin K1 administered ORALY by MOUTH to my newborn.

Child's Name: _____ Date of Birth: _____

Printed Name: _____

Signature: _____

Date: _____