Metabolism
Vitamin K₁ is converted to more polar metabolites, such as phytomenadione-2, 3-epoxide.

Elimination
The half-life of vitamin K₁ in plasma is about 1.5 to 3 hours. Vitamin K₁ is excreted in the bile and urine as glucuronide and sulphate conjugates.

Indications
Documented Indications
Prophylaxis and treatment of hemorrhagic disease of the newborn.

Contraindications
The use of Konakion MM pediatric is contraindicated in cases of known hypersensitivity to any of the ingredients.

Side Effects
In rare cases, anaphylactoid reactions have been reported after parenteral use of Konakion MM pediatric. Local irritation may occur at the injection site, but is unlikely in view of the small injection volume.

Precautions
Parenteral administration is associated with a risk of kernicterus in premature infants weighing less than 2.5 kg, particularly if they are acidic. This risk is increased by administering the drug by rapid injection.

Overdosage
No overdose effects are known.

Stability
This medicine should not be used after the expiry date (EXP) shown on the pack. Protect from light and heat (store below 25°C). The ampoule solution must be clear when used. Improper storage can cause turbidity or phase separation. In such cases, ampoules must not be used.

Drug Interactions
Vitamin K₁ antagonizes the effect of coumarin-type anticoagulants.
Dosage and Administration

For all healthy neonates: 2 mg orally at birth or shortly after birth, followed by a further 2 mg dose four to seven days later.

Exclusively breast-fed babies: In addition to the regimen recommended for all healthy neonates, a 2 mg dose should be given orally after four to six weeks. If administration of a second oral dose after 4 to 7 days (or administration of a further oral dose 4 to 6 weeks in breast-fed infants) cannot be ensured, a single I.M. injection of 1 mg (0.1 ml) should be given at birth or shortly after birth.

Neonates with special risk factors (e.g. prematurity, birth asphyxia, obstructive jaundice, maternal use of anticoagulants or antiepileptics):
- 1 mg intramuscularly or intravenously at birth or shortly after birth if the oral route is unsuitable.
- Intramuscular and intravenous doses should not exceed 0.4 mg/kg (equivalent to 0.04 ml/kg) in premature infants weighing less than 2.5 kg (see Precautions).
- The size and frequency of further doses should be based on coagulation status.

Therapy
Initially, 1 mg by intravenous injection, with further doses as required, based on the clinical picture and coagulation status. In certain circumstances, treatment with Konakion MM pediatric may need to be accompanied by more direct forms of effective hemorrhage control, such as transfusion of whole blood or coagulation factors, to compensate for severe blood loss and the delayed response to vitamin K₁.

Administration
Oral Use (with the dispenser included in the package): after breaking the ampoule, place the dispenser vertically into the ampoule; withdraw the solution from the ampoule into the dispenser until the solution reaches the marking of the dispenser (=2 mg vitamin K₁); administer the contents of the dispenser directly into the newborn’s mouth.

If a dispenser is not available, Konakion MM pediatric can be given orally with a syringe: withdraw the required amount from the ampoule using a needle and syringe; remove the needle from the syringe and administer the contents of the syringe directly into the infant’s mouth.

Parenteral Use: Konakion MM pediatric should not be diluted or mixed with other parenteral medication, but may be injected into the lower part of an infusion set.