### **RECOMMENDED INTAKE OF VITAMIN D SUPPLEMENTS FOR INFANTS**

*This recommendation is an update of the recommended intake of vitamin D supplements for infants, as the vitamin D content in infant formulae and follow-on formulae will be changing in accordance with the new EU regulations. The recommendation is to ensure an adequate intake of vitamin D for infants.*

*The vitamin D supplementation is given to infants (0-12 months of age) individually, based on whether the infant is exclusively breast fed or given also an infant formula or a follow-on formula. The quantity of the vitamin D supplement is reduced if the child is given 500 ml or more infant formula or follow-on formula a day.*

**Updated recommendation for the use of vitamin D supplementation for infants**

All children need to be given a reliable Vitamin D supplementation from the age of two weeks. The dosage of vitamin D supplementation for infants has to take into account the quantity of any intake of infant formula/follow-on formula by the infant. This ensures that the infant's intake of vitamin D is in accordance with the recommendation and prevents the safe intake from being exceeded.

Children who are exclusively breastfed and children who are consuming less infant formula or follow-on formula than 500 ml/day are to be given 10 µg (400 IU) of vitamin D supplementation a day all year round. When a child in addition to or instead of breast milk receives 500 ml or more infant formula/follow-on formula, the dose of vitamin D preparation is reduced according to the amount consumed by the child of the product with vitamin D fortification (see the table). Baby cereals (gruels) and baby porridges with vitamin D fortification are also counted in the quantity of infant formula and follow-on formula consumed by the child.

It is important that the use of a vitamin D supplementation continues for all children without interruption throughout the first year of life. After the first year all children aged 1–2 years are to be given 10 µg/day of vitamin D supplement regardless of the other food the child is eating.

### **Dosage of vitamin D supplements**

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| **Infants** | **Vitamin D supplement throughout the year**  **µg/day** |
| * a child that is exclusively breast fed and a child whose daily intake of infant formula/follow-on formula is less than 500 ml\* | 10 |
| * A child whose daily intake of infant formula/follow-on formula is 500-800 ml\* | 6 |
| * A child whose daily intake of infant formula/follow-on formula\* exceeds 800 ml\* | 2 |

\* Baby cereals (gruels) and porridges with added vitamin D are included in the quantity of infant formula/follow-on formula.

**Why is an adequate intake of vitamin D important?**

Vitamin D is necessary for normal growth and especially for bone development. Vitamin D promotes the absorption of calcium and phosphorous from food in the intestinal tract and maintains the normal equilibrium of calcium and phosphorous in the system. Long-term deficiency of vitamin D in children causes rickets. But, long-term overdosage of vitamin D causes desfunction, especially in the metabolism of calcium. Both the recommended daily intake of vitamin D and the safe tolerable upper intake level for the different age groups have been determined based on scientific data.

Babies are born with vitamin D stores in their body, which are impacted by the mother’s intake of vitamin D during pregnancy. It is therefore important to ensure that the vitamin D intake is adequate during pregnancy by taking a vitamin D supplementation. A newborn baby will use up the vitamin D stored in its body within a couple of weeks. That’s why all infants need a reliable Vitamin D supplement from the age of two weeks. Breast milk hardly contains any vitamin D at all.

**Vitamin D content in infant formulae and follow-on formulae are being specified**

Vitamin D is added to all infant formulae and follow-on formulae in accordance with the Commission Delegated Regulation (EU) 2016/127. According to this regulation, the vitamin D content is increased from 1.5–2.5 µg/100 kcal to 2.0–2.5 (max 3) µg/100 kcal.

Infant formulae and follow-on formulae have to be in accordance with the new regulation by June 2020 at the latest. The vitamin D content of the products sold in Finland will be specified for each product during the transition period. The first products adhering to the new regulation will be in the shops in the autumn of 2018.

The new recommendation of vitamin D supplementation will be taken into use immediately. It is applied to all children in the same way regardless of whether the child is given infant formulae/follow-on formulae containing the current or the new vitamin D levels.

**Type of vitamin D supplementation**

The primary vitamin D supplement recommended is in the D3 format (cholecalciferol), which is the normal form of vitamin D for the human body and more effective than vitamin D2 (ergocalciferol).

The primary choice recommended for infants is a product in drop format, which makes it easier to follow the recommended dosage. Sprays etc. are not recommended due to the uncertain dosage.

**Recommended intake of vitamin D and safe upper intake levels**

The recommended intake of vitamin D for infants is 10 µg (400 IU) per day. With this intake of vitamin D an adequate serum concentration is achieved in almost all individuals (over 50 nmol/l). Exceeding the recommended intake of vitamin D has not shown to be of any additional benefit.

According to a scientific assessment by the European Food Safety Authority (EFSA) in 2018, the safe, tolerable upper intake level is 25 μg/day for infants aged up to 6 months and 35 μg/day for infants aged 6-12 months.