Vitamin D for the Human Milk-Fed Baby

What is Vitamin D?

Everyone needs vitamin D. **Vitamin D is essential to bone health**. A lack of vitamin D in infants and children can lead to a condition called **metabolic bone disease, also known as rickets**. Adults with low vitamin D levels are at risk for low bone density and osteoporosis. In addition to bone health, vitamin D plays an important role in supporting the immune system and mental health.

There are two types of vitamin D that you may hear about – vitamin D2 and vitamin D3. **Vitamin D3** is purchased in stores for adults, infants and children. It is also known as "cholecalciferol." Vitamin D2, also known as ergocalciferol, is most often prescribed as a once-a-week or once-a-month dose by a physician or other provider.

Why do Babies Need Vitamin D Supplements?

Humans get vitamin D in two ways. They can **make vitamin D if they are exposed to enough sunlight, or they can obtain vitamin D orally via diet or as a supplement**. The amount of sunlight needed to support an optimal vitamin D level in infants is not safe due to the risk of sunburn and the increased risk of skin cancer over time. Therefore, infants must take a vitamin supplement.

The amount of vitamin D in breastmilk varies depending on the maternal vitamin D level. Most lactating women don't have high enough vitamin D levels to provide an adequate amount of vitamin D for a baby's needs. Therefore, vitamin D supplements are needed for human-milk fed babies to ensure daily requirements.

How Much Vitamin D do Babies Need?

The breastfed or human-milk fed baby should be given **400 International Units (IU) of a vitamin D3** supplement per day until at least 1 year of age (this is equal to 10 micrograms or 10 µg). This can be given directly to your baby or can be placed in a bottle of expressed milk. When shopping for vitamin D3, look for products that are specifically labelled for infants. Follow the directions on the label for dosing, as infant supplements vary. While they all provide 400 IU per dose, some infant vitamin D3 supplements are designed to deliver 400 IU in just 1 tasteless drop, while others require 1 mL in a suspension via a dropper. If you use the drops, they can be placed on your finger or nipple to be licked off by your baby.

- If the baby is weaned before a year of age, the vitamin D supplement can be discontinued once the baby is no longer breastfeeding and is just taking formula. For a baby who is being fed a **combination of human milk and formula**, it is recommended to continue to give a vitamin D supplement. Babies who are exclusively formula-fed get enough vitamin D through formula.
- After your child is 1 year of age, talk to your doctor about whether to continue the vitamin D supplement. **Dairy products are fortified with vitamin D** and are the main source of vitamin D in food after 1 year of age. If your toddler

does not eat dairy products, they can continue to take 400 IU of vitamin D3 daily as a supplement. For toddlers who do eat dairy, continuing vitamin D3 400 IU daily is still reasonable and safe.

Can Mothers Take Enough Vitamin D to Meet their Infant's Requirements?

Some mothers prefer to take high dose vitamin D rather than supplement the baby. Although there is research showing that this is possible, there is no current calculator to know how much vitamin D an individual mother needs for their baby. The vitamin D dose will vary depending on the mother's health history, other medications, and body weight. Even if the mother is on vitamin D for her own health, it is still safe and recommended to give vitamin D to the breastfed infant.