Vitamin D information for health professionals in Scotland

1. Who is at risk of low vitamin D status?
The whole UK population is at risk of low Vitamin D status due to living much of our life indoors and in a country with limited sunlight. Our main source of vitamin D is from the action of sunlight on our skin but in countries in the Northern Hemisphere, it is not strong enough to make it in the winter months (September to April). Most of us are able to synthesise vitamin D through normal exposure of the skin to summer sunlight but, living indoors, in the northern hemisphere and using sun creams increases the risk of deficiency, even in summer months. In addition, some mother and infant groups have been shown to be at increased risk, including: babies of mothers with darker skin types, pregnant and breastfeeding women, babies and mothers who wear concealing clothing, babies and mothers who spend a lot of time indoors or use sun creams, babies of obese mothers (BMI >30) and babies of mothers with gestational diabetes.

2. Updated Guidance
In July 2016, the UK Scientific Advisory Committee on Nutrition (SACN) updated recommendations on vitamin D supplementation for the whole population, including new-born babies. It is now recommended that:

- **Everyone** over one year of age should take a 10μg/d vitamin D supplement daily
- **As a precaution, breastfed babies from birth up to one year of age should also be given a supplement of 8.5 to 10μg/d vitamin D per day.**
- **Babies who are formula fed do not require vitamin D if they are having 500ml/day of infant formula or more, as infant formula already has added vitamin D.**

3. How can we support pregnant women to take vitamin D?
The Scottish Government recommend that pregnant and breastfeeding women take a vitamin D supplement of 10 micrograms (or 400 units) daily. **From April 2017 Healthy Start maternal vitamins (which provide Vitamin D, folic acid and Vitamin C) are provided free to all pregnant women in Scotland.**
Health professionals should inform all pregnant and breastfeeding women about the importance of this for their health and the future health of their baby. **It is essential that maternal vitamin D deficiency is prevented and/or corrected during pregnancy in order to prevent babies being born with depleted stores.** In some cases, pregnant woman may require a higher dose of vitamin D – this should be discussed with her doctor. **A baby born deficient in vitamin D will not restore their levels from breast milk alone.**

4. **Why do breastfed babies need to be given Vitamin D?**
A new-born baby’s vitamin D level depends on their mother’s level during pregnancy. It will be higher if the mum took vitamin D during pregnancy. Most of us are able to make vitamin D in the summer sunlight but living and working indoors and using sun creams makes this less likely. Babies are also kept in the shade to protect them from sunburn. Some mothers and infants have a higher risk of vitamin D deficiency including those who wear concealing clothing, babies of mothers with darker skin types and babies of overweight or diabetic mothers. Therefore, **as a precaution**, it is now suggested that breastfed babies be given additional vitamin D as well as their mother.

5. **Provision and supply of vitamins for children**
Whilst pregnancy vitamins will be provided universally, there are local variations in the provision of vitamins available to breastfeeding mothers and their infants across Scotland. In some areas this is only provided free to those eligible through the Healthy Start Scheme and some Health Boards are supporting universal free provision. Local discussions will need to take place, across services, to discuss procurement, storage and distribution of Healthy Start vitamins for children so that all families can access them easily. Healthy Start maternal vitamin tablets are the supplement recommended for pregnant and breastfeeding women and Healthy Start drops for infants as other supplements may have a different balance of nutrients added and be more expensive. Health professionals should be encouraged recommend Healthy Start vitamins.
6. Practical Issues

- **How do we protect breastfeeding?** Breastfeeding has a positive impact on the short, medium and long-term health of children and has an important and lasting impact on women’s health. There is a risk that messages around vitamin D supplementation will give the impression that infant formula is superior to breast milk. It is therefore very important that health professionals give some thought as to how the message is relayed to parents. Emphasising that the potential problem is related to a lack of sunlight in the UK, not to dietary insufficiencies is important. Also relevant is the fact that it affects the whole population, not just breastfed babies. It may also be worth mentioning that the Government is taking a ‘precautionary’ approach to protect everyone. **Keeping the messages clear and simple will aid understanding and encourage uptake.**

- **How can we support parents to give their baby vitamin D?** Healthy Start Vitamins for **infants** currently contain 7.5μg/d of vitamin D, as well as vitamin A and vitamin C. The new recommended preventative dose is 8.5-10μg/d. From September 2018 a new product will be available containing the recommended dose. The current product can be given to a baby from birth after consultation with a clinician.

- **The vitamin drops should be given using the dropper provided:**
  - Into the side of the baby’s mouth at the level of the lower gums rather than onto the tongue or the back of the throat as this may upset or choke the baby.
  - Alternatively, the vitamin drops can be ‘dropped’ onto the mothers breast, near the nipple, so that the baby can swallow the drops whilst breastfeeding. However, there could be a risk that babies dislike the taste and so reject the breast, therefore it is not recommended that she start off this way.
  - Vitamin drops should not be given to breastfed babies via a bottle with water or flavoured drinks or on a dummy.
  - She can start with one drop per day to get the baby used to the taste and sensation and build it up to the recommended 5 drops per day.
When should professionals recommend that parents start giving vitamins? We strongly recommend that the community midwife discusses the use of vitamins after the first week when mothers’ confidence in breastfeeding has increased. The midwife should suggest that the mother gets a supply of vitamin drops to start before the baby is 2 weeks old. All messaging about vitamin D supplementation should continue to promote, support and protect breastfeeding.

7. What happens if the baby is formula fed?
All babies living in the northern hemisphere are vulnerable to low vitamin D status, however, infant formula has vitamin D added. Therefore, babies who receive infant formula (over 500mls per day) do not require any extra supplementation of vitamin D. However, if a baby is being both breastfed and given infant formula they may still need a supplement of vitamin D if they have less than 500mls of infant formula a day.