

Guideline: A Healthy Start - Folic Acid and Vitamin D Supplementation in Pregnancy and Breastfeeding (October 2018)

All pregnant and breastfeeding women should be advised to take;

- 10 microgram (400 units) **Vitamin D** daily ideally before conception, **throughout** pregnancy and whilst breast feeding. Women who may require testing for deficiency should be identified as a higher dose may be needed.
- 400 micrograms **Folic Acid** daily before conception and until week 12 of pregnancy. Women at higher risk of conceiving a child with a neural tube defect should be identified and advised to take Folic Acid 5mg daily and continue until week 12 of pregnancy. (See pink box below)

All advice given should be recorded and compliance checked at each antenatal appointment

Healthy Start Vitamins for Women

- Contain 400 micrograms of Folic Acid, 10 micrograms of Vitamin D and 70 mg of Vitamin C. It is a cost effective option and can be purchased from all [Children's Centre's](#). Women requiring a higher dose of Vitamin D or Folic Acid should be signposted to their GP.
- All preconception and pregnant women are eligible for free Healthy Start Vitamins for Women. All breastfeeding women are eligible to obtain their free first two month supply. [See link](#)
- Certain women are eligible for the vouchers (which entitle them to other items e.g. milk, fresh fruit and veg). [See link](#)
- Advice given should be recorded in the woman's records.

Folic Acid - Women at higher risk of conceiving a child with a neural tube defect;

- Either partner has a neural tube defect (or a family history) or previous pregnancy affected by a neural tube defect
- BMI $\geq 30 \text{kg/m}^2$ pre-pregnancy
- Coeliac disease (or other malabsorption state), diabetes mellitus, or is taking antiepileptic medicines (refer to BNF).
- NB: Sickle cell disease – woman to take throughout pregnancy

Women with a history of confirmed Vitamin D deficiency

Is the woman currently taking a Vitamin D supplement?

Yes - Check that dose and preparation is suitable

No - Measure Vitamin D and bone profile on GP request form

Women at increased risk of Vitamin D deficiency

Does the woman have symptoms or have multiple risk factors (see [Adult guidance](#), page 5) for Vitamin D deficiency?

Yes - Measure Vitamin D and bone profile on GP request form

No - Recommend **Healthy Start Vitamins for Women**. Stress importance of compliance as this group is at greater risk of deficiency

25(OH)D <25 nmol/L – refer to [flow chart](#)
 25(OH)D >25 and <50 nmol/L – See **text box below**
 25(OH)D >50 nmol/L - Recommend **Healthy Start Vitamins for Women** or if previous history of deficiency use enhanced supplement options

Enhanced supplement options for women at risk of D deficiency (pre-pregnancy) and for maintenance after high dose treatment;

If calcium intake is sufficient (>700mg /day – see [Calcium](#)):

- **Healthy Start Vitamins for Women** - one daily **plus** a daily dose of 10-15 micrograms (400-600units) Vitamin D. [Encourage OTC](#) or prescribe as *InVita® D₃ 2,400 units/ml drops (POM)
- A daily preparation containing 20-25 micrograms (800-1000 units) colecalciferol alone. [Encourage OTC](#) or prescribe *Fultium-D₃® 800 units capsules (POM) **plus** 400 micrograms of Folic Acid until week 12

If calcium intake is insufficient:

- Calcium and Vitamin D - daily dose of 1200 mg calcium and 20-25 micrograms (800-1000units) Vitamin D *Adcal-D₃® Caplets (recommended dose is 2 BD) **plus** 400 micrograms of Folic Acid until week 12.

**licensed preparations for use in pregnancy*

A Healthy Start - Sheffield Guidance: Folic Acid and Vitamin D Supplementation in Pregnancy and Breastfeeding.

Optimising Folic Acid and Vitamin D intake in pregnancy aims to reduce the risk of conceiving a child with neural tube defect and optimise musculoskeletal development, giving babies the **best start in life**

Vitamin D - All women should be advised to take Vitamin D supplementation throughout pregnancy and whilst breastfeeding. This should be done pre-conceptually (where possible) and/or at the first antenatal appointment. Compliance should be discussed and recorded at each subsequent appointment with all healthcare professionals

Folic Acid - All women should be advised to take Folic Acid supplementation, before conception and until week 12 of pregnancy. However, please note supplementation can be taken through the duration of the pregnancy. Women who are at higher risk of conceiving a child with a neural tube defect should be identified and advised to take a higher daily dose

It is agreed by Sheffield CCG and SCC Children's Services that **Healthy Start Vitamins for Women** will be promoted universally as a public health message to all childbearing women, progressing onto Healthy Start Vitamins for their baby in due course. Some groups may gain extra benefit from enhanced supplementation and these are specified in this protocol

Key points/recommendations

- To raise awareness of the importance of folic acid and vitamin D. To ensure advice on supplementation and lifestyle are offered to all women who are trying to conceive, who are pregnant or breast feeding.
- To provide a systematic approach to implementing national and local guidelines around Folic Acid and Vitamin D
- To rationalise testing for Vitamin D deficiency based on risk factors and symptoms
- Patients should be assessed and advised to take the suggested recommended daily Vitamin D and Folic Acid supplementation as per [flow chart](#) and advised about calcium intake
- **[Over the counter supplementation](#) is first choice.** See [patient information leaflet](#) to support self-care.
- **Healthy Start Vitamins for Women** are a cost effective option for most women ([see enhanced supplements options page 1 for alternatives](#)) and are available to buy from all [Children's Centre's](#). Those identified at needing a higher dose of Folic Acid or Vitamin D will need an additional or alternative supplement.
- In Sheffield, there is an extended healthy start scheme to complement the national scheme. See [further guidance](#) for more information:
 - **Healthy Start Vitamins for Women** are *free* to all pre-conception women, they are available from all [Children's Centre's](#). They are also free to all pregnant women

throughout the duration of pregnancy and are available from midwives at antenatal appointments or children's centres.

- All breastfeeding women will be offered two month supply from the midwife at the discharge unit and then all those who qualify for Healthy Start Vouchers thereafter. Women should then be signposted to buy low cost ongoing supplies available from all Children's centres and community pharmacies.

Vitamin D

- *Risk factors and symptoms:* please see guidance for [Adults](#) (page 5)
- *Diet:* There are very few foods providing a natural source of Vitamin D. Consequently, dietary sources provide only approximately 10-15% of daily requirements. They include:
 - Egg yolk
 - Mushrooms
 - Cheese, milk and butter (small amounts)
 - Fortified foods (some margarines and breakfast cereals in UK)
 - NB: Oily fish and liver are also other good sources of Vitamin D however, due to restrictions of food that should be avoided in pregnancy, these food items should not be recommended as a source of Vitamin D during pregnancy.
- *Sun exposure:* please see guidance for [Adults](#) (page 13) and [NICE guidance](#)
- *Recommended Vitamin D intake for adults:* see guidance for [Adults](#) (page 4). In addition to this, previous advice from the UK Chief Medical Officers and NICE Guidance still stands that recommends all pregnant and breastfeeding women, especially teenagers and young women, should also take a daily 10mcg supplement.

Supporting leaflets for self-care are available on the [CCG intranet](#) for your use; these include an additional leaflet to support conversations, see [Appendix 2](#)

Calcium

- The recommended daily intake of calcium for pregnant women is 700 mg a day. Many women will be getting this from their diet. For example half a pint of milk (330 mg), a 150 g pot of yogurt (210 mg) and a medium (40 g) chunk of cheddar (300 mg) will provide the recommended daily requirement. Breastfeeding women need an additional 550 mg / day (total daily intake of 1250 mg a day).
- Women should be encouraged to increase their calcium intake from their diet. If this is not possible, a combined preparation of calcium and Vitamin D is recommended. **Adcal-D₃[®] caplets** are licensed in pregnancy and are in the [Sheffield formulary](#).
- Examples of calcium-rich foods to support discussions with women are available on the [NHS choices website](#). Alternatively, calcium intake can be assessed using an [online calcium calculator](#).

Folic Acid

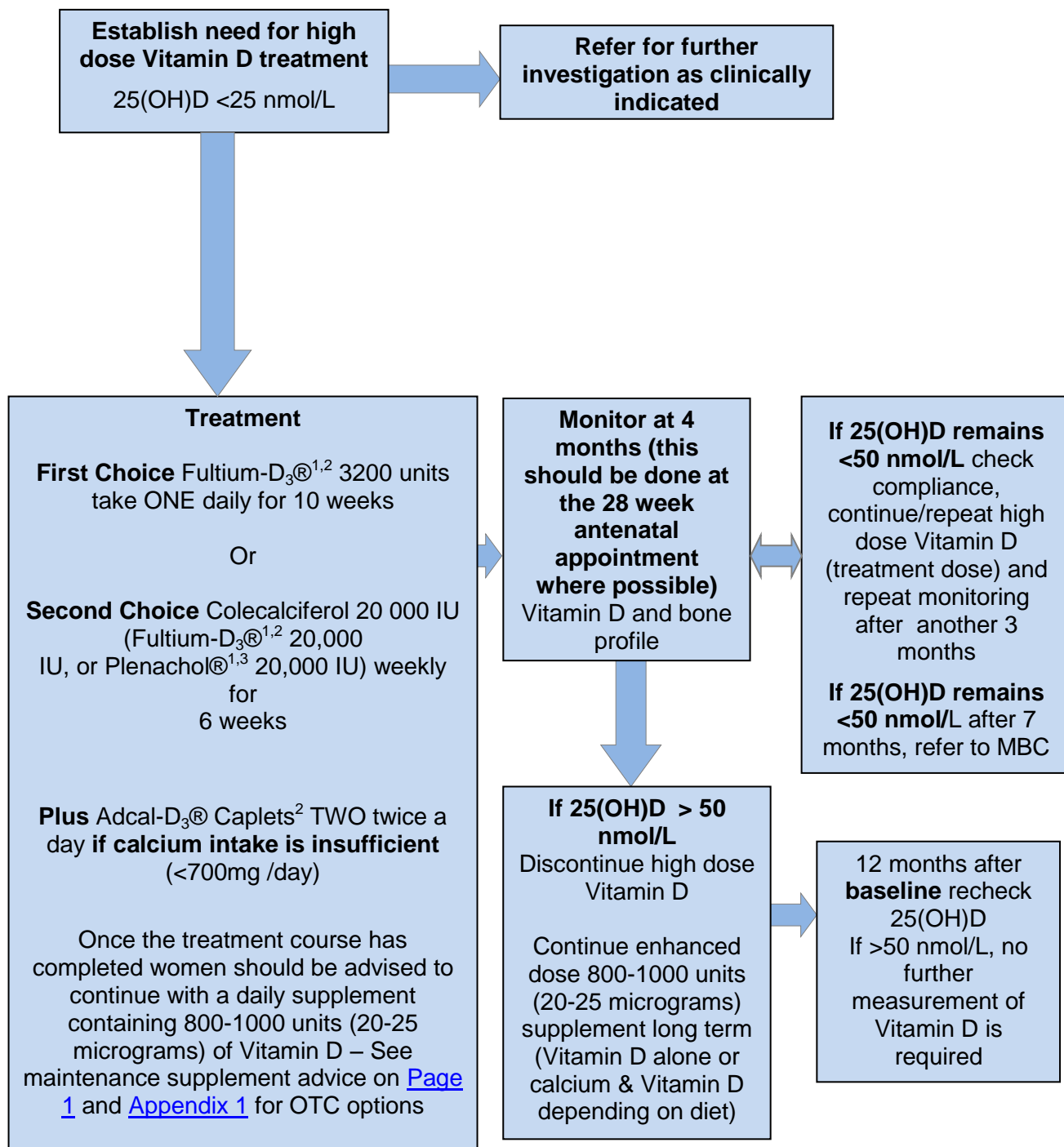
Women at higher risk of conceiving a child with a neural tube defect should take a higher dose of Folic Acid (5mg daily) until week 12 of pregnancy. The following groups are at higher risk;

- Either partner has a neural tube defect (or a family history) or previous pregnancy affected by a neural tube defect
- BMI \geq 30kg/m² - pre-pregnancy
- Coeliac disease (or other malabsorption state), Diabetes Mellitus, or is taking antiepileptic medicines (refer to BNF).
- Women with sickle-cell disease should continue taking their normal dose of 5mg Folic Acid throughout pregnancy

There are no studies suggesting that the combined use of high dose 5mg Folic Acid with Healthy Start Vitamins for Women (containing 400micrograms Folic Acid) during pregnancy has been shown to cause any adverse effects. The SPC for Folic Acid also states under 'Over-dosage' that 'no special procedures or antidotes are likely to be needed'.

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High-dose Oral Vitamin D Supplementation and Monitoring



¹ Halal or kosher certified.

² Licensed preparation for use in pregnancy

³ Suitable for vegetarians

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Appendix 1: Over the Counter Preparations

OTC preparations can be obtained from pharmacies, major supermarkets and health food shops. The table below lists some examples of preparations available along with current prices to support discussions with patients. Please note these vitamin supplements are often on offer, which reduces price further. As per individual manufacturer's advice, preparations annotated with a (V) are suitable for vegetarians those with (H) have been certified as Halal. Note those annotated with a (H) or (V) are suitable for those following Halal diets; for further information see [separate advice](#)

Examples of OTC preparations	Cost (August 2018)/pack size
Vitamin D 400 unit (10 microgram) preparations	
Boots - Vitamin D 400 unit (V)	£2.29/90 (76p/month)
Healthy Start - Vitamins for Women (V)	Around £1.15/60 (58p/month) – available from all Children's Centres
Holland and Barrett - Vitamin D 400 unit tablets	£3.59/100 (£1.07/month)
Holland and Barrett - Vitamin D 400 unit vegetarian capsules (V)	£4.99/100 (£1.50/month)
Pro D3 400 unit capsules (V) (H)	£7.99/30 (£7.99/month)
Vitamin D 1000 unit (25 microgram) preparations	
ASDA - High strength vitamin D 25 microgram food supplement tablets	£2.00/60 (£1.00/month)
Boots - Vitamin D 1000 unit (25 microgram) tablets (V)	£4.99/90 (£1.67/month)
Holland and Barrett - Vitamin D3 1000 unit (25 microgram) tablets	£8.19/100 (£2.45/ month)
Pro D3 1000 unit capsules (V) (H)	£9.99/30 (£9.99/month)
Sainsbury's Vitamin D 25 microgram (1000 unit) tablets	£2.50/90 (83p/month)
Sunvit D3 1000 unit tablets (V) (H)	£4.79 /30 (£4.79 / month) (plus post and packaging)
Tesco – High strength Vitamin D – 1000 unit (25 microgram) tablets (V)	£3.50/90 (£1.17/month)
Valupak 1000 unit tablets - available from most community pharmacies (V)	£0.99/60 (50p/month)

Appendix 2: Patient Information Leaflet

Vitamin D and Folic Acid Supplementation in Pregnancy and whilst Breastfeeding

Taking Folic Acid during the first trimester of pregnancy reduces the risk of the child developing a neural tube defect.

Taking Vitamin D supplements during pregnancy helps with muscle and bone development, giving babies the best start in life.

All women should take Vitamin D supplementation throughout pregnancy and whilst breastfeeding.

All women should take Folic Acid supplementation, before conception and until week 12 of pregnancy. If you are at a higher risk of conceiving a child with a neural tube defect you will be advised to take a higher daily dose. Your doctor will need to prescribe this higher dose.

Vitamin D and Folic Acid supplements can be brought from many pharmacies, supermarkets and health food shops. 'Healthy Start Vitamins for Women' tablets are available at low cost from all Children's Centre's in Sheffield. They are free to certain groups under the extended Sheffield Healthy Start Scheme.

The recommended daily dose / preparations for you are:

Folic Acid 400 micrograms daily until at least week 12 of pregnancy

Folic Acid 5mg tablets (if this strength is needed this will be provided on a prescription from your GP)

Vitamin D 400 units / 10 micrograms daily whilst pregnant and breast feeding

A preparation containing between 20 and 25 micrograms (800 - 1,000 units) of Vitamin D daily

Healthy Start Vitamins for Women (tablet contains 400 micrograms of Folic Acid and 400 units / 10 micrograms of Vitamin D) - these are designed to be taken at preconception, throughout pregnancy and whilst breastfeeding.



Further Reading / References

Scientific impact paper no. 43– Vitamin D in pregnancy:

https://www.rcog.org.uk/globalassets/documents/guidelines/scientific-impact-papers/vitamin_d_sip43_june14.pdf

Vitamin D: increasing supplement use among at-risk groups NICE – PH56:

<http://www.nice.org.uk/guidance/PH56>

Electronic medicines compendium:

<http://www.medicines.org.uk/emc/>

Vitamin D - advice on supplements for at risk groups, CMO:

<https://www.gov.uk/government/publications/vitamin-d-advice-on-supplements-for-at-risk-groups>

Folic Acid SPC:

<https://www.medicines.org.uk/emc/medicine/23970>

Scientific Advisory Committee on Nutrition (SACN): Vitamin D and Health:

https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/537616/SACN_Vitamin_D_and_Health_report.pdf

Public Health England: PHE publishes new advice on Vitamin D:

<https://www.gov.uk/government/news/phe-publishes-new-advice-on-vitamin-d>

Version history

This document was collaboratively produced by:

Heidi Taylor – Clinical Effectiveness Pharmacist, NHS Sheffield CCG

Nicky Peel – Consultant in Metabolic Bone Medicine, STHFT

Margaret Ainger – GP lead for children, NHS Sheffield CCG

Helen Baston – Consultant Midwife: Public Health, The Jessop Wing, STHFT

Marie Reid – Matron – Community midwifery services, The Jessop Wing, STHFT

Trish Evans and Will Carlile – GPs in Sheffield

Approved – November 2015

Amended March 2016, corrected strength of InVita oral drops on page 1.

Updated January 2017, including advice from SACN and details on Healthy Start Vitamins scheme by Kirsty Dale, Clinical Practice Pharmacist, NHS Sheffield CCG.

Full Review done by Kirsty Dale, Clinical Practice Pharmacist, NHS Sheffield CCG April 2017 and September 2018

Approved by APG: October 2018

Review date: October 2021