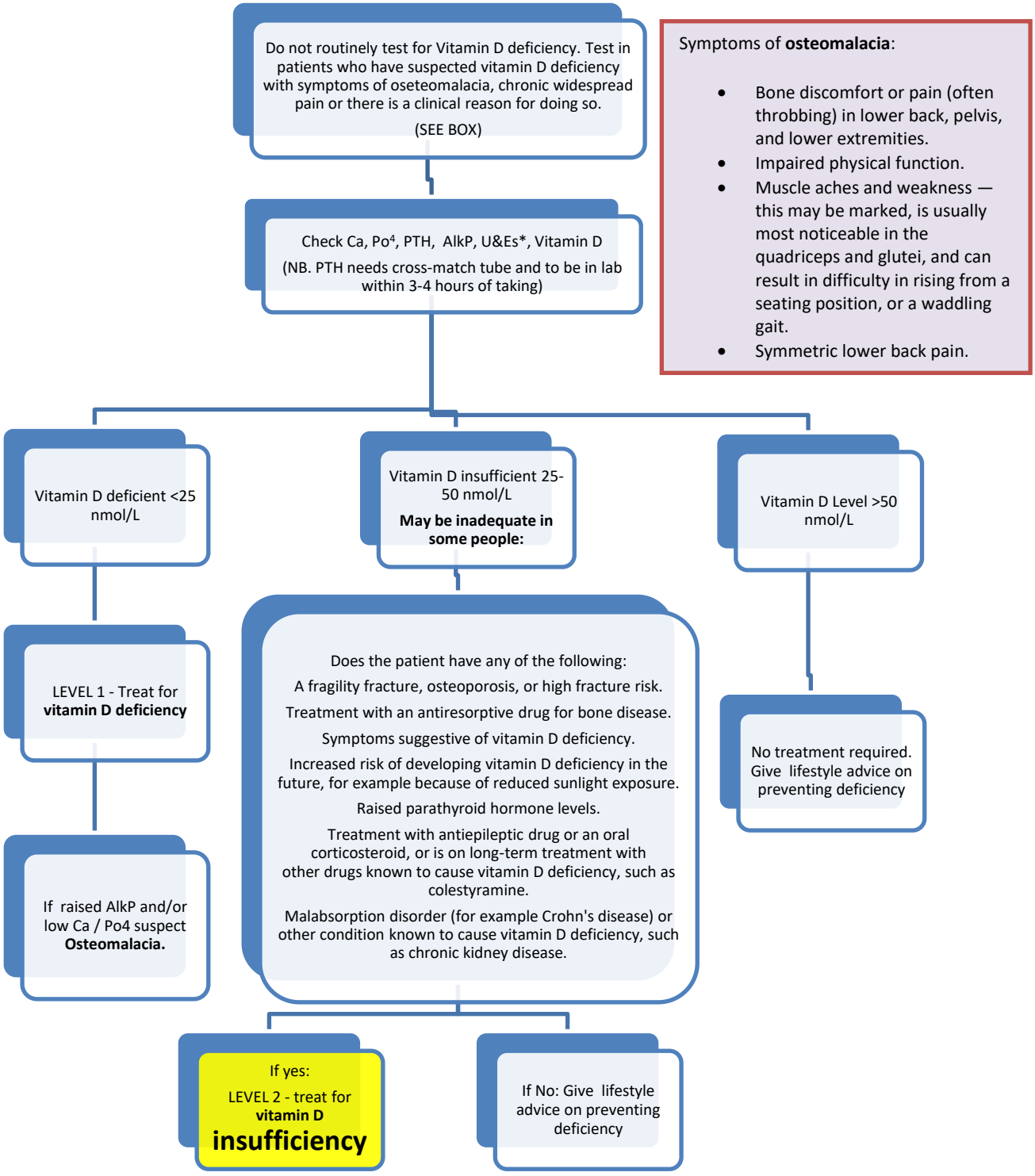
Title	*Vitamin D Deficiency Guideline - NHS Borders*
Document Type	*Clinical Guideline*
Version Number	*V3.0*
CGQ & RDS ID Number	*Clinical Governance & Quality Use only*
Approval/Issue date	*October 2019 / May 2021 updated October 2023*
Review date	*October 2026*
Owner/Responsible Person	*Liz Leitch; liz.leitch@nhs.scot*
Developed by	*Dr A Tan, Dr R Williamson and NHS Borders Pharmacists – Oct 2019*
Reviewed by	*Dr A Tan, Dr R Williamson and NHS Borders Pharmacists – Oct 2023*
Significant resource implications (financial/workload)	*N/A*
Approved by	*Dr A Tan, Dr R Williamson and NHS Borders Pharmacists*
Health Inequality Impact Assessment (HIIA) (only statutory for policies)	*N/A*

Uncontrolled when printed

The Scottish Government currently recommends everyone age 5 years and above should consider taking a daily supplement of 10 micrograms (400 units) vitamin D, particularly during the winter months (October – March). Those at higher risk* should take a supplement all year round. ***These should be purchased over the counter. Widely available in pharmacies and supermarkets.***

* older people, aged 65 years and over, people who have low or no exposure to the sun, e.g. those who cover their skin for cultural reasons, who are housebound or who are confined indoors for long periods, people who have darker skin, e.g. people of African, African-Caribbean or South Asian origin.

Babies and Children under 5 years of age should take vitamin drops containing vitamin D (Healthy Start drops) all year round.



* If hypercalcaemia, severe hypocalcaemia, hyperphosphataemia, hypomagnesaemia, eGFR <45 or significant liver disease consider specialist referral or advice.

Level	Initial treatment	Maintenance treatment*	Monitoring
1	**First Choice** Stexerol D3 tablet; *50,000 units once weekly for 6 weeks or* Fultium D3 capsule*; 40,000 units once weekly for 7 weeks* **or** **Second choice** Fultium D3 capsule; *3,200 units once daily for 12 weeks*	**First choice** Stexerol D3 tablet; *1,000 units once daily longterm* **Second choice** Fultium D3 capsule; *800 units once daily longterm*	*Vitamin D can unmask previously undiagnosed primary hyperparathyroidism.* Repeat testing of serum calcium at 3 weeks and 6 weeks during the initial loading regime If osteomalacia check serum Ca, AlkP, PTH every 12 weeks. Once PTH normalised, check Ca annually. In patients where osteomalacia is suspected and in whom the appropriate vitamin D regime has been used, repeat serum vitamin D annually should be considered
2	**First Choice** Stexerol D3 tablet; 25*,000 units once weekly for 6 weeks* or **Second choice** Fultium D3 capsule; *3,200 units once daily for 6 weeks*	**First choice** Stexerol D3 tablet; *1,000 units once daily* **Second choice** Fultium D3 capsule; *800 units once daily*	Repeat serum Ca, AlkP, PTH in 6 months and review clinical condition. Consider whether OTC supplement would be appropriate or whether treatment should be longterm
3	Lifestyle advice and OTC supplement	Daily supplement of 10 micrograms (400 units) particularly during the winter months (October – March). Those at higher risk should take a supplement all year round.	Nil or as clinically indicated

Vitamin D can unmask previously undiagnosed primary hyperparathyroidism, and the above blood tests should be performed to identify this (or if symptoms of hypercalcaemia occur).

Routine monitoring of vitamin D levels is generally unnecessary for patients on long term maintenance vitamin D doses of up to 2,000 units day.

Common symptoms of hypercalcaemia include malaise, weakness, anorexia, thirst, nausea, constipation and polyuria.

Symptoms of hypocalcaemia include numbness and/or **tingling** of the hands, feet, or lips,muscle cramps,muscle spasms,seizures,facial twitching,muscle weakness,lightheadedness, and slow heartbeat.

Whilst on maintenance vitamin D doses recheck bone profile and vitamin D levels if symptoms suggestive of vitamin D toxicosis or hypercalcaemia (confusion, polyuria, polydipsia, anorexia, vomiting or muscle weakness) are present.

Avoid in:
Hypersensitivity to active substances or excipients (please refer to Product SPCs), hypervitaminosis D, nephrolithiasis, nephrocalcinosis, severe renal impairment, diseases resulting in hypercalcaemia/hypercalciuria (consider on case-by-case basis)

Test	Reason
Renal function tests (U&E, eGFR)	To exclude renal failure. Avoid colecalciferol in renal patients
Liver function tests (including ALP)	To exclude hepatic failure.
FBC	Anaemia may be present if there is malabsorption.
PTH	To exclude primary hyperparathyroidism. (High PTH can be appropriate and is not unexpected in Vitamin D deficiency ("secondary hyperparathyroidism"). Can be used in helping to guide need for treatment in the 25 – 50 insufficient range. (Typically, primary hyperparathyroidism would be associated with high calcium and high PTH (though normocalcaemic primary hyperparathyroidism is also recognised)
Calcium	To exclude hypercalcaemia and provide a baseline for monitoring. Hypocalcaemia may indicate long standing vitamin D deficiency.
Phosphate	Hypophosphataemia may indicate long standing vitamin D deficiency.
25-OH Vitamin D levels*	To determine vitamin D status

* Only measure if patient is symptomatic and has risk factors for Vitamin D deficiency

Coding - C28 Vitamin D Deficiency

References:

NICE Clinical Knowledge Summary. Vitamin D deficiency in adults Vitamin D deficiency in adults | Health topics A to Z | CKS | NICE

Scientific Advisory Committee on Nutirion (SACN). Vitamin D and Health 2016. https://www.gov.uk/government/groups/scientific-advisory-committee-on-nutrition

Summary of Product Characteristics. Stexerol-D3 tablets, Fultium D3 capsules. www.medicines.org.uk