



The Laboratory Services Reform Programme

ADVICE NOTE

Indications for Measurement of Vitamin D Levels

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Clinical Practice Guidance Document Cover Sheet

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Document Owner/Author	Professor Martin Cormican
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The Laboratory Services Reform Programme offers the following advice:

1.1 Advice for Laboratory Users

1. For most people who express concern regarding their vitamin D levels in the absence of a specific clinical indication for testing the relevant intervention is to adhere to the Department of Health advice regarding supplementation. This does not require testing.
2. Accepted indications for measuring vitamin D levels are outlined below in point 1.2. Please state the specific indication using such a term or other terms based on local laboratory advice on each request for testing for vitamin D levels.
3. The half-life of Vitamin D is 2-3 months. Retesting at intervals less than 6 months is not generally advised with the exception of those with a low baseline and a malabsorption syndrome.
4. Unnecessary testing for vitamin D levels involves avoidable risk of needle exposure and generates unnecessary clinical and laboratory waste. Unnecessary testing is contrary to the goal of a sustainable healthcare service.

1.2 Advice for Laboratories and Users

1. Vitamin D testing should be reserved for specific patient groups; it should not be used as a general screen.
2. In general indications for testing for vitamin D should be one of the following
 - a) metabolic bone disease
 - i. Osteoporosis or Osteopaenia
 - ii. Rickets or Osteomalacia
 - iii. Paget's Disease of Bone
 - iv. Pathological Fracture
 - v. Unexplained Hypocalcaemia, raised PTH, low or high Phosphate
 - b) Specific named clinical condition due to or leading to Vitamin D Deficiency
 - i. Malabsorption, CKD, Liver Disease
 - ii. Muscle weakness
 - iii. Chronic inflammation
 - iv. Certain Drug therapies: Glucocorticoids, Anticonvulsants, Antiretrovirals, Antifungals, Anti Oestrogens or Cholestyramine
3. Routine repeat testing is not required. For those with low baseline and malabsorption retesting in 6 months may be helpful.
4. The Department of Health have issued advice for the general population regarding vitamin D supplementation (see below).

1.3 Advice for Laboratories

1. Laboratories should communicate to laboratory users the specific indications for testing for vitamin D levels accepted by the laboratory and the minimum accepted interval between tests.
2. Measurement of vitamin D levels should be performed when relevant and legible clinical details and requestor identification are provided on the request (electronic or paper) accompanying the sample and the sample received is suitable for analysis.
3. To the greatest extent practical requests for testing for vitamin D levels that do not meet these requirements should be rejected
4. There are significant practical challenges in implementing a process to manage requests in the absence of electronic ordering. Providing users with a specific list of terms such as that above (point 2) that must be legible on a request form for acceptance of the sample for testing has been used effectively in some laboratories.

5. If samples are rejected a report should issue to the effect that testing for vitamin D was not performed because the criteria for testing were not met.
6. In so far as practical with the available laboratory information system laboratories should consider adding a comment to reports on vitamin D levels drawing attention to the recommendation from the Department of Health for the general population to take vitamin D supplements for part of all of the year (depending on age and other circumstances).

2 Background

The Department of Health has recently issued advice that adults older than 65 years should take 15 micrograms of vitamin D daily year round.

Teenagers and adults aged less than 65 are advised to take 15 micrograms of vitamin D from Halloween to St. Patrick's day.

Teenagers and adults less than 65 are advised to take 15 micrograms of vitamin D per day throughout the year if they get little sun exposure, if they have dark skin or if they are pregnant.

Five micrograms of vitamin D per day is recommended for infants from birth to 12 months if they are exclusively breast fed or at taking less than 300ml of infant formula per day. Note infant milk formula is supplemented with vitamin D.

Five micrograms per days of vitamin D is recommended for children from age 1 to 4 from Halloween to St. Patrick's day.

Ten micrograms per day of vitamin D is recommended for children aged 5 to 12 from Halloween to St. Patrick's day.

Ten micrograms per day of vitamin D is recommended for children aged 5 to 12 from year round if they get little sun exposure, if they have dark skin.

In this context measurement of vitamin D levels is not generally required to assist people in decisions regarding vitamin D supplementation. Measurement of vitamin D levels can only represent a snapshot at a specific time. In general therefore the best way to address a patients concerns regarding vitamin D levels in the absence of a specific indication for testing is to advise them to follow the Department of Health guidance.

Unnecessary testing for vitamin D or other blood tests represents exposure of patient and healthcare worker to avoidable needle risk. Unnecessary blood tests increasing clinical and laboratory plastic waste and carbon footprint and are contrary to the goal of sustainable healthcare. Unnecessary tests are also likely to delay reporting of essential tests because of the time required to process the samples.

3 References

1. [gov - New advice on Vitamin D supplement for people aged 65 years and older \(www.gov.ie\)](http://www.gov.ie)
2. [gov - Healthy Ireland Policies \(www.gov.ie\)](http://www.gov.ie)

Authors: Developed by the Laboratory Services Reform Programme Incorporating The National Clinical Pathology Programme.

Approved By: Martin Cormican MCRN 011105,
HSE Clinical Lead for Laboratory Services Reform Programme.

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