Vitamin D Screening Recommendations

**Purpose**
To provide guidance regarding population-based screening for vitamin D deficiency.

**Key Messages**
- Do not screen for vitamin D deficiency in healthy adults or children.
- On a case-by-case basis, consider selective testing for vitamin D deficiency in high-risk individuals such as patients with malabsorption syndromes or osteoporosis and elderly (i.e. institutionalized) and infants with low sunlight exposure.
- Nearly all Americans and Canadians obtain sufficient vitamin D from their diet.
- Serum 25-Hydroxyvitamin D is the best commercially available indicator of vitamin D status.
- Serum 25-Hydroxyvitamin D level greater than 20 ng/mL is adequate for the vast majority of the population.

**Overview**
Numerous observational studies have shown a correlation between vitamin D and bone health, cardiovascular disease, cancer, diabetes, immune function, renal disease and stroke. Randomized controlled studies have shown that vitamin D is important for bone health, but they have not established causal relationship between vitamin D and other health outcomes, including mental health.

The Institute of Medicine (IOM), US Preventive Services Task Force (USPSTF) and the American Society of Clinical Pathology as part of the Choosing Wisely ® campaign do not recommend screening for vitamin D deficiency in healthy individuals.

Establishing the cut point for the diagnosis of vitamin D deficiency is controversial because of the lack of standardization among assays and because some groups of patients, e.g. obese and African Americans, tend to have low levels of 25-Hydroxyvitamin D but have lower risk of fracture than the general population. This may be due to increased bioavailable vitamin D for which there is not currently commercially available testing. Lack of a cut point that is clear and consistent across labs has resulted in over diagnosis and encouraged excessive vitamin D testing. The IOM recommended a cut point of 20 ng/mL of serum 25-Hydroxyvitamin D for the diagnosis of vitamin D deficiency, indicating that levels above greater than or equal to 20 ng/mL are sufficient for 97.5% of the population.

The IOM, USPSTF and the Endocrine Society, state that the levels of vitamin D intake listed below sufficient for healthy individuals:

<table>
<thead>
<tr>
<th>Age</th>
<th>Recommended Vitamin D Intake (IU/day)</th>
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<tbody>
<tr>
<td>0-12 months</td>
<td>400 IU</td>
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<tr>
<td>1-70 years</td>
<td>600 IU</td>
</tr>
<tr>
<td>&gt;70 years</td>
<td>800 IU</td>
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Guidelines are intended to be flexible. They serve as reference points or recommendations, not rigid criteria. Guidelines should be followed in most cases, but there is an understanding that, depending on the patient, the setting, the circumstances, or other factors, care can and should be tailored to fit individual needs.

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References


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