Vitamin D Screening

The Monroe County Medical Society provides the following recommendations on vitamin D screening:

- 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, osteoporosis, or patients living in institutional settings
- 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 *who are not considered high risk*

The National Academy of Medicine, the 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. This recommendation is consistent with the Monroe County Medical Society's guidelines

Which patients are considered high risk and should be tested for vitamin D deficiency? Those with:

- Malabsorption syndrome (eg gastric bypass, celiac disease, or a history of small bowel surgery)
- Metabolic bone disease (eg osteoporosis, osteopenia, or osteomalacia)
- Abnormal blood calcium or phosphorus level
- Chronic liver or renal disease
- Chronic use of medications that may interfere with absorption (eg cholestyramine) or normal vitamin D metabolism (eg anticonvulsants)
- Parathyroid disease

There is limited or mixed evidence regarding vitamin D testing and supplementation in these cases

- Chronic PPI use
- Malignancy [associations are primarily observational and results of supplementation trials have been mixed]

Vitamin D toxicity is unusual, but may occur following prolonged consumption of doses over 10,000 units daily.

- Symptoms of toxicity include muscle pain and weakness, vomiting, and confusion, and may be accompanied by hypercalcemia and hyperphosphatemia.
- Caution should be used in dosing vitamin D supplements in patients with on medications that can cause hypercalcemia, such as digoxin and hydrochlorothiazide.
- Supplementation should be avoided or minimized in patients with hypercalcemia, recurrent nephrolithiasis, or granulomatous disease, such as sarcoid.

Special Populations

The American Academy of Pediatrics recommends that supplementation with 400 IU of vitamin D should be initiated within days of birth for all **breastfed infants**, and for **nonbreastfed infants** who do not ingest at least 32oz of vitamin D–fortified formula daily. [Rationale: fewer than one-quarter of infants studied would have met the current 2008 AAP recommended intake of 400 IU per day, regardless of feeding type]

The USPSTF previously recommended vitamin D supplementation to prevent falls in **community-dwelling adults aged 65 years or older who are at increased risk for falls**. However, in a draft recommendation in 2017 the USPSTF now recommends **against** vitamin D supplementation in this group to prevent falls. [Rationale: in a review of the evidence, the USPSTF found that vitamin D supplementation does not reduce the number of falls or the number of persons who experience a fall.]

The American College of Obstetricians and Gynecologists concludes that there is insufficient evidence to support a recommendation for screening all **pregnant women** for vitamin D deficiency. For pregnant women thought to be at increased risk of vitamin D deficiency, maternal serum 25-hydroxyvitamin D levels can be considered and should be interpreted in the context of the individual clinical circumstance.

Updated Jan 2018. Patient Handout from the University of Florida. References: AAP, ACOG, Choosing Wisely, Monroe County Medical Society, USPSTF