Nutrition Needs for Older Adults: Vitamin D

The National Resource Center on Nutrition & Aging

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Introduction

Vitamin D is a fat-soluble vitamin that plays an important role in the health of older adults. Vitamin D promotes strong bones, helps muscles to move, and has a role in keeping the immune system healthy[1]. Vitamin D may even play an important role in the health of an aging brain[2,3].

Vitamin D is unique in that it can be produced in our bodies when sunlight reaches the skin and triggers the production of vitamin D. However, as we age, our skin is unable to synthesize vitamin D as efficiently as it did in our younger years. Older adults are also more likely to spend more time indoors away from the sun[1].

How Much is Needed?

Older adults 70 years and above have higher vitamin D needs than younger adults. These needs are the same for both men and women.

It's important to get the right amount of vitamin D. Too little can cause weak bones but too much can cause toxicity. The tolerable upper limit level (UL) for vitamin D is set at 4,000 International Units (IU) for adults[4]. It's important to note that excessive sun exposure does not cause vitamin D toxicity[1]; too much supplementation is more often the culprit.

Recommended Dietary Allowances (RDA) for Vitamin D[1]:

Life Stage Group	Needs for Men and Women
1-70 years	600 IU
71+ years	800 IU

Food Sources of Vitamin D

Unfortunately, we don't find high levels of vitamin D in a lot of different food sources. Very few foods naturally contain vitamin D, and many other foods are supplemented with vitamin D.

Food Sources of Vitamin D[5]:

Food source	Amount per serving	IU per serving
Cod liver oil	1 Tbsp	1,360
Fatty fish (salmon)	3 ounces	566
Fortified orange juice	1 cup	137
Fortified milk	1 cup	124
Fortified margarine	1 Tbsp	60
Liver (beef)	3 ounces	42
Egg yolk	1 egg	41
Fortified cereal	1 cup	40

Some older adults are not able to get adequate vitamin D through sunlight and food alone. Supplementation may be needed through a multivitamin or single-vitamin supplement. It is important that older adults work with their health care team to determine their serum vitamin D levels and whether supplementation is needed.

Strategies to Help Older Adults Optimize Intake Daily

The following strategies can help older adults optimize their intake of vitamin D:

When Shopping:

- Purchase foods naturally high in vitamin D, like fish and eggs
- Look for food items fortified with vitamin D, like beverages and cereals
- Read food labels for vitamin D content

During Meal Preparation:

- Breakfast is a good opportunity for high vitamin D foods — from eggs, to cereal, to milk
- Include fish at least two days of the week in menu planning

At the Table:

- Offer beverages fortified with vitamin D, such as milk
- Provide fortified soft spread margarines at the table

TAKE HOME MESSAGE:

Vitamin D is an important nutrient for older adults. Older adults need to consume more vitamin D than they did as younger individuals, but it's not found in many food sources. A great deal of attention is required to ensure that older adults get the vitamin D they need for optimal health.

REFERENCES

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