Vitamin D

What is vitamin D?
Vitamin D is a vitamin that is stored in your body’s fat tissue. It helps your body absorb calcium, which helps to build strong bones. It also keeps the right amount of calcium and phosphorus in your blood. Low levels of vitamin D may increase the risk of certain diseases, such as cancer and autoimmune diseases. Children with low levels of vitamin D are at risk for rickets. Rickets is a rare disease that causes soft, weak bones that are unable to grow well. Adults with low levels of vitamin D are at risk for osteomalacia. Osteomalacia is a disease that causes bones to soften and break more easily.

How much vitamin D do I need?
The current recommended dietary allowance (RDA) that healthy people need each day is:

- 600 International Units (IU) per day for ages 1 to 70 years, including women who are pregnant or breastfeeding.
- 800 IU per day for ages 71 years and older

You may have different needs than the doses listed above. Talk to your doctor about how much vitamin D you need each day.

Where can I find vitamin D?
Sun Exposure
The main source of vitamin D for most people is sunshine. Your body is able to make vitamin D directly from sun exposure. For most people, 5 to 30 minutes of sun exposure, between 10 am to 3 pm, 2 times each week is enough for the body to make vitamin D. Sunscreen blocks most of your body’s ability to make vitamin D. Talk to your healthcare provider before you increase your amount of time in the sun. Your doctor may want you to take a supplement instead of increasing your time in the sun if you have risk factors for skin cancer or if you take certain medicines.

This handout is for informational purposes only. Talk with your doctor or health care team if you have any questions about your care.

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Food

The table below shows vitamin D amounts in some foods. Most people are unable to get enough vitamin D from their food alone. However, it is important to eat foods that are a good source of vitamin D to help meet your total daily needs.

<table>
<thead>
<tr>
<th>Food</th>
<th>Serving Size</th>
<th>IU of Vitamin D</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cod liver oil</td>
<td>1 tablespoon</td>
<td>1360</td>
</tr>
<tr>
<td>Salmon, cooked</td>
<td>3 ounces</td>
<td>500 – 800</td>
</tr>
<tr>
<td>Salmon, canned</td>
<td>3 ounces</td>
<td>465</td>
</tr>
<tr>
<td>Tuna fish, canned</td>
<td>3 ounces</td>
<td>70 – 230</td>
</tr>
<tr>
<td>Shrimp, cooked</td>
<td>4 ounces</td>
<td>165</td>
</tr>
<tr>
<td>Milk, fortified with vitamin D</td>
<td>1 cup</td>
<td>100 – 120</td>
</tr>
<tr>
<td>Yogurt, fortified with vitamin D</td>
<td>1 cup</td>
<td>50 – 100</td>
</tr>
<tr>
<td>Orange juice, fortified with vitamin D</td>
<td>1 cup</td>
<td>100</td>
</tr>
<tr>
<td>Cereal, fortified with vitamin D</td>
<td>3/4 – 1 cup</td>
<td>40 – 100</td>
</tr>
<tr>
<td>Cheese</td>
<td>1 ounce</td>
<td>5 – 20</td>
</tr>
</tbody>
</table>

Dietary Supplement

When sun exposure and food do not provide the amount of vitamin D your body needs, your doctor may recommend a supplement. A blood sample may be taken to check your body’s vitamin D level. If it is low, you will need to take a supplement that is more than the RDA to get your vitamin D level up to normal. Your doctor will check your blood again after you have taken the supplement for a while to make sure your vitamin D level is in the normal range.
Am I at risk for a vitamin D deficiency?

You may have a vitamin D deficiency if you:

- Do not eat enough foods that are good sources of vitamin D, such as fish and fortified milk.
- Eat a vegetarian diet.
- Do not eat or drink dairy products, including milk due to an allergy or lactose intolerance.
- Are over 50 years old.
- Have certain medical problems, such as kidney disease, liver disease, or problems with your intestinal tract or digesting fat.
- Live somewhere with low amounts of sunlight.
- Have dark-colored skin.
- Wear sunscreen regularly.

Do I need to take a vitamin D supplement?

Talk to your doctor, pharmacist or dietitian to help you decide how much vitamin D you need and what supplement is right for you. Tell your doctor about any medical conditions you may have.

Can I take a vitamin D supplement safely with my other medicines?

Tell your doctor or pharmacist about all medicine you take, including prescription and over-the-counter medicines, vitamins, minerals, and herbal products. It is important to bring a list of these with you to your appointments.

Here are a few medicines that may interfere with a vitamin D supplement:

- Antacids with magnesium
- Corticosteroids (Prednisone)
- Weight loss medicines (Xenical, Orlistat, Alli)
- Cholesterol reducing medicines (Prevalite/Cholestyramine, Questran, LoCholest)
- Seizure medicines (Dilantin/Phenytoin, Phenobarbitol)
- Thiazide diuretics (HCTZ)
Can I take too much vitamin D?

Yes, especially if you take large doses as a supplement. This can lead to increased calcium levels, which may increase your risk of kidney stones and may weaken your bones and muscles. It is important to tell your doctor if you feel any unusual symptoms or discomfort when you take your supplements.

Your body is unable to make too much vitamin D from the sun and will slow down or stop the amount it makes to keep you in a normal range. However, you can burn and damage your skin from too much sun exposure.

The RDA of vitamin D is 600 IU for those age 1 year to 70 years and 800 IU for adults over age 70. For adults, the safe, upper limit of vitamin D is 4,000 IU a day from both food sources and supplements. It is important that you do not consume more than 4,000 IU a day, unless your doctor tells you otherwise.