

VITAMIN E

Should I take vitamin E supplements?

RECOMMENDATION: Include vitamin E-rich foods in your diet but don't take separate high-dose supplements unless your doctor recommends it - vitamin E doses found in regular multi-vitamins are safe.

What's the evidence?

For Prostate Cancer *Prevention*?

Vitamin E from food might prevent prostate cancer, but supplements might be harmful:

- Many studies have shown that having enough vitamin E from food is linked to lower risk for prostate cancer as well as heart disease.
 - However, these benefits do not seem to come from taking vitamin E supplements, especially doses over 400 IU (International Units) per day.¹
- The SELECT (SELenium and vitamin E prostate Cancer prevention Trial) study found that when healthy men took vitamin E supplements of 400 IU per day it did not prevent prostate cancer as expected, but instead might have increased their risk for developing it.²

For Prostate Cancer *Treatment*?

Vitamin E from food might slow down progression or recurrence of prostate cancer:

- Although lab studies suggest that vitamin E slows the growth of prostate cancer cells, there is little evidence that taking separate vitamin E supplements stops prostate cancer from growing or returning.
 - Taking vitamin E supplements in combination with selenium, vitamin C and coenzyme Q10 did not affect Prostate Specific Antigen (PSA) or other markers of prostate cancer growth for some patients with rising PSA levels.³
 - Men on 'active surveillance' who took vitamin E as part of a vegan diet and lifestyle program showed PSA improvements suggesting that they might be able to delay treatment. However, we don't know what part vitamin E played in this benefit.⁴

Vitamin E from food is needed for everyone's good health including men diagnosed with prostate cancer

Vitamin E facts:

- Vitamin E is a powerful antioxidant that works with the body's natural defence system to stop free radical damage.
 - Although free radicals are natural, they can be destructive - damaging cells and causing cancer.
- Years of research has shown the importance of dietary vitamin E in fighting disease - lowering the risk of Alzheimer's disease, diabetes, heart disease and cancer.
- More research is needed to understand the effect of vitamin E on risk of prostate cancer recurrence and survival and to see how much supplemental vitamin E can be safely taken and by whom.

Eating balanced diets that include a variety of vitamin E rich foods might help prevent prostate cancer in healthy men and might also reduce cancer progression or recurrence for men already diagnosed with prostate cancer.

The bottom line: Eat food not supplements!

Because of the potential dangers of taking too much, it's best for men diagnosed with prostate cancer to get their vitamin E from eating a balanced diet with a variety of whole foods.

- Most of our dietary vitamin E comes from eating plant-based foods including, plant oils, nuts, seeds, grains and vegetables.
- While early studies found that vitamin E supplementation was helpful for some people who weren't getting enough in their diets, current research shows that for most people, vitamin E from food alone or a low-dose supplement is best for good health.
 - For most people, including vitamin E-rich foods in a healthy, well-balanced diet will promote overall health and is better than supplementation.

Approximate vitamin E content for various foods in milligrams (mg) and International Units (IU)

Food item	Serving/amount		Vitamin E content	
			(mg)	(IU)
Nuts (almonds, hazelnuts)	¼ cup	60 ml	9-18	13-27
Sunflower seeds	¼ cup	60 ml	8-13	11-20
Wheat germ (cereal)	¼ cup	60 ml	5	7
Eggs	2	90 g	3	5
Tomato paste, canned	¼ cup	60 ml	3	5
Peanut butter	2 tbsp	30 ml	3	5
Salmon	2.5 oz	75 g	3	5
Vegetables (asparagus, broccoli, spinach, peppers)	½ cup	125 ml	1-2	2-3
Commonly used vegetable oils				
Wheat germ oil	2 tsp	10 ml	14	21
Sunflower, safflower oils	2 tsp	10 ml	3-4	4-6
Canola, olive oil	2 tsp	10 ml	2	3

Health Canada, Canadian Nutrition File, 2010: www.healthcanada.gc.ca/cnf

This information is not meant to replace advice from your doctor or dietitian.

You can easily get enough vitamin E from eating a balanced diet

The Recommended Dietary Allowance (RDA) for adults is 15 milligrams (mg) or 22.4 International Units (IU) per day.

- Because men tend to have poor diets, the average daily intake of vitamin E among North American men aged 60 years and older is only 7 mg.
- Some vitamin E rich foods (such as vegetable oils and nuts) are high in fat and calories as well. If you are worried about weight gain, choose lower fat sources of vitamin E, such as dark green vegetables and whole grains.
- Most multivitamins contain amounts of vitamin E that are healthy and safe, between 50 to 100 IU, which is equivalent to 22.5 to 45 mg of active 'man-made' vitamin E.
- There is not enough proof to say that higher amounts are better for everyone; taking separate vitamin E supplements at 200 IU or higher should be talked about with your doctor or a dietitian.
- In high doses, vitamin E can actually act as a pro-oxidant, increasing the risk of cell damage rather than protecting against it.
 - Your daily intake of vitamin E should not exceed 1000 mg per day, especially from supplements.
- Men with high blood pressure or taking aspirin or anticoagulant drugs should be cautious when taking supplements, as vitamin E has a blood thinning effect.
 - Talk to your doctor about stopping just before and immediately after surgery or radiation.

1. Clarke et al. Vitamin E in human health and disease. *Critical Reviews in Clinical Lab Sciences*. 2008; 45(5):417-450
2. Klein, et al. Vitamin E and the risk of prostate cancer: The selenium and vitamin E cancer prevention trial (SELECT). *Jama - Journal of the American Medical Association*. 2011; 306(14):1549-1556
3. Hoenjet, et al. Effect of a nutritional supplement containing vitamin E, selenium, vitamin C and coenzyme Q10 on serum PSA in patients with hormonally untreated carcinoma of the prostate. *European Urology*. 2005; 47(4):433-440
4. Frattaroli, et al. (Dean Ornish) Clinical events in prostate cancer lifestyle trial: Results from two years of follow-up. *Urology*. 2008; 72(6):1319-1323



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