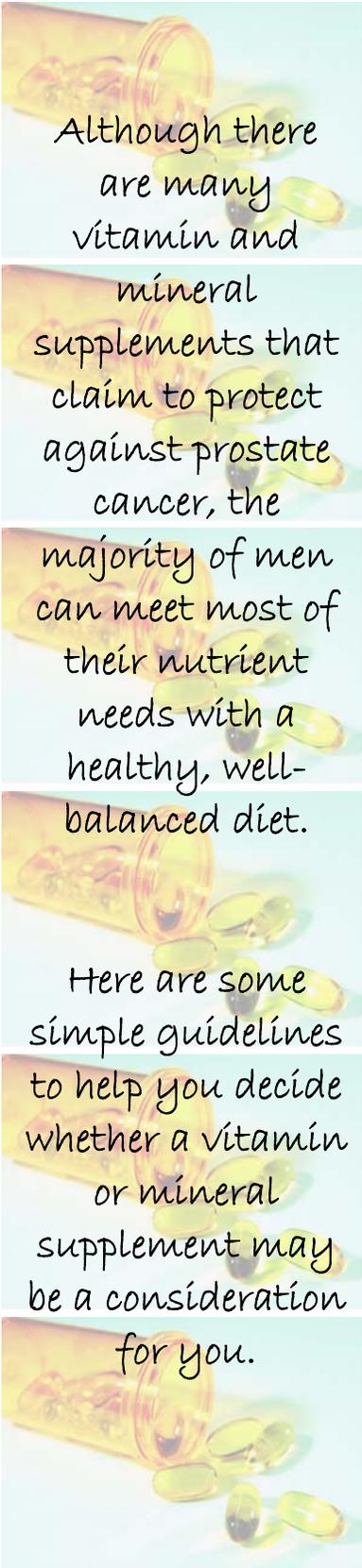


Supplement Use



Although there are many vitamin and mineral supplements that claim to protect against prostate cancer, the majority of men can meet most of their nutrient needs with a healthy, well-balanced diet.

Here are some simple guidelines to help you decide whether a vitamin or mineral supplement may be a consideration for you.

As people age, their vitamin and mineral requirements may increase, because the body's ability to synthesize, absorb and utilize various vitamins and minerals may decline. This can lead to deficiency and increased risk of chronic diseases. But are supplements the answer? If you are thinking about taking a vitamin or mineral supplement, consider the following points:

1. Go with food first

Nutrition supplements are meant to support a healthy diet and not to be used as a substitute or replacement for food. While vitamin and mineral supplements may provide required nutrients, foods offer many other components that cannot be bottled.

If you are thinking about taking supplements, first look at your diet. How does it compare to Canada's Food Guide? Is it balanced or are you lacking in some food groups? If you are eating a well balanced diet, you are probably getting all the nutrients you need from just food, and therefore, don't require any supplements. However, if you are lacking (a food group(s)), then you may need to consider supplements.

Before reaching out for that bottle of pills, you should determine if you can get the nutrient from food sources first. For instance, many men choose to take 200 micrograms of selenium per day without knowing that two Brazil nuts contain the same amount of selenium and also provide other nutrients important for overall health.

If you are unsure about food sources of specific nutrients or how to successfully incorporate them into your diet, talk to a dietitian. Research suggests vitamin, minerals and antioxidants may not be as effective when taken as an isolated compound compared to when they are consumed naturally in the diet.

2. Talk to your health care provider

Vitamin, mineral and herbal supplements are not always risk-free. If you are taking prescription or over-the-counter medication there is a potential for drug interactions with some supplements, or side-effects that may interfere with how certain medications work. Vitamin E supplements, for example, are not recommended for men who have high blood pressure, or are taking aspirin or anticoagulant medication, as it may have a blood thinning effect.

If you have a chronic medical condition, such as diabetes, hypertension or heart disease, or are taking prescription or over-the-counter medication, consult with your doctor, dietitian or pharmacist before starting any new supplement regimen. It is advised that individuals taking nutrient supplements talk to their doctor about discontinuing the use of supplements prior to and immediately following surgery or radiation.

5. Be aware of the source and units

Unfortunately, deciphering supplements labels can be quite difficult. It is important to know that there are several different forms of vitamins and minerals out there (synthetic, natural or in combination with other nutrients) and the value on a bottle might not correspond to the “active” content. Also, the units on the bottle often do not match dietary recommendations. Below are a few examples of converting units and comparing synthetic and natural forms. If you have questions about deciphering supplement labels, talk to your pharmacist or a dietitian.

Vitamin D

Although multivitamins and supplements list vitamin D content in International Units (IU), recommendations are normally in micrograms (mcg). To convert IU to mcg, use a factor of **40**:

Example. Vitamin D 400 IU \div **40** = **10 mcg** “active” vitamin D, which is the current vitamin D recommendation for men aged 51 – 70 years.

Vitamin E

Most individual vitamin E supplements contain natural or d-alpha-tocopherol. To determine the amount of active vitamin E available in milligrams (mg), multiply the value by a factor of **0.67**:

Example. Vitamin E 400 IU \times **0.67** = **268 mg** “active” vitamin E, which is equivalent to nearly **18 times** the vitamin E daily recommendation.

In most multivitamins, vitamin E is included as synthetic or dl-alpha-tocopherol. To determine the amount of active vitamin E available, multiply the value by a factor of **0.45**:

Example. Vitamin E 45 IU \times **0.45** = **20.25 mg** “active” vitamin E, which is equivalent to nearly **1.5 times** the vitamin E daily recommendation.

6. More isn't always better

Some people might think that if a little is good, taking a lot is even better. However, taking an excess of certain nutrients, can cause problems. Large amounts can also interfere with prescription and over-the-counter medications.

Nutrient	UL
Vitamin C	2000 mg
Vitamin D	50 mcg
Vitamin E	1000 mg
Calcium	2500 mg
Selenium	400 mcg
Zinc	40 mg

If you are taking large doses of vitamins and/or minerals, the negative effects to your body are more likely to be chronic and slowly develop over time. For instance, an excessive intake of selenium can cause hair loss and brittle nails, and obtaining too much zinc can cause anemia and increases in “bad” cholesterol. Remember that vitamin and mineral toxicity is very rarely due to dietary sources, but rather from supplements. Your combined intake from all supplements (including multivitamins, single supplements and combination products) plus fortified foods should not be higher than the Tolerable Upper Intake Level (UL).

7. Take with food

Absorption for most vitamins and minerals is generally enhanced when supplements are taken with food. In some cases, like that with calcium carbonate, the presence of food is necessary for the calcium to be absorbed. If you have questions about potential interactions between various supplements and medications that you take, talk to your pharmacist.

Although most men can meet all of their nutrient needs from a well-balanced, healthy diet, there are some vitamins and minerals that may be difficult to obtain in adequate amounts. Below is a list of several common vitamin and mineral supplements taken by men concerned about prostate cancer, and some suggestions on whether they may be considered beneficial, and for whom, based on current evidence.

Supplements that may be a consideration

- **Multivitamins (with minerals):** While no substitute for a well-balanced diet, a multivitamin can help you to 'cover your bases' for nutrients that are often under consumed (such as calcium and vitamin E) without the risk of over supplementation. Be aware: taking more than one multivitamin per day (especially if you take additional individual supplements) may *increase* the risk of advanced prostate cancer.
- **Vitamin D:** For Canadian men aged 50 years and older, vitamin D supplements should be considered. While the dose in most multivitamins (400 IU) is sufficient and safe for those obtaining vitamin D naturally in their diet, some people may benefit from a higher dose. If you are at high risk for poor vitamin D status (those with darker skin, a poor dietary intake, do not expose their skin to sunlight, or are currently on androgen deprivation therapy), you may want to consider taking 1000 IU of vitamin D in a supplement.
- **Long-chain omega-3s (fish oil):** If you are unable to consume the recommended two servings of fish (particularly cold-water fish such as salmon or sardines) each week, you may want to consider a low-dose marine-based omega-3 fatty acid supplement.
- **Fibre supplement:** The daily fibre recommendation of 25 – 30 grams can be difficult for many men to meet with diet alone. Although fibre-rich foods such as whole grains and legumes provide many additional benefits, a daily fibre supplement may be a consideration. Choose a psyllium or pectin product and make sure to drink plenty of water with your fibre supplement (at least one large glass).

Supplements that may be indicated for some men based on health status

- **Calcium:** If you are on androgen deprivation (hormone) therapy or have diagnosed osteoporosis (low bone mass), your diet may not provide enough calcium. Consider how much calcium your diet provides and the amount of calcium in multivitamin. If you are still unable to achieve 1500 milligrams of calcium per day, you should talk to your doctor or a dietitian about an individual calcium supplement.
- **Selenium:** If your serum (blood) level of selenium is confirmed by your doctor as low, you should first try to increase your intake from foods such as Brazil nuts, fish and grains. If you are still unable to increase your serum levels, most multivitamins contain amounts that are both sufficient and safe, between 25 to 200 micrograms.

Insufficient evidence at this time to endorse individual supplement use

- **Lycopene:** Opt for at least two servings of lycopene-rich foods, such as processed tomato products, each week rather than lycopene in supplement form.
- **Soy (isoflavones):** Soy products (such as tofu and enriched soymilk) are an excellent source of high-quality protein and a great lower-fat alternative to animal sources such as meat. Until further studies are done, increasing your soy protein and isoflavone intake through food is best. Aim for one or more servings of soy each day.
- **Vitamin E:** If you are unable to meet the vitamin E recommendation (15 mg per day) through food alone, most multivitamins contain amounts that are both effective and safe, between 50 to 100 International Units (IU), which is equivalent to 22.5 to 45 milligrams of active vitamin E. At this time, there is no considerable evidence to suggest that higher amounts are beneficial.
- **Zinc:** Taking high doses of zinc from supplements may actually be harmful for prostate health. The amount in most multivitamins (typically 15 milligrams) is sufficient and safe.

The Prostate Education & Research Centre



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