

# IMMUNE ESSENTIALS

Vitamin C, vitamin D, zinc, and DHA play a special role in immunity. While the usual LPI recommendations for these nutrients can be attained by diet and a daily multivitamin, we recognize that your immune system might face additional challenges at certain times. Dietary supplements are an important strategy to help you stay healthy.

Review the supplement information below and determine whether you should consider extra supplementation. Be sure to note our cautions to avoid taking too much or harmful drug interactions.

## Vitamin C

C

up to 2,000 mg per day

### Immune functions:

Vitamin C is an antioxidant that protects cells against damaging free radicals produced by the immune system. Vitamin C also may increase the production and function of certain immune cells.

### Why take a supplement?

Vitamin C can be depleted during a serious illness or infection. Extra vitamin C might be helpful for older adults.

### Caution:

More than 2,000 mg of vitamin C a day might cause intestinal gas, bloating, and diarrhea. If you are prone to kidney stones, talk to your doctor before starting any vitamin C supplements.

## Zinc

Zn

up to 40 mg per day

### Immune functions:

Zinc is required for the growth and development of immune cells. Zinc is a structural component of proteins critical for normal immune function. It is also important for the synthesis of antibodies.

### Why take a supplement?

Extra zinc might help if you feel a cold coming on. Older adults are more susceptible to zinc deficiency.

### Caution:

Try not to exceed 40 mg of zinc a day from a combination of diet and supplements.

## Vitamin D

D

up to 4,000 IU per day

### Immune functions:

Vitamin D increases the production of small peptides and proteins that can damage bacteria or viruses. It also limits the amount of inflammation generated by immune cells in an infection.

### Why take a supplement?

Evidence suggests that a daily vitamin D supplement protects against respiratory infection. People who rarely go outside, are severely overweight, wear sunblock, or have dark skin are more likely to have low blood vitamin D levels without supplementation.

### Caution:

Vitamin D supplements should be taken daily if possible. Do not take large amounts (greater than 10,000 IU) of vitamin D in a single day unless advised by your doctor.

## DHA

DHA

250 mg per day

### Immune functions:

Docosahexaenoic acid is an omega-3 fatty acid also known as DHA. It can be converted into compounds that reduce inflammatory damage caused by bacterial and viral infections.

### Why take a supplement?

If you are not eating oily fish 1-2 times per week or taking a supplement, you are likely not getting enough DHA.

### Caution:

If you are prone to bleeding or are on blood thinners, consult your doctor before taking DHA supplements. The only vegan source of DHA supplements is from algae oil.