

Vitamins, minerals and herbal supplements

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Vitamins and minerals

A balanced diet will almost definitely meet all your vitamin and mineral needs, but many HIV-positive people also take a multivitamin and mineral tablet every day.

Vitamin and mineral deficiencies are seen in people with HIV who are unwell and have weak immune systems. Many doctors believe that this is a consequence of being ill.

Some research has shown that taking nutritional supplements can slow HIV disease progression. However, other research failed to find any benefit.

High doses of vitamins and minerals

There is little evidence that taking 'mega' doses of vitamins and minerals have any benefit. Indeed, it is worth noting that large doses of some can cause very unpleasant side-effects and can even be dangerous.

- **Vitamin A:** Doses above 9000 micrograms in men and 7500 micrograms in women may be harmful. Large amounts can cause liver and bone damage, vomiting and headache. If you are pregnant, or thinking about becoming pregnant, you should talk to your doctor before taking vitamin A as large doses can harm an unborn child, and high levels of the vitamin have been associated with increased viral load in breastmilk.
- **Vitamin C:** Doses above 1000mg per day can cause kidney stones, and special care is needed if you are taking the protease inhibitor indinavir (*Crixivan*) or atazanavir (*Reyataz*) which can also cause kidney stones. It has also been shown that large doses of vitamin C can lower blood levels of indinavir (*Crixivan*).
- **Vitamin E:** Doses above 800mg a day may interfere with normal immune function. Special care is needed if you are taking anti-coagulants or if you have haemophilia.
- **Zinc:** Doses above 75mg a day have been linked with copper deficiency, a shortage of immune system cells called neutrophils, and anaemia.
- **Selenium:** Doses of more than 750 micrograms per day have been associated with immune suppression.
- **Vitamin B6:** More than 2g a day can cause nerve damage, but doses as low as 50mg a day have been associated with peripheral neuropathy.

Herbal supplements

Herbal remedies are also widely used by people with HIV. However, some herbal remedies can interact with anti-HIV medication meaning that the amount of the HIV drug that gets into the blood is too low to effectively fight the virus leading to the emergence of drug-resistant HIV.

Because the use of herbal supplements is not studied as extensively as the use of prescription medications not all the potential interactions are known about.

Some of the most concerning interactions seen so far are:

- **African potato:** This herb is widely used in Africa by people with HIV, but test tube studies have shown that the body uses the same mechanism to process it as it does for HIV drugs, meaning that not enough anti-HIV drug may get into the blood.
- **Garlic:** Supplements of garlic have been shown to stop the body processing protease inhibitors and NNRTIs properly. A study involving HIV-negative volunteers taking a protease inhibitor found that a twice-daily garlic supplement lowered blood concentrations of the protease inhibitor. This finding is very concerning as garlic is often

taken by people with high levels of fat in their blood, and high blood fats can be a side-effect of anti-HIV drugs. However, there is no evidence that garlic used for cooking interacts with HIV medicines.

- **St John's wort:** This popular herbal antidepressant has been shown to lower blood levels of indinavir and the UK's Medicines Control Agency has warned that it could affect blood levels of all protease inhibitors and the NNRTIs efavirenz (*Sustiva*, also in the combination pill *Atripla*) and nevirapine (*Viramune*).
- **Sutherlandia:** A herb which is used in Africa for the treatment of people with HIV has been shown by laboratory studies to interact with anti-HIV drugs.

Help and advice

Before you take any vitamin, mineral or herbal supplement talk to your HIV doctor or specialist HIV pharmacist first. They will be able to tell you if there is a risk of an interaction with anti-HIV drugs.

A dietitian can analyse your diet and advise you on how to optimise your nutritional intake so you can meet your vitamin and mineral requirements through both foods and supplements.

Also remember, vitamins, minerals and herbals supplements can have side-effects, just like prescription medicines and you should never take more than the recommended dose.