

# Factsheet Vitamins, minerals and herbal supplements

## Key points

- A balanced diet will provide all the vitamins and minerals most people need.
- Large doses of vitamin and mineral supplements can be harmful.
- Several herbal remedies can interact dangerously with HIV medications.



A [balanced diet](#) will almost certainly meet all your vitamin and mineral needs, but many people, including those with HIV, choose to take a multivitamin or other vitamin and mineral supplements.

This may be because they hope a supplement will strengthen their immune system or if they feel they may not be getting all their required nutrients from their diet.

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.

*"Before you take any vitamin, mineral or herbal supplement, talk to your HIV doctor or specialist HIV pharmacist first."*

Many people with HIV have low levels of vitamin D, and this has been associated with an increased risk of some health problems such as osteoporosis. You get most of your vitamin D from sunlight on your skin but it is also found in food. A dietitian can advise you on dietary sources of vitamin D.

If you are pregnant, you will have slightly different nutritional needs and it is recommended that

you take folic acid and vitamin D supplements. This can be discussed with your healthcare team.

## High doses of vitamins and minerals

There is limited evidence that taking vitamin and mineral supplements have any benefit. Large (or 'mega') doses of some can cause very unpleasant side-effects and can even be dangerous.

- Vitamin A: Doses above 0.7mg for men or 0.6mg for women may be harmful. Large amounts can cause liver and bone damage, vomiting and headache. Doses of more than 1.5mg may increase the risk of osteoporosis. 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 B3: Higher doses taken for a long time may lead to liver damage. The maximum daily doses of vitamin B3 (niacin) are 17mg (nicotinic acid supplements) or 500mg (nicotinamide supplements).
- Vitamin B6: Taking a dose of more than 200mg a day can cause nerve damage ([neuropathy](#)).
- Vitamin C: Doses above 1000mg per day can cause diarrhoea and stomach pain and could lead to [kidney stones](#). Special care is needed if you are taking the protease inhibitors [indinavir \(Crixivan\)](#) or [atazanavir \(Reyataz\)](#) which can also cause [kidney stones](#).
- Vitamin E: Higher doses may interfere with normal immune function. Special care is needed if you are taking anticoagulants or if you have haemophilia. Taking 540mg or less is unlikely to cause problems.
- Magnesium: Doses of 400mg a day can cause diarrhoea.
- Potassium: Doses above 3700mg a day could be harmful.
- Zinc: High doses have been linked with copper deficiency, changes in cholesterol, a shortage of immune system cells called [neutrophils](#), and [anaemia](#). The maximum recommended daily dose as a supplement is 25mg a day.

You can find out more about the [recommended daily levels of vitamins and minerals on the NHS Choices website](#).

## Herbal supplements

Herbal remedies are also widely used to supplement diets. However, some herbal remedies can interact with HIV treatment, meaning that the amount of the HIV drug that gets into the blood is too low to effectively fight the virus. This can lead to the emergence of [drug-resistant HIV](#).

Because the use of herbal supplements is not studied as extensively as the use of prescription medications, it is likely that 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. The herb affects protease inhibitors and NNRTIs.

- **Garlic:** Supplements of garlic have been shown to stop the body processing protease inhibitors properly, lowering blood concentrations of the anti-HIV drug. 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, garlic taken in food does not have this effect.
- **St John's wort:** This popular herbal antidepressant has been shown to lower blood levels of indinavir (*Crixivan*) and it may affect blood levels of all protease inhibitors, NNRTIs and maraviroc (*Celsentri*) so should not be used when taking these anti-HIV drugs.
- **Sutherlandia:** A herb which is used in Africa for the treatment of people with HIV has been shown by laboratory studies to interact with protease inhibitors and NNRTIs.

There may also be interactions between anti-HIV drugs and borage oil, DHEA, ginkgo biloba, liquorice, milk thistle and valerian.

## 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.

### Find out more

**Nutrition** Information booklet

**Eight ways to look after your health** Basic leaflet with pictures

**Exercise** Simple factsheet