

Vitamin supplements in cystic fibrosis

Cystic Fibrosis Trust is grateful to the dietitians from the British Dietetic Association Cystic Fibrosis Specialist Group who prepared the information in this leaflet.

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Contents

Introduction	2
What vitamin supplements do I need?	3
Why do I need to take extra vitamins?	3
When should I take my vitamins?	3
What do these vitamins do and where can I find them in food?	4
Sunlight and vitamin D	5
Can I take other vitamins or health supplements?	5
Vitamin plan notes	6
Further information	7

Introduction

This is a leaflet about the vitamin supplements you might need to take if you have cystic fibrosis. It covers: which vitamin supplements you might need and why, when you should take them, what they do, where you can find them in food, sunlight and vitamin D and other vitamins and health supplements.

What vitamin supplements do I need?

Most people with cystic fibrosis (CF) need supplements of the fat-soluble vitamins A, D, E and K. If you are pancreatic sufficient and do not take enzymes you may not need to take vitamin supplements. Your dietitian or doctor will be able to advise you.

What vitamin supplements do I need?

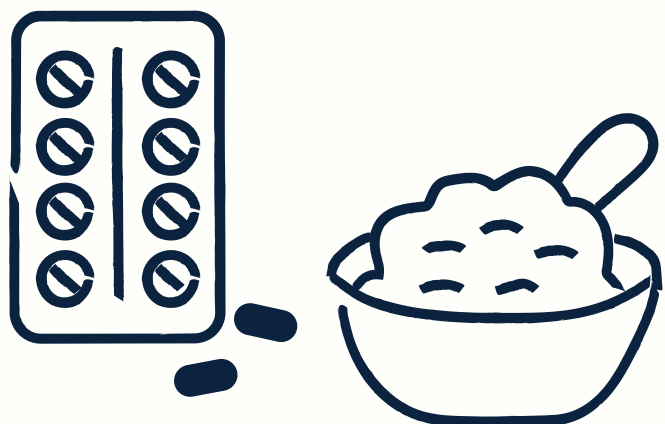
In CF, the absorption of some vitamins from your diet is reduced, and this may lead to low blood levels and symptoms of vitamin deficiency. This is particularly the case if you are pancreatic insufficient and require enzymes. The vitamins most affected are the fat-soluble vitamins A, D, E and K.

Your body may sometimes need more vitamins. They are essential, especially when fighting or recovering from infection, and you should always take the vitamins prescribed for you as your doctor recommends. Blood levels of vitamins A, D and E are measured at least once a year, and you will be advised if you need to change your dosage.

It is not necessary to take a vitamin C supplement as you should be able to get enough vitamin C from your diet (eg fruit, vegetables, juices). As vitamin C is water-soluble, your body should not have a problem absorbing it.

When should I take my vitamins?

You can take all your vitamins at the same time, but you should take them with food and enzymes, such as alongside a meal, to make sure they are well absorbed.



What do these vitamins do and where can I find them in food?

Vitamin	What these vitamins do?	Where can I find these vitamins in food?
Vitamin A	<p>Essential to maintain and repair the surfaces inside your lungs. Works in the lining of your lungs to help fight infections and prevent tissue damage.</p> <p>Helps your eyes adapt to the dark and prevents night blindness. Good vision is essential for driving at night.</p> <p>Keeps your immune function healthy by protecting cell membranes.</p>	<ul style="list-style-type: none"> • Dairy products (eg milk, yogurts, cheese) • Oily fish* • Liver** • Egg yolk • Carrots and yellow and green vegetables
Vitamin D	<p>Helps your body absorb calcium from your diet to maintain healthy bones and teeth. Without enough vitamin D, bones can become thin and break easily.</p> <p>Linked to improved lung function and muscle function.</p> <p>Role in regulating inflammation and maintaining a healthy immune system.</p>	<ul style="list-style-type: none"> • Oily fish* • Liver** • Fortified margarine • Egg yolk • You can also get vitamin D from sunlight (see below)
Vitamin E	<p>Keeps blood cells and nerves healthy by protecting cell membranes.</p>	<ul style="list-style-type: none"> • Vegetable oils and margarine • Eggs • Nuts
Vitamin K	<p>Essential for blood clotting, which stops you bleeding.</p> <p>Beneficial for strong bones.</p>	<ul style="list-style-type: none"> • Green leafy vegetables • Vegetable oils and margarine • Liver**

*Mackerel, salmon, herring, sardines and pilchards.

**You should avoid eating liver if you are pregnant as the high levels of vitamin A could affect your unborn baby.

Sunlight and vitamin D

Our body creates most of our vitamin D from the direct action of sunlight on our skin, so try to be outside for short periods on sunny days without sun cream to boost your vitamin D level. Most people can make enough vitamin D from being out in the sun daily for short periods with their forearms, hands or lower legs uncovered and without sunscreen from April to the end of September, especially from 11am to 3pm.

According to NHS guidance, the specific amount of time needed in the sun to make enough vitamin D is not known. There are a number of factors that can affect how much vitamin D is made, including your skin colour, how much of your skin is exposed, the time of day, the season and where you are in the world. It's important to take care not to burn. You must cover up or apply sunscreen before your skin starts to turn red or burn.

The longer you stay in the sun without sun protection, especially for large periods of the day, the greater your risk of skin cancer. You should take extra care to protect babies and children, as their skin is much more sensitive than adult skin. Babies less than 6 months of age should not be exposed to direct sunlight.

Caution

Remember to cover up or protect your skin before the amount of time it takes you to go red or burn. Some medications (eg Ciprofloxacin, Voriconazole) cause your skin to be extra sensitive to sunlight. If you are taking these medications, or you experience sun sensitivity, you should avoid exposure to sunlight or the use of sun beds.

Can I take other vitamins or health supplements?

You can do harm by taking too many vitamins, so you should consult your dietitian if you are using additional vitamins or health supplements.



Vitamin plan notes



Further information

Find more information resources about living with cystic fibrosis at cysticfibrosis.org.uk/information.

Our Helpline is open 10am – 4pm Monday to Friday. It's available to anyone looking for information or support with any part of cystic fibrosis, a listening ear, or just to talk things through.

How to reach us:

- Call **0300 373 1000** or **020 3795 2184**
- Email helpline@cysticfibrosis.org.uk
- Chat with us on **Facebook, Twitter or Instagram**
- Message us on WhatsApp on **07361 582053**

Visit cysticfibrosis.org.uk/helpline for more information.

We welcome your feedback on our resources.

You can also ask for this resource in large print or as a text file.
Email infoteam@cysticfibrosis.org.uk.

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This leaflet has been designed to be given out by a CF dietitian, along with their advice. If you downloaded or requested it directly from Cystic Fibrosis Trust we would advise you to discuss this information with your CF dietitian.

The information in this leaflet is based on clinical best practice and a consensus of opinion by dietitians within the British Dietetic Association Cystic Fibrosis Specialist Group. For detailed guidance on CF nutrition, please see the **Consensus document on nutritional management of cystic fibrosis**. Our consensus documents as well as other publications about cystic fibrosis can be found at cysticfibrosis.org.uk/publications or they can be ordered through our Helpline.

The information in this leaflet is general, please discuss it with your dietitian for a more personalised look at the topic.

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The information in this resource does not replace any advice from your doctor or CF team. It is important that you seek your team's advice whenever you want to change your treatment.

Cystic Fibrosis Trust

Cystic Fibrosis Trust is the charity uniting people to stop cystic fibrosis. Our community will improve care, speak out, support each other and fund vital research as we race towards effective treatments for all.

We won't stop until everyone can live without the limits of cystic fibrosis.

cysticfibrosis.org.uk

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