

Vitamin Supplements

Which vitamin supplements do I need?

The fat soluble vitamins A, D, E and K

Why are they necessary?

These vitamins are found within the fat in our food. Although taking pancreatic enzymes helps you to absorb the fat from your food, some fat and fat-soluble vitamins will still be passed in your stools. To ensure you have adequate levels of these vitamins in your blood we ask you to take daily vitamin supplements.

WHAT DO THESE VITAMINS DO?

Vitamin A	Is important for healthy skin, hair and eyes. It is especially important for good vision in dim light
Vitamin D	Helps the body absorb calcium from the diet and is important for maintaining healthy bones and teeth. Also is important for maintaining a healthy immune system
Vitamin E	Is needed for the production of red blood cells and is important for maintaining a healthy immune system, healthy skin and hair
Vitamin K	Vitamin K is beneficial to bone health and the you may need extra vitamin K to help with blood clotting



How much of these vitamins should I take?

You will be advised by your dietitian or doctor individualised dose of vitamins which will be dependent on your blood levels of these vitamins

Name of vitamin	Type of preparation
A and D	gel capsules
Abidec (A, D, B and C)	liquid
BPC multivitamins (A, D, B and C)	capsules or tablets
Calcium and vitamin D Adcal D3 1500mg/400iu	chewable tablet
Calcium and vitamin D Adcal D3 caplets 750mg/200iu	Swallowable caplet
Colecalciferol capsule/tablet 800iu	gel capsule or tablet
Vitamin E (alpha tocopherol acetate) 134mg/200iu	gel capsule or tablet
Vitamin E suspension 500mg/ml	liquid
Vitamin K (menadiol) 10mg	tablet

Take vitamins
with food and
enzymes to
improve
absorption

When should I take my vitamins?

You can take your A and D capsules, Vitamin E capsules and Vitamin K capsules at the same time, anytime of day but ideally **with some food and enzymes** to aid absorption.

Adcal D3®; Advice for taking alongside other medicines and food

If you are taking **tetracycline, doxycycline, azithromycin, ciprofloxacin** , these **antibiotics** should be taken at least **two hours before, or four to six hours after taking Adcal D3®**.

If you are taking **alendronate (Fosamax®), or risedronate (Actonel®)**, your **Adcal D3®** should be taken at least **three hours after** taking these medications.

If you are taking any **iron supplements** these preparations should be taken at least **two hours before, or four to six hours after taking Adcal D3®**.

Foods rich in oxalic acid (found in spinach, beetroot and rhubarb) or **phytic acid** (found in whole grain cereals e.g branflakes, weetabix, wholemeal bread) **should not be eaten within 2 hours of taking Adcal D3®**

How will I know if I am taking enough of these vitamins?

We will check your vitamin levels by taking a blood sample. If your vitamin levels are not within the normal range we may change your vitamin prescription/dosage and recheck your levels again.



We will check your vitamin D level in the winter months as this is the best time of the year to assess your level. It is now recommended that people with CF have adequate vitamin D levels all year round as this may help to protect you from developing low bone mineral density.

Many people with CF need extra vitamin D supplements in addition to their A and D capsules or multivitamins to achieve an optimal vitamin D level, especially during the winter months.

What will happen if I do not take my vitamins?

Your blood levels of these vitamins may become low and this can indicate vitamin deficiency. This can cause:

Low Vitamin A level : night blindness – difficulty seeing when the light is dim.

Low Vitamin D level : bone pain, increased risk of fractures and osteoporosis (thin, brittle bones).

Low Vitamin E level : deficiency is rare, but can cause poor muscle co-ordination.

Low Vitamin K level : deficiency can make your blood more difficult to clot.

Should I take any other vitamins or health supplements?

Some health supplements may also contain vitamins A, D and E e.g. fish oils, multivitamins. As these vitamins are stored in the body it is important that you do not take more than recommended by your doctor and dietitian. If you are taking any additional vitamins or health supplements, please let the dietitian know so she can advise you if it is safe to continue taking them.

Remember – sunlight can help your vitamin D levels!

You can help improve your vitamin D level by having regular sunlight exposure. Vitamin D is made in the body from the action of sunlight on the skin. Short periods outside in the summer months in the UK between the hours of 10am and 3pm (at least 15 minutes exposure on hands and face) on bright days should be enough to make some vitamin D.



Be careful not to get sunburnt!

**Respiratory Directorate—Cystic Fibrosis
Information for Patients**

Are there any foods I can eat to help improve my vitamin levels?

Including foods which are good sources of fat soluble vitamins in your diet will be beneficial to your general health, but they do not contain enough of these vitamins (A, D and E) to prevent you becoming deficient. In general we would always recommend you have as much variety in your diet as possible as this will help you to obtain a good range of all the vitamins your body needs. Foods which are good sources of fat soluble vitamins are:

Vitamin	Food Sources
A (retinol)	*Liver, milks and dairy produce and eggs, oily fish e.g. herring and mackerel
D (ergocalciferol)	Milk and dairy produce, fortified butter and margarine, fortified foods such as yoghurts, milkshake powders and powdered milk, fortified breakfast cereals, oily fish and eggs
E (alphatocopherol)	Cod liver oil, corn and olive oil, peanuts, hazelnuts, butter, margarine, cream
K (phylloquinone)	Green leafy vegetables, margarines and vegetable oils.

*** If you are pregnant you should avoid eating liver because it main contain very high levels of vitamin A and this could affect your unborn baby.**



Contact us:

If you have any questions or concerns regarding this information, please contact one of our CF Dieticians: on 0121 424 1796/0121 424 1788 / or 0121 424 2000 Bleep 2425/2944/2734/2965 mobile phone 07794375776 or email:

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Respiratory Directorate—Cystic Fibrosis

Information for Patients

Our commitment to confidentiality

We keep personal and clinical information about you to ensure you receive appropriate care and treatment. Everyone working in the NHS has a legal duty to keep information about you confidential.

We will share information with other parts of the NHS to support your healthcare needs, and we will inform your GP of your progress unless you ask us not to. If we need to share information that identifies you with other organisations we will ask for your consent. You can help us by pointing out any information in your records which is wrong or needs updating.

Additional Sources of Information:

Go online and view NHS Choices website for more information about a wide range of health topics <http://www.nhs.uk/Pages/HomePage.aspx>, www.cysticfibrosis.org.uk, www.heartlandscf.org

You may want to visit one of our Health Information Centres located in:

- Main Entrance at Birmingham Heartlands Hospital Tel: 0121 424 2280
- Treatment Centre at Good Hope Hospital Tel: 0121 424 9946

Clinic Entrance Solihull Hospital Tel: 0121 424 5616

or contact us by email: healthinfo.centre@heartofengland.nhs.uk.

Dear Patient

We welcome your views on what you thought of this patient information leaflet, also any suggestions on how you feel we can improve through our feedback link below:

Patient Information Feedback email: patientinformationleafletfeedback@heartofengland.nhs.uk

If you wish to make any other comments this can be done through the links listed below:

Patient Opinion: www.patientopinion.org.uk

I want great care: www.iwantgreatcare.org (Here you can leave feedback about your doctor)

Be helpful and respectful: think about what people might want to know about our patient information and this hospital and how your experiences might benefit others. Remember your words must be polite and respectful, and you cannot name individuals on the sites.

If you have any questions you may want to ask about your condition or your treatment or if there is anything you do not understand and you wish to know more about please write them down and your doctor will be more than happy to try and answer them for you.

