

# CF Health Matters



*This information sheet is published by the Cystic Fibrosis Dietitians across Canada.*

## Vitamins and Cystic Fibrosis

### Why do people with Cystic Fibrosis need to take vitamins?

Many people with CF have problems when they eat food, making it hard for their intestines to soak up nutrients, *especially* fat. To help with this, enzymes are taken with meals and snacks. Vitamins A, D, E, & K are unique because they need fat in order to be ‘soaked up’ by your body, they are called “fat-soluble” vitamins. Even when someone takes enzymes they can still lose fat in their stool. If they are losing fat then they are probably also losing vitamins. If you don’t take your vitamins, over time, you may develop low levels in your blood. This is known as a *vitamin deficiency*.

You may wonder why it is important for someone with CF to take their vitamins if they don’t have a problem when they eat. To understand why, you must realize that vitamins are important to your body when you are healthy, but they even more important when you are sick. People who have CF may find they get sick more often than people who don’t have CF. To help their bodies fight an infection they need more vitamins than someone without CF. We ask people with CF to take a vitamin pill because it is very hard to get enough vitamins from food alone. Our focus is often the *fat soluble* vitamins, but it is important to remember that all vitamins are needed for a healthy body.

### What do the different fat soluble vitamins do and what will happen if I do not get enough?

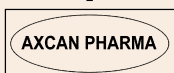
#### Vitamin A

Vitamin A has many important roles in the body. It helps you see at night and lets your eyes adjust when you move from a dark place to a bright place. If you have a vitamin A deficiency then your eyes may not be able to get used to changes in light. There have been people with CF who have reported having this problem. If you think this is a problem speak to your CF doctor. Vitamin A also helps make skin healthy and helps fight infection when you get sick. During childhood it helps you grow. It is found in eggs, liver, tomatoes, milk, and some fruits & vegetables. For people with CF, food sources are not enough to prevent vitamin A deficiency, therefore a vitamin supplement is usually recommended.

#### Vitamin D

Vitamin D comes from two sources. It is made by the skin when it is exposed to sunlight, and it is found in the foods we eat. It helps your body absorb calcium, and helps move calcium from your blood to your bones. Without enough vitamin D your bones can weaken and the chances of breaking a bone become greater. While foods such as eggs and cereals contain vitamin D, the main source is milk. A vitamin supplement is usually recommended to make sure you get enough every day.

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# Vitamins and Cystic Fibrosis

*If you want more information on Vitamins and CF, please ask a member of your CF team.*

## Vitamin E

Vitamin E has become very popular because of its role as an *antioxidant*. As you grow your body goes through many changes. As your body changes it produces harmful products that can destroy your healthy cells. Vitamin E helps get rid of these harmful products and this is why it is called an *antioxidant*. A deficiency of vitamin E can affect your body's ability to protect itself when you get sick. For people with cystic fibrosis this may affect their lungs and their ability to breath. Foods that contain vitamin E include plant oils, margarines, and some fruits & vegetables. Diet alone cannot prevent a vitamin E deficiency in people with CF, therefore a supplement is usually recommended.

## Vitamin K

Most of the vitamin K we need comes from our diet. It is found in green vegetables, plant oils, and margarine. We also have healthy bacteria in our intestines that produce vitamin K. Even though the bacteria in your intestine is healthy, it can be destroyed by the antibiotics you may take for a lung infection. This can affect the amount of vitamin K you get on a daily basis. Vitamin K is very important because it helps your blood clot. When you cut yourself, the time it takes for your cut to stop bleeding is affected by how much vitamin K you have in your body. The longer it takes to 'clot' the less vitamin K you may have. Vitamin K is also important for proper bone growth in children. To prevent a deficiency many people with CF take a supplement that contains vitamin K.

## Why should I take vitamins?

People with CF are at a very high risk for getting vitamin deficiencies. These deficiencies are serious and can include symptoms such as night blindness, bone fractures, back pain, and bleeding. They may also effect how quickly you recover from a lung infection. You can prevent these deficiencies just by taking your vitamins recommended by your CF clinic. To make sure get the most from vitamin supplements it is best to take them with food and enzymes.

## Dietary Sources

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**A** liver  
egg yolk  
dairy products  
green leafy or yellow  
vegetables

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**D** liver  
fish  
fortified milk and margarine  
egg yolk

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**E** vegetable oils  
nuts  
eggs  
wheat germ

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**K** green leafy vegetables  
liver  
vegetable oils  
bacteria in the intestine also  
make vitamin K

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