

Salt supplementation for children and teenagers with Cystic Fibrosis

Why is salt important for children and teenagers with Cystic Fibrosis (CF)?

Sodium and chloride are minerals. Together they are known as salt. Large amounts of salt are lost in the sweat of people with CF. Because of these high salt losses, the level of salt in the body can drop.

Salt helps maintain the body's fluid balance and also helps muscles work. Low salt levels can also lead to a decreased thirst drive, so people with CF are more likely to get dehydrated. Low salt intake over a long period of time can cause reduced appetite and slow growth.

Symptoms that suggest your child might be dehydrated and need more salt include headaches, fatigue, nausea and vomiting, problems concentrating, dizziness, muscle cramps and dark, strong smelling urine.

Dehydration can also make sputum thicker and contribute to blockages in the gut. To prevent these problems, the salt lost through sweat must be replaced. This is particularly important in hot weather, when unwell with a fever or during exercise when sweating is increased.

How do children and teenagers with CF ensure they get enough salt?

Table salt should be added to meals all year round. There is no need to cook with salt for the whole family – the child/teenager with CF should use a salt shaker at the table. In this age group, salt supplements are not needed in cold weather as intake of salt from food and use of table salt is usually enough. When the weather is hot though (above 25°C), extra salt is needed.

Salt powder (oral electrolyte powder) can be added to foods or drinks or salt tablets can be taken to provide extra salt. Extra salt may also be needed during exercise (see next page).



Everyone's salt needs vary so it is hard to predict the exact dose each person will need. The table below may be used as a guide:

Age	Salt supplementation in hot weather
3–11 years	2–4 salt tablets/day OR 4–8 teaspoons salt powder/day
12–18 years	4–6 salt tablets/day OR 8–12 teaspoons salt powder/day

More fluid is also needed when having extra salt. People with CF having extra salt should make sure they drink enough fluid throughout the day. Dark, strong smelling urine or going to the toilet less than four – five times per day are signs that a person may not be drinking enough.

Your child/teenager might be at risk of not having enough salt if they:

- > are unwell – as food intake may decrease

- > have a fever – as sweating can increase salt losses
- > have diarrhoea or vomiting – these increase salt and fluid losses.

Sports drinks (home made or bought) may be useful in these cases. See next page for common sports drinks on the market and a recipe to make a homemade sports drink.



What about exercise?

Extra salt and fluid are also important when exercising. Everyone's salt needs vary so it is hard to predict the exact dose each person will need. The table below may be used as a guide but also watch for symptoms of dehydration and have more salt (on top of the below doses) if needed.

Drink plenty of fluid when exercising to help prevent dehydration. Dark, strong smelling urine or going to the toilet less than four – five times per day are signs that a person may not be drinking enough.

Age	Salt supplementation during exercise
3–11 years	1 salt tablet or sports drink (see below) prior to exercise
12–18 years	2 salt tablets or sports drink (see below) prior to exercise

NB. Above doses should be in addition to the amount routinely given daily in hot weather.

What sports drinks are appropriate?

Sports drinks provide fluid as well as sodium. They also have some carbohydrate. Sports drinks can be useful because fast and complete re-hydration relies on both fluid and salt. As most sports drinks are made for people without CF who only lose small amounts of salt in their sweat, they may not contain enough salt for people with CF. See the table (right) for the sodium content of the common sports drinks on the market.

Sodium content of sports drinks

Homemade sports drink can be made by mixing 1000mls (1 litre) of cordial with ½ a teaspoon of table salt.

Gatorade, homemade sports drink or re-hydration products (hydralyte and gastrolyte) should be used rather than other brands of sports drink, due to their higher sodium contents (see table to the right).

Drink	Sodium content (mg) per 1000ml (1L)
Gastrolyte	1070
Hydralyte	1060
Homemade Sports Drink	1000
Gatorade	510
Gatorade Endurance	840
Powerade	280

Note: For further information or for help working out the amount of salt you or your child needs, talk to your dietitian or doctor.

There are many public health messages about the risks of having too much salt in the diet. These messages are not relevant for people with CF. This is because for people with CF, salt losses through sweat are much higher than in those without CF. As a result, it is much more common for people with CF to not have enough salt than for them to have too much salt. Even with adding salt to foods and using salt supplements, it is not likely that a person with CF will have too much salt.

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