My Nutrition

Cystic Fibrosis and salt replacement therapy for adults

Why do people with Cystic Fibrosis need extra salt?

All people with cystic fibrosis (CF) lose large amounts of salt in their sweat. Salt is made up of sodium and chloride. Sodium is important for conducting nerve impulses, muscle contraction and growth. It also controls the amount of water in the blood and tissues.

People with CF lose 3 – 4 times more salt through their sweat than those without CF. The CF sweat gland is unable to absorb salt back into the blood. As the level of salt in the blood does not rise, the body has no recognition of thirst. This leads to a higher risk of dehydration. To prevent dehydration, people with CF need to replace both salt and fluid. Exercise, fevers, infections and hot weather cause even more salt and fluid to be lost.

Signs and symptoms of salt depletion:

- Fatigue, irritability, headaches
- Poor concentration
- Salt crystals on the skin
- Nausea, vomiting, decreased appetite
- Muscle cramps
- Low blood sodium (Hyponatraemia)
- Thicker saliva and mucous that is harder to remove from the lungs (increasing risk of infection)
- Thicker secretions that may cause blockages in the bowel (also called Distal Intestinal Obstruction Syndrome, DIOS)

Recommended doses of salt

Salt requirements for CF depend on symptoms, dietary intake, living climate and activity level. Approximate daily requirements are:

- Adults: 2-3 tsp / day (4000-6000 mg)

Assume that a regular diet contains the equivalent of 1 teaspoon of salt a day.

Even more salt may be required:

- During periods of illness due to reduced intake and increased losses
- When dietary intake is decreased and/or replaced by oral supplements or tube feeds with low sodium content
- Before additional physical activity
- When holidaying or living in hot climates

This is a consensus document from Dietitian/ Nutritionists from the Nutrition Education Materials Online, "NEMO", team.

Developed: June 2021
Due for review: June 2023

Queensland Government

Remember: in Queensland extra salt and fluid is required all year round.

Getting extra salt in the diet

The easiest way to consume extra salt is by adding salt and eating foods naturally high in salt.

Try to include the following foods daily:

- Vegemite, butter, margarine
- Cheese
- Pretzels, salted biscuits, salted nuts
- Hot chips or potato crisps
- Tomato, barbeque and soy sauce
- Gravy and dressings
- Processed meats like devon, salami, sausages, ham and bacon
- Pizza
- Olives and pickles
- Canned fish in brine
- Frozen or tinned meals
- Packet pasta, 2 minute noodles

Salt supplements

Salt tablets, salt filled gel caps and electrolyte drinks (e.g. *Glucolyte, Gastrolyte*) can help prevent dehydration. These supplements create thirst to encourage fluid intake.

- 360 mg in 600mL of *Glucolyte*
- 240 mg in one salt tablet
- 500 mg, approximately, in one salt filled gel cap
- 2000 mg in one tsp of table salt
- 400 mg in one café-style salt sachet

Sport drinks have less sodium (between 150-240 mg per 600mL) than other electrolyte drinks. Increase the salt content of these drinks by adding ¼ tsp of salt, or make your own sports drinks (¼ to ½ teaspoon salt in 1L cordial). Some salt drinks are high in sugar so good dental hygiene is important.

Tips to include more salt:

- Travel with extra salt and water bottle
- Use plenty of sauces and gravies
- Choose the ‘salted’ varieties of foods

This is a consensus document from Dietitian/ Nutritionists from the Nutrition Education Materials Online, "NEMO", team.

Reviewed: June 2021
Due for review: June 2023

Queensland Government

- Try freezing your electrolyte drink into ice blocks
- Crush salt tablets or use table salt in your electrolyte drink – freezing this will make an icy slushy
- Add salt generously to savoury foods

Salt and fluid together are important

Water is also lost through sweat. The body cannot store water and the amount lost every 24 hours must be replaced. The average guide for fluid requirement is 2 – 3 litres/day (35 – 45ml/kg/day). This is increased with exercise, heat and humidity. Nutritious fluids like milk can help to prevent dehydration and provide extra calories.

For more information, contact your Dietitian or Cystic Fibrosis Centre.

Reviewed: June 2021
Due for review: June 2023