

## Salt and fluid replacement therapy and Cystic Fibrosis

- In people with Cystic Fibrosis (CF), the basic genetic defect causes changes inside the sweat glands. The volume and rate of sweat production is normal. However since chloride is not taken up by the body, more (chloride and sodium electrolytes) salt is lost in the sweat.
- People with CF lose **3 - 4 times more salt** through their sweat glands than those without CF, so your daily need for this **essential mineral is high**.
- Salt loss leads to a higher risk of dehydration in people with CF, because they tend to have a lower thirst drive.
- The more you sweat, the more salt you lose, so in situations where you sweat more e.g. Queensland summer months, exercise or both, this can add up to a large excess of salt lost in sweat!
- If the level of sodium (salt) in the blood is too low this can lead to:
  - loss of appetite,
  - tiredness,
  - impaired performance,
  - nausea,
  - difficulty concentrating,
  - weakness,
  - dizziness,
  - muscle cramps,
  - headaches and dehydration.

Dehydration can also cause sputum to be thicker (increasing the likelihood of infection), and increase the likelihood of severe constipation better known as Distal Intestinal Obstruction Syndrome (DIOS) in patients with CF.

All these things can be prevented and reduced by enough salt and fluid. Remember, it is a combination of salt and fluid that prevents salt loss in people with CF.

### Contact your local CF office

#### Cystic Fibrosis Australia

Unit 26, 5 Inglewood Place  
Norwest Business Park  
Baulkham Hills 2153

Postal Address  
PO Box 8007  
Baulkham Hills NSW 2153

**T:** +61 (0) 2 8883 4477  
**F:** +61 (0) 2 8883 5515  
**E:** [general@cfa.org.au](mailto:general@cfa.org.au)

## How much salt and fluid do I actually need?

- Approximately 4000-6000mg salt per day is the minimum daily recommended amount for adults with CF. At least 2 – 3 times the amount recommended for adults without CF. However it is important to remember there will be large differences between individuals, depending on physical activity levels, climate conditions.
- Salt requirements may exceed 6000 mg/day with extreme weather conditions (heat and humidity) or with excessive exercise. It is best to be guided by individual signs and symptoms.

- Water is also lost through sweat. The body has no storage and the amount lost every 24 hours must be replaced. The average guide for fluid requirement is 35 – 45 ml/kg/day which is typically somewhere between 2 – 3 litres/day minimum. This need will increase with increased activity, heat and humidity.

### How much sodium is in Glucolyte and salt tablets?

- 1 sachet glucolyte = 360mg sodium
- 1 salt tablet = 240mg sodium
- 1 teaspoon salt = 1600mg sodium
- 1 café style sachet salt = 400mg sodium

### Salt and fluid TOGETHER are important!

Research has shown a high salt drink containing 460mg/L, helped prevent dehydration in people with CF exercising in a hot climate, and accelerated thirst drive. This amount of sodium is the same as:

- 1 sachet Glucolyte in 600mL water
- 2 salt tablets with 2 glasses water
- 1/4 tsp salt (1 café style sachet) in 1L cordial

### How do I fit enough salt and fluid into my day?

- Add salt to all foods in cooking and at the table
- Include foods high in salt e.g. salted nuts, cheese, vegemite, pretzels, chips, processed meats etc
- Instead of just drinking water, use a high sodium chloride drink
  - Glucolyte (1 sachet in 600mL water)
  - try homemade sports drink 1/4 to 1/2 teaspoon salt in 1L cordial
  - add 1/4 teaspoon salt to commercial sports drinks e.g. Gatorade, Powerade
- Use salt tablets and take with a glass of water or cordial
- If you have a gastrostomy button or feed via a nasogastric tube try flushing your tube with salty water or adding 1/4 to 1/2 teaspoon salt to your feeds.

### REMEMBER: Extra salt and fluid is required all year round in Queensland and Western Australia

Things I can do to increase my salt and fluid intake

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_

For further information contact your Dietitian or Cystic Fibrosis Centre.

Developed by: Queensland Health Nutrition support group Nutrition Education Materials Online (NEMO).

This is a consensus document by Queensland Health Dietitians. Developed: August 2012. Disclaimer: <http://www.health.qld.gov.au/masters/copyright.asp> Next Review: August 2014.

Disclaimer: The information contained herein is provided in good faith. However accuracy of any statements is not guaranteed by Cystic Fibrosis Australia. We provide the information on the understanding that persons take responsibility for assessing relevance and accuracy. Individuals are encouraged to discuss their health needs with a health practitioner.

© Copyright Cystic Fibrosis Western Australia 2015