



Women's & Children's Hospital

Nutrition for toddlers and young children with Cystic Fibrosis

Under 5 years of age



**Government
of South Australia**

SA Health



**Women's
& Children's
Hospital**

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Mealtime behaviour management for children with Cystic Fibrosis (CF)

Good nutrition is very important for people with CF. Getting children to eat well can be a challenge but there are things parents and caregivers can do to help children eat well to stay healthy.

Keep in mind that all toddlers and young children go through phases of fussy eating behaviours, habits or likes/dislikes. While good nutrition and growth are a focus for those with CF, try to be realistic and not get too anxious about 'normal' toddler eating! The CF team will keep an eye on your child's weight and growth and discuss any concerns with you as they arise. If your child is growing well, hydrated and their vitamin levels are ok, these are good signs you are doing a great job of meeting your child's nutrition needs!

Tips for encouraging healthy eating

Plan ahead and have structured mealtimes

- > Aim for three meals and three snacks every day at about the same time each day. This gives your child time to get hungry between meals and snacks and increases the chance that they will eat more and try new foods.
- > Before starting a meal or snack, do your best to have all the food ready. This will help you to be free during the meal to spend time with your child. You can then role model good eating, and give them lots of praise for good eating.
- > Work out the fat content of the meal or snack your child is going to eat so you can have the right number of enzymes ready.
- > Don't allow TV, toys, handheld games, Mp3 players or books at the table as these distract from eating.
- > Avoid cooking different meals. Plan one menu for the whole family then add extras to your child with CF's meal to increase the calories (see page 8 for ideas).
- > Limit the length of meals to about 20 minutes. When the meal is over, clear your child's plate (even if they have not eaten much) and do not offer food until the next scheduled meal or snack.

Give choices

- > Always have foods on the plate that you know your child likes and will eat. This will mean that they will at least eat something! Include new foods, or those your child has rejected in the past, on the plate as well and let your child decide which foods they want to eat.
- > Allow your child to choose whether to prepare their enzymes or have you do it for them.
- > Give your child two options at meals or snacks and let them choose what to eat (e.g. 'would you like some pasta or a cheese sandwich for lunch today?').
- > Allow your child to choose between two items to add to their food to provide extra calories (e.g. 'should we add cheese or butter to your vegies?').
- > Involve your child in choosing what to cook for meals and let them help to prepare meals. Think about your child's safety if they are helping in the kitchen.

Emotions and attitudes

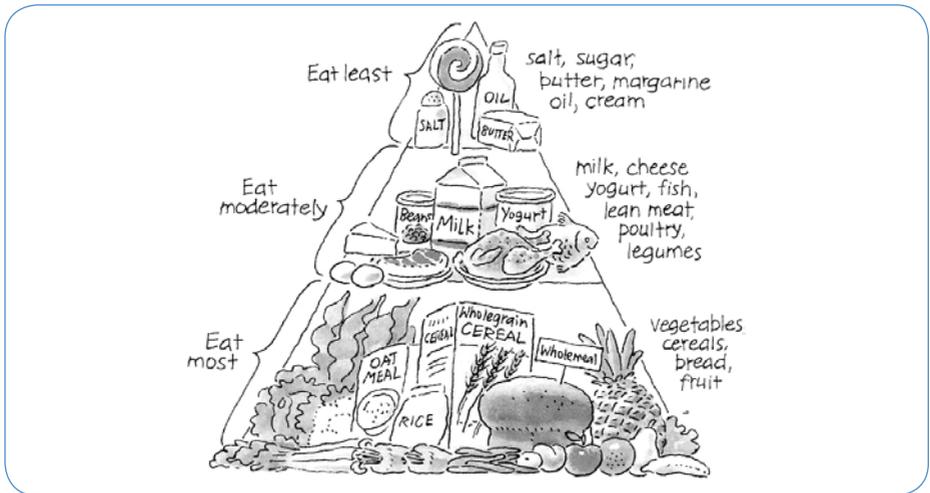
- > Try not to worry if at the end of the meal your child has not eaten much. If you are relaxed about eating, your child is more likely to be the same.
- > Have a relaxed talk with your child about healthy eating, at a time other than at meals or in clinic. Make sure you explain, in a way they can understand, the reasons for needing to eat high-calorie foods.
- > Give your child the chance to express their feelings about having to eat a lot and about having CF. Let your child know that you understand. Children who can put their feelings into words often feel less need to rebel by not eating.
- > Talk with your dietitian, doctors, nurses and social worker for support and advice.

Your child's nutrition needs

Most young children need 1,000–1,500 calories daily. A child with CF may need 20–50% more (or 1,200–2,200 calories) daily. Higher body weights are linked to better lung function so making sure children with CF eat enough to maintain a healthy weight is important for their health. Since children with CF will tend to eat the same amount as other children, more calories should be added to their diet to meet their higher needs.

A balanced diet is important for the whole family; including your child with CF. This includes breads and cereals, fruits and vegetables, dairy products and protein foods like meat, chicken, fish, legumes and eggs. For the healthy population we talk about eating a 'healthy food pyramid', but for children with CF, we like to talk about a 'healthy food cube' instead because children with CF need to eat lots of everything!

Healthy food pyramid for healthy population



Healthy food cube for CF



Keep in mind that your child's eating habits, behaviours and preferences, as well as their nutrition needs and goals will change as they grow. The CF dietitian is always at clinic if you need to chat about any food or nutrition issues. They can also answer questions about your child's eating, weight, or nutrition goals. You can ask to speak with the CF dietitian at any clinic visit – you do not have to wait for your doctor to suggest a dietitian review!

High energy tips for for kids with CF

In order to achieve a high calorie (energy) intake, children with CF should have a high fat intake. For the healthy population, too much fat in the diet is not advised due to its effects on cholesterol, heart health and weight. Research has found that people with CF, have lower cholesterol levels despite their high fat intakes. They also have a lower rate of other risk factors for heart disease such as obesity. For these reasons, they are not likely to be at an increased risk of heart disease by having lots of fat in their diet.

Give your child with CF full cream milk to drink with meals and snacks and use full cream dairy products (like cheese, yoghurt, and custard). Aim for high calorie snacks and drinks between meals and add in extra calories (see page 8) to every meal.

- > Aim for 100–200 calories per snack, three snacks per day.
- > Aim to add extra calories to meals with high fat additions.

See the tables on the next pages for high energy snack and drink ideas as well as tips for adding extra calories to your child with CF's meals. Don't forget to give your child their enzymes before they have any foods or drinks containing fat.

Use the following guide to work out how much Creon to have:

- > Creon micro: 1 scoop per 4g fat
- > Creon 10,000: 1 capsule per 8g fat

The tables on the next pages also list the fat content of the foods and drinks to help you work out the correct enzyme dose.

Note: The energy content of a food may be measured in either kilojoules (kJ) or calories. One calorie is equal to 4.2 kilojoules.

100–200 calorie snack ideas (420–840 kJ)

100–200 calorie snacks	Calories	Fat content (g)
Custard		
> Yogo: banana split, berry blast or choc vanilla, 150g	150	4
> Yogo Mix, 150g	250	9
> Foster Clark custard cup, 140g	130	4
> Nestle Milo, 100g	140	5
Fruche, 125g	100	1
Le Rice	170	4
Mousse, Nestle Chocolate, 60g	130	5
Yoghurt		
> Dairy Farmers Thick and Creamy, Yoplait Original 170g	190	6
> Nestle Children's Yoghurt, 95g	100	3
> Go-Gurt, 100g	110	2
Ice Cream		
> Regular, 1 scoop	100	6
> Paddle Pop/Billabong	100	3
> Choc Wedge	170	11
Cheese: 2 x Babybel Mini, 2 x Laughing Cow cube, 2 x Kraft Cheesetiks	140	11
Bars		
> Uncle Toby's muesli bar	100	4
> K-time twist bar	120	1
> K-time muffin bar	170	3
> LCM bar	100	2
> Milo energy bar	100	1.5
> Nutri grain bar	130	3

100–200 calorie snacks	Calories	Fat content (g)
Jatz biscuits (6)		
> with 20g cheese (1 thin slice)	200	13
> with dip (2 Tbs)	200	15
> with Kraft cheese spread (2 Tbs)	250	17
Le snak	100	6
Sultanas, 1 box	130	0
Banana, 1 medium	100	0
Fruit salad, canned in syrup, ½ cup	100	0
Crumpet with 2 tsp margarine and 1 tbs honey	230	8
English muffin (½) with 1 tsp margarine	110	5
Hot cross bun (½) with 2 tspn margarine	150	11
Pikelets (2) with 1 tsp margarine on each	130	12
Raisin toast with 2 tsp margarine	170	8
Toast (1)		
> with 1 tsp margarine and 1 tsp jam/honey	110	5
> with 2 tsp peanut butter	120	6
> with 2 tsp nutella	120	4
> with 1 thick slice cheese	190	11
Baked beans (½ cup)	125	1
Chocolate		
> Cadbury chocolate, 1 row (6 squares)	130	7.5
> Cadbury Dairy milk bar (fun size)	100	5
> Mars bar (fun size)	100	4
> Caramello Koala	100	4.5
> Tim Tam	100	5
Chips, 25g packet	130	8
Shapes, 25g packet	130	6

100–200 calorie snacks	Calories	Fat content (g)
Tiny Teddies, 25g packet	120	4
Frankfurt	100	9
Lamington fingers (2)	140	4
Cinnamon donut	260	14
Iced cupcake	160	5

High calorie drinks to use as snacks or with meals

Drinks	Calories	Fat content (g)
250ml (1 cup) Full cream milk	160	9
250ml (1 cup) Fortified milk (Full cream milk + 2 heaped tablespoons skim milk powder)	250	9
375ml flavoured milk	270	8
250ml Fruit juice (unsweetened)	100	1
250ml Soft drink	100	0
250ml Cordial (standard dilution)	100	0

Note: Milk drinks and fruit juice provide more nutrients and are therefore better choices than cordial or soft drinks.

Add extra calories (kJ) to meals

Food	Quantity to provide 100–200 calories	Fat content (g)
Olive/canola oil	1 tablespoon	20
Butter/margarine	3 teaspoons	12
Mayonnaise (original)	1 tablespoon	15
Peanut butter	1 tablespoon	10
Cheese	30g (size of a small matchbox)	10
Cream (thickened), sour cream	2 tablespoons	14
Cream (double)	1 tablespoon	10
Cream cheese	2 tablespoons	13
Avocado	3 tablespoons	9

Ideas for adding extra calories

- > Add cheese, margarine/butter or oil to vegetables, scrambled eggs or pasta.
- > Add olive oil or an oil based dressing to salads.
- > Spread butter or margarine plus mayonnaise, avocado, peanut butter or cheese spread on sandwiches, crackers, muffins or crumpets.
- > Add cream, sour cream or margarine/butter to soups, casseroles, pasta sauces, scrambled eggs or potatoes.
- > Add cream to cereal, milk drinks, yoghurt or custard. Try whipped cream as a topping on hot chocolate.
- > Cook meats in plenty of oil or margarine/butter.
- > Dip fruit pieces or crackers in cream cheese, cheese spread, peanut butter or full fat dips.
- > Use full cream milk plus cream, ice cream or full cream yoghurt to make shakes or smoothies.
- > Add powdered milk to milk and milk drinks or use in casseroles, soups and pasta sauces.

Tube feeding

Some people with CF still struggle to gain weight or grow normally even if they follow all of the advice in this booklet. Because of the link between higher body weight and better lung function, the CF dietitian and doctors may suggest tube feeding to help with weight gain. Tube feeding helps to provide the extra calories needed for weight gain and normal growth. Tube feeds are often done at night during sleep, but can also be given during the day. They do not replace eating but are used in addition to food intake.

My child's goals

My child's current weight:

_____ kg = _____ percentile

My child's goal weight:

_____ kg = _____ percentile

My child's specific nutrition goals:

1. _____

2. _____

3. _____

Useful websites

For more information on normal toddler behaviour and eating, try the following websites:

- > **Women's and Children's Hospital Nutrition department resources:**
www.wch.sa.gov.au/services/az/other/nutrition/nutres_under5.html
- > **Child and Youth Health – Parenting and Child Health page:**
www.cyh.com/SubDefault.aspx?p=98

The original nutritional and educational content of this booklet has been reviewed by specialist Dietitians at the Children, Youth and Women's Health Service (CYWHS), SA Health.

Food product information contained in this booklet was up to date at the time of revision. If you are not sure about a food, check with the manufacturer.

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