Eating well and maintaining a good body weight is essential for everyone but especially when you have cystic fibrosis (CF). A healthy body weight will help reduce frequency of chest infections, improve or maintain your lung function and can generally make you feel well in yourself.

However, being overweight and increase your risk of other health problems too such as high blood pressure, sleep apnoea (a condition that causes interrupted breathing during sleep), diabetes and being very overweight or obese may affect your lung function.

Body Mass Index (BMI) is a measure your dietitian will use to assess if you are within the healthy weight range for your height. The ideal range is 20-25, but for CF it is recommended that women aim to have a BMI of 22 and men a BMI of 23.

Calculate your BMI [here](#).
What should I be eating? What is a healthy diet?

A healthy balanced diet should be based on the principles of the Eatwell Guide below. Each portion of the plate represents how much of the food you should be eating. The Eatwell Guide shows how much of what we eat overall should come from each food group to achieve a healthy, balanced diet.

Fruit & vegetables and starchy foods should make up the most of our diet. It is important to eat a variety of foods to ensure you have a variety of nutrients.

*Please note, in CF you do require more salt than the general population and may be advised on adding salt to food and taking salt tablets*
Fruit and vegetables are low fat and make an ideal snack if you are trying to prevent further weight gain or lose some weight. They are also an important source of vitamins and minerals.

Aim for a mixture of different coloured fruit and vegetables each day. Think of a rainbow!

How can I include more fruit and vegetables in my diet?

5 portions a day is the recommended amount for the general population. 80g (3 tablespoons) is a portion of fruit and a portion of vegetables.

However there is no specific amount recommended for people with CF, therefore just try to have some each daily ideally as part of every meal or some as a snack.

Examples:

- 1 apple, banana, pear or orange
- 2 plums, kiwi fruits, satsumas or similar sized fruit
- ½ a grapefruit
- 1 slice of large fruit such as pineapple or melon
- 1 heaped tablespoon of dried fruit such as raisins, sultanas or apricots
- 1 glass (200ml) of fruit juice (Fruit juice will only count as 1 portion of fruit, regardless of how much you drink. It is also high in sugar - if you are diabetic only drink with a meal)
- 1-2 handfuls of strawberries, grapes, cherries or blueberries
- 3 heaped tablespoons of vegetables e.g. peas, sweet corn
- ½ avocado
- A small cereal bowl of salad
- 2 broccoli spears, 8 cauliflower florets

Tips for eating fruit & vegetables when trying to gain weight

- Have a bowl of fruit with ice cream or full fat / Greek yogurt
- Have banana and custard as a snack or pudding
- Add cheese sauce or grated cheese to vegetables
- Avocados are very high in calories – add these to sandwiches or side salads
Bread, Rice, Potatoes and Pasta—’Starchy Foods’

These foods are carbohydrates and should make up a third of what we eat, so remember to include them at each meal time.

They are a good source of energy, provide vitamins and minerals and provide fibre.

**What is a ‘starchy food?’**
- Bread
- Bagels
- Potatoes
- Rice
- Pasta
- Breakfast cereal
- Noodles
- Couscous

If you choose wholegrain varieties, you will be increasing your fibre intake. This can help keep you fuller for longer so you will be less tempted to snack during your meals.

Wholegrain foods also provide vitamins and minerals such as B vitamins, folic acid and zinc.

**How can I choose wholegrain varieties?**
- Choose wholemeal, granary or seeded breads
- Try brown rice or whole-wheat pasta
- Try breakfast cereals such as porridge or weetabix

**Making healthier choices:**
- Have boiled potatoes or a jacket potato instead of chips
- Use tomato based pasta sauces instead of creamy ones
- Use low fat spread instead of butter
- Have skinned or semi skinned milk on cereal instead of full fat

**Tips for weight gain:**
- Fill a 1/3 of your plate with carbohydrate foods
- Have breakfast cereals with full fat milk
- Choose creamier pasta sauces rather than tomato based
- Have a carbohydrate based snack in between meals – try toast, cereal, instant noodles or crackers with cheese
Meat, Fish and Alternatives

These foods contain protein. Protein is needed by the body for growth and repair. Aim to include a protein food in each meal.

Meat & Fish
- Meat contains many vitamins and minerals such as iron, zinc and vitamin B12
- Red meat such as beef is a good source of iron
- White meats such as chicken are lower in fat
- Oily fish provides omega 3 fatty acids
- Oily fish includes salmon, mackerel, trout, pilchards and sardines

Vegetarian Sources of Protein
- Beans and lentils
- Eggs
- Nuts
- Tofu
- Soya, ‘Quorn’

What are beans & lentils? How can I incorporate them into my diet?
Beans and lentils are low in fat and contain protein, fibre and some vitamins and minerals such as iron and folate.

They also have a low glycaemic index – this means they are broken down slower so your blood sugars will remain more stable and will help keep you fuller for longer.

Examples:
- Chickpeas
- Kidney beans
- Butter beans
- Baked beans
- Red, green and yellow lentils
- Add beans or lentils to salads
- Why not have baked beans on toast for breakfast?
- Add lentils to soups or stews
I've read that red meat causes cancer. Is this true?

There is some evidence to suggest that eating large amounts of red and processed meats (more than 90g per day) can increase your risk of developing bowel cancer. By reducing your portion size and alternating with different meats, fish and beans you can reduce your risk.

Red meat includes beef, lamb and pork. Processed meats include ham, bacon, sausages and salami.

The following table will give you some ideas on how to make changes:

<table>
<thead>
<tr>
<th>Food/portion size</th>
<th>Alternative food/portion size</th>
</tr>
</thead>
<tbody>
<tr>
<td>3-4 slices roast beef/lamb/pork</td>
<td>Have 2 slices</td>
</tr>
<tr>
<td>Cooked breakfast with 2 sausages and 2 rashers of bacon</td>
<td>Have 1 sausage and 1 rasher of bacon, have extra beans/tomatoes/mushrooms and eggs</td>
</tr>
<tr>
<td>Quarter pounder beef burger</td>
<td>Order a standard size burger with cheese</td>
</tr>
<tr>
<td>Ham/beef/corned beef sandwich</td>
<td>Swap to chicken/egg/fish fillings a couple of times a week</td>
</tr>
<tr>
<td>Chilli con carne or spaghetti bolognese made with minced beef</td>
<td>Add extra veggies and beans or make with a vegetarian alternative such as soya mince or Quorn</td>
</tr>
<tr>
<td>8oz steak</td>
<td>5oz steak</td>
</tr>
<tr>
<td>Lamb curry</td>
<td>Chicken curry</td>
</tr>
<tr>
<td>Steak pie</td>
<td>Chicken or vegetable pie</td>
</tr>
<tr>
<td>Meat based meals every day</td>
<td>Try 'meat free Monday’ – why not try a new recipe using fish or beans/lentils or try a soya or Quorn meat alternative?</td>
</tr>
</tbody>
</table>

**Making Healthier Choices:**

- Choose lean meat and cut off any visible fat from meat before cooking
- Remove the skin off chicken before cooking
- Reduce your intake of red meat (beef, lamb, pork) to once or twice per week
- Reduce your portion size of red meat and processed meats
- Try alternative cooking methods such as grilling or baking
- If you choose to fry, use a non-stick frying pan so you do not need to add any oil and drain off any excess fat
- Have poached or scrambled eggs instead of fried
- Include more beans and lentils
- Aim for 2 portions of fish per week, 1 of which should be oily

You can still include red and processed meats in your diet—especially as red meat is a great source of iron; just consider how often you eat it.
Milk and Dairy Foods

These foods contain calcium, protein and vitamins A+D. Calcium is essential for bone health. It is recommended that people with CF have almost twice the recommended daily amount of calcium (1000 - 1200mg/day).

What foods are included?

- Milk
- Cheese
- Yogurts

Making Healthier Choices

- Low fat dairy products often contain more calcium than the full fat varieties
- Use semi skimmed or skimmed milk instead of full fat milk
- Choose low fat yogurts instead of thick and creamy
- Use a stronger flavour cheese, so you need to use less of it
- Grate cheese rather than slicing it
- Use a reduced fat cheese or cottage cheese

What dairy foods should I choose if I want to gain weight?

- Full fat ‘blue top’ milk
- Full fat yogurts, often labelled as ‘luxury’
- Full fat Greek yogurt
- Add grated cheese onto foods such as pasta, mashed potato and vegetables

How can I achieve 1000mg calcium each day?

- 1 pint of milk
- 1 yogurt
- 30g / small match-box sized piece of cheese

How can I meet my calcium requirements if I do not like dairy foods?

- Sardines
- Pilchards
- Dark green leafy vegetables e.g. broccoli
- Nuts such as almonds
- Baked beans
- Some breakfast cereals are fortified with calcium e.g. Cheerios
- Calcium enriched soya milk

Alternatively, your dietitian or doctor may recommend a calcium supplement such as Calcichew or Adcal caplets
Foods High in Fat and Sugar

Foods that are high in fat and sugar contain a lot of calories and eating these foods often will contribute to weight gain.

High fat foods such as biscuits, cakes and pastry also contain saturated fats. Saturated fats are the ‘bad’ fats which can contribute to a high cholesterol and heart disease. The majority of people with CF do not have raised cholesterol levels as they do not absorb fat in the diet that well, but the foods that contain saturated fat are high in calories and it is best to reduce your intake of these foods if you are trying to prevent your weight increasing or if you are trying to lose weight.

Sugary foods especially sweets and sugary drinks contain lots of calories without the benefits of any other nutrients such as vitamins or minerals. Having lots of these in between meals can lead to tooth decay.

Foods high in fat/sugar:

- Crisps
- Chocolate
- Biscuits
- Cakes
- Takeaways
- Full fat milk
- Cream
- Cheese
- Sausages
- Pastry
- Full sugar drinks e.g. cola, lucozade
- Sweets
- Ice cream
- Nuts

Ways to reduce your fat & sugar intake:

- Grill, bake or poach foods instead of frying
- Reduce the amount of oil used in cooking, if you must use it try a spray oil
- Remove visible fat and skin off meats before cooking
- Use reduced fat cheese and grate it rather than slicing it
- Use reduced fat margarines instead of butter e.g. Flora Light, Bertolli Light
- Save foods such as crisps and chocolates for treats instead of having them every day
- Try diet or sugar free drinks instead of full sugar
- If you are hungry snack on fruit or vegetables. Why not try cherry tomatoes, sticks of raw carrots, pepper and cucumber
Should I eat more of these foods if I want to gain weight?

Foods high in fat and sugar have a lot of calories which can help with weight gain and can still be eaten, but consider choosing healthier high calorie foods more often:

- Nut butters – try peanut or cashew nut butter on toast or apple slices dipped in nut butter
- Nuts – all varieties contain the ‘healthier’ fats and are good for calories
- Not keen on regular salted or unsalted nuts? Why not try the flavoured nuts such as sweet chilli, salt + vinegar and spicy chilli
- Olives – great as a snack or added into salads, pasta dishes and pizza toppings
- Add some mixed seeds (e.g. pumpkin, sunflower, flax) to salads, soups cereals or just have as a snack with dried fruit + nuts
- Hummus – with toast, pitta bread, crisps or vegetables such as pepper and carrots
- Avocados make a great addition to sandwiches and salads
- Add an olive oil based margarine to potatoes, vegetables and sandwiches. It contains the same amount of calories as butter but has more of the ‘healthier’ fats
- Make your own trail mix:

  - popcorn (salted, sweet or both)
  - nuts
  - small chocolate such as Smarties or M+Ms
  - dried fruit
  - mixed seeds (e.g. pumpkin, linseeds, sunflower seeds)
  - mix all the ingredients together in a bowl. Take a portion out with you to college or work to snack on during the day

To try to avoid sugary drinks and sweets if you want to gain weight. These provide ‘empty calories’ - in other words they do not provide any nutrients for a nutritious diet.
Saturated and Unsaturated Fats

Fat is high in calories. Although fat contains a lot of calories it is essential for a healthy balanced diet and provides the fat soluble vitamins A, D and E.

There are 2 types of a fat – saturated and unsaturated. Saturated fat can lead to a high cholesterol level which can contribute to an increased risk of heart disease. However, if you have cystic fibrosis, it is unlikely you will have a high cholesterol level particularly if you take pancreatic enzymes, as you do not absorb fat from your diet very well.

What foods contain saturated fats?

- Butter
- Lard
- Cream
- Cakes, biscuits, crisps
- Pies, pastry
- Cheese
- Ice cream

Unsaturated fats are monounsaturated and polyunsaturated. These types of fat are the ‘healthier’ types of fat. However they still contain the same amount of calories as all other types of fat so if you want to lose weight, you need to reduce the total amount of fat in your diet.

What foods contain unsaturated fats?

- Oily fish e.g. mackerel, salmon, trout, sardines
- Nuts and seeds
- Avocados
- Cooking oils such as sunflower, rapeseed, olive
- Olive oil and vegetable oil based spreads e.g. Bertolli, Flora

How can I include more unsaturated fats in my diet?

- Snack on nuts and seeds instead of crisps and biscuits. Try almonds, walnuts, Brazil nuts, pumpkin seeds and sunflower seeds
- Add olives to salads or pasta dishes or just have them as a snack
- If using any fat to cook use vegetable oil or olive oil instead of butter or lard
- Add avocados to salads and sandwiches or have guacamole as a dip
- Have oily fish once a week instead of meat
- Have peanut butter on toast for breakfast

I’ve read that coconut oil is good for health. Is this true?

Coconut oil is very high in saturated fat – even more so than butter. Currently, there is not enough evidence to suggest coconut oil has any benefits on our health. Therefore, it is recommended we replace saturated fats with unsaturated fats into our diets.
Understanding Food Labels

Reading food labels can be confusing.

To identify if a food you are eating is high or low fat or sugar, you need to look at the nutritional information ‘per 100g’.

Use the table below for guidance

<table>
<thead>
<tr>
<th>Per 100g</th>
<th>Low – healthy choice</th>
<th>Medium – ok most of the time</th>
<th>High – just occasionally</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fat</td>
<td>3g or less</td>
<td>3.1-0g</td>
<td>More than 20g</td>
</tr>
<tr>
<td>Sugar</td>
<td>5g or less</td>
<td>5.1-15g</td>
<td>More than 15g</td>
</tr>
</tbody>
</table>

Remember, when deciding how much Creon you need, you must look at the fat ‘per portion’. If you need insulin and carbohydrate count, you need to look at ‘total carbohydrates per portion’.

What about salt?

You may read in magazines or newspapers that we need to reduce our salt intake for health reasons. Remember, this isn’t applicable to CF as you lose more salt when you sweat and this needs to be replaced, either with salt tablets or adding salt to your food.

If you have any concerns please discuss this with your dietitian.

Don’t Forget Fluids!

Most people need 6-8 cups of fluid per day to stay hydrated. Drinking plenty of fluids can also make it easier for you to clear sputum. Avoid full sugar drinks as they do not provide any nutrition and contain large amounts of sugar

Try:

♦ Water – still or sparkling
♦ Add flavour to water by adding fruit such as oranges, lemons, lime or even add a few sprigs of mint
♦ Sugar free squash
♦ Diet fizzy drinks
♦ Milk
♦ Tea and coffee
What if I am unwell and lose my appetite?

If you become unwell and lose your appetite it is essential you start to eat more high calorie foods and snacks until your appetite is back to normal. This will help minimise any unintentional weight loss.

- Have small frequent meals and snacks rather than 3 large meals a day. Large meals can be off putting when you are not feeling very well.
- Have nourishing drinks such as milk, milkshakes and nutritional supplements
- Have lots of ice cream, custard or cream with fruit and puddings
- Add butter or margarine to potatoes and vegetables
- Use full fat milk for drinks and cereals

Once you are feeling better and if your weight is still in the healthy range you can start to make those healthier choices again.

Contact us:

If you have any questions or concerns regarding this information, please contact one of our CF Dieticians: on 0121 424 1796 (direct line with answer phone) or mobile 07794 375776.
Or 0121 424 2000 Bleep 2425

Or email:
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Our commitment to confidentiality

We keep personal and clinical information about you to ensure you receive appropriate care and treatment. Everyone working in the NHS has a legal duty to keep information about you confidential.

We will share information with other parts of the NHS to support your healthcare needs, and we will inform your GP of your progress unless you ask us not to. If we need to share information that identifies you with other organisations we will ask for your consent. You can help us by pointing out any information in your records which is wrong or needs updating.

Additional Sources of Information:


You may want to visit one of our Health Information Centres located in:

- Main Entrance at Birmingham Heartlands Hospital Tel: 0121 424 2280
- Treatment Centre at Good Hope Hospital Tel: 0121 424 9946
- Clinic Entrance Solihull Hospital Tel: 0121 424 5616

or contact us by email: healthinfo.centre@heartofengland.nhs.uk.

Dear Patient

We welcome your views on what you thought of this patient information leaflet, also any suggestions on how you feel we can improve through our feedback link below:

Patient Information Feedback email: patientinformationleafletfeedback@heartofengland.nhs.uk

If you wish to make any other comments this can be done through the links listed below:

Patient Opinion: www.patientopinion.org.uk

I want great care: www.iwantgreatcare.org (Here you can leave feedback about your doctor)

Be helpful and respectful: think about what people might want to know about our patient information and this hospital and how your experiences might benefit others. Remember your words must be polite and respectful, and you cannot name individuals on the sites.

If you have any questions you may want to ask about your condition or your treatment or if there is anything you do not understand and you wish to know more about please write them down and your doctor will be more than happy to try and answer them for you.