Nutrition & Chronic Obstructive Pulmonary Disease
What is Chronic Obstructive Pulmonary Disease (COPD)?

C = CHRONIC means... won’t go away
O = OBSTRUCTIVE means... partly blocked
P = PULMONARY means... in the lungs
D = DISEASE means... sickness

Chronic Obstructive Pulmonary Disease (COPD) is a disease that makes it hard to empty air out of your lungs. This is because the airways get smaller leading to airflow obstruction. This can result in shortness of breath or tiredness because you are working harder to breathe.

COPD is a term used to include chronic bronchitis, emphysema or a combination of both conditions.

Some common symptoms of COPD include:
- Shortness of breath, called dyspnoea, and an increased effort to breathe.
- Increased mucus production and frequent clearing of the throat.
- Chronic cough and chest tightness.
- Wheeze.
- Frequent chest infections, particularly in winter.
- Anxiety and sometimes depression, often due to breathlessness.
- Reduced physical fitness and muscle strength.
- Weight gain or weight loss.
- Changes in body composition, including loss of muscle strength.

Why is it important for people with COPD to eat well?

Good nutrition plays an important role in the management of COPD. It won’t cure COPD, but it can help you feel better, make your body stronger and help to fight infections.

A healthy nutritious diet:
- Provides energy including the energy you need to breathe.
- Promotes a strong immune system to help you prevent and fight infection.
- Helps you maintain a healthy weight – if you are overweight, your lungs and heart have to work harder, which can make breathing more difficult. If you are underweight or not eating enough, you will feel tired and this can make it more difficult to do everyday things. You may also be prone to infections.

By choosing a wide variety of nourishing foods you are getting all the building blocks or nutrients needed for health and wellbeing. There are no good or bad foods, but how you combine them together each day and each week is important.
How can COPD affect diet and nutrition?

For people with COPD, maintaining a healthy weight is very important. If people with COPD are very overweight, their heart and lungs have to work harder to supply oxygen to the body. Likewise, losing too much weight and becoming nutritionally compromised can make people with COPD more at risk of infection.

WHAT IS A HEALTHY BODY WEIGHT?

Using the graph at the back of this booklet, it is possible to work out an individual’s Body Mass Index (BMI), which is based on their weight and height. This indicates whether a person is underweight, overweight or within a healthy weight range. When someone has COPD, it is important to be aware of their weight, and any weight changes. If concerned, seek advice from your doctor or nurse.

WEIGHT GAIN

People with COPD who are very overweight may become more short of breath during activities, such as walking up stairs or carrying the groceries. Increased weight adds to the body’s oxygen demands. Carrying additional body weight also increases the risk of high blood pressure, high cholesterol and diabetes.

Some medication taken for COPD, such as steroids, may cause an increase in appetite and result in a person eating more than usual. This may lead to weight gain and can be a concern if it causes the person with COPD to become very overweight.

Crash dieting is unhealthy, especially in COPD. Any weight loss should be done gradually through sensible healthy eating and ideally in combination with increased physical activity.

WEIGHT LOSS

People with COPD may struggle to eat enough and begin to lose weight. They may also notice they are losing strength in their muscles or that their body shape is changing. Be aware of visual signs of weight loss, for example jewellery and clothes becoming looser. Some of the causes of weight loss in people with COPD are:

- Poor appetite – you may have noticed that you have less interest in food. This may be for several reasons. When people with COPD are unwell or have a chest infection, this can reduce your appetite. You may also find that you are feeling full from only small amounts of food. Some people also experience changes in the way food tastes, which can affect their appetite.

- Shortness of breath – chewing and swallowing can feel more difficult for someone with shortness of breath to breathe. As a result, you may begin to eat less, or very slowly.

- Tiredness – some people with COPD may feel that they do not have enough energy to shop, cook or prepare their own meals. You may skip meals or rely on convenient options instead.

- Increased energy needs – people with COPD often need to eat more than someone without COPD because their body has to work harder to breathe and fight infections.

- Dry mouth – some treatments for COPD, including oxygen, nebulisers and inhalers, can cause a dry mouth. This can make chewing and swallowing more difficult and can sometimes lead to taste changes, all of which can make food less appealing.
Eating well for people with COPD

Eating a healthy, balanced diet is vital for maintaining good health. This includes eating foods from all of the different food groups, to provide the body with the nutrients it needs.

PROTEIN
Proteins are the body’s building blocks and are essential for growth and repair. Protein helps us to maintain our muscle mass, including those muscles that help with breathing.

- Foods that provide us with protein include: meat, chicken, fish, eggs, dairy products (milk, cheese, yogurt), tofu, beans, lentils and nuts.
- Try to include a portion of protein with at least two meals during the day, e.g. lunch and dinner.

STARCHY FOODS
Starchy foods, also called carbohydrates are an excellent source of energy.

- Starchy foods include: potatoes, bread, pasta, rice, cereals.
- Always include a starchy food at each meal.
- Try to choose wholegrain varieties as these are a good source of fibre which can prevent constipation.

FRUITS AND VEGETABLES
Fruits and vegetables are an important source of vitamins and minerals, which help support your immune system.

- Aim to eat at least five portions of fruit and vegetables a day.
- You can use fresh, frozen, or canned – they all count.

DAIRY FOODS
People with COPD can sometimes have weaker bones which can be made worse by medications and/or reduced physical activity. Dairy foods contain protein and calcium, which help to maintain normal bones.

- Dairy foods include: cheese, milk, yogurt, fromage frais, custard.
- Aim to include a serving of dairy food in the diet three times per day. A serving size is equal to:
  - A glass of milk (200ml)
  - A matchbox size of cheese (125g)
  - A carton of yoghurt (125g)
- If you are underweight or need to gain weight, opt for full fat or high energy options. If you are overweight or obese and weight loss is recommended, stick to low fat or skimmed options.

VITAMIN D

- Vitamin D is also vital for bone health as it helps the body to absorb calcium.
- The best source of Vitamin D is sunlight, but wearing sun protection creams reduces Vitamin D production.
- Dietary sources such as eggs, oily fish and fortified milks are even more important.

HIGH ENERGY FOODS

- High energy foods are those that are high in fat (e.g. chips, fried foods, meat pies), high in sugar (e.g. fizzy drinks, sweets), or high in both sugar and fat (e.g. chocolate, cream cakes).
- These foods may be helpful if you are trying to gain weight and can be included in your diet. However, if you are trying to lose weight, they should be used sparingly.
- These types of foods are generally not recommended if you have high cholesterol or diabetes.
Tips to encourage eating

When someone with COPD is struggling to eat enough to get the energy and nutrients they need to maintain their weight and strength, the following tips may help to increase their appetite and overcome symptoms.

POOR APPETITE

- To decrease shortness of breath at mealtimes, try to rest and relax before and after meals, but don’t lie down after meals.
- Encourage a little and often approach – small meals and snacks frequently throughout the day, rather than three large meals.
- Try not to overload the plate with too much food and have a gap between the main meal and dessert.
- Be flexible with mealtimes and make the most of ‘good eating times’ – different people will have more of an appetite at certain times of the day, whether this is at breakfast or teatime.
- Ensure there are some convenient foods on standby in the freezer or cupboard for quick and easy meals. Good cupboard ideas include: long life milk, savoury snacks, biscuits, rice puddings, corned beef, baked beans, macaroni cheese, soups, tinned puddings, custard.
- Avoid drinking with meals, instead drink fluids one hour before and one hour after a meal. This will decrease the amount of food in the stomach at any one time.

COPING WITH A DRY MOUTH

- Try softer foods or moist foods, e.g. choose minced beef rather than individual pieces of meat, and provide plenty of sauce or gravy.
- Make foods easier to chew e.g. cook vegetables until they are soft and try dipping breads in liquids, such as soups or casseroles.
- Try sucking on fruit sweets, or ice cubes made with fruit juice. Chewing on sugar free gum can also help to stimulate saliva production.
- If a dry mouth is causing soreness or problems with eating, speak to your doctor or nurse. Products that help people produce saliva are available on prescription.
- If you notice increased difficulty swallowing or frequent coughing during meals speak to your doctor or nurse.

COPING WITH TASTE CHANGES

- Good mouth care can help, including cleaning teeth/dentures, using a mouthwash and flossing.
- Try new foods, including sharp or spicy foods, which have a stronger taste, or different seasonings and sauces.
- If you have ‘gone off’ a particular food, try it again after a couple of weeks.

Losing too much weight and becoming nutritionally compromised can make people with COPD more at risk of infection.
Tips for gaining weight or improving nutritional intake

When someone with COPD is struggling to eat enough to get the energy and nutrients they need, the following tips may help to improve their nutritional intake:

- Always choose full fat or high energy options, e.g. whole milk and butter.
- Make fortified milk by whisking 2-4 tablespoons of milk powder into one pint of milk; use this in place of regular milk and add to drinks, puddings, cereals, soups and sauces.
- Add grated cheese to foods such as mashed potato, scrambled eggs and baked beans.
- Add cream to sauces, soups, desserts, cereals and porridge.
- Fortify salads with healthy fats such as olive oil, avocados, nuts, seeds or olives.
- Add butter or olive oil to vegetables, potatoes, pasta, scrambled eggs and bread.
- Add honey, dried fruit and jams into foods such as porridge and milk puddings.
- Consume nourishing drinks based on milk, such as Complan, to increase energy and protein intake. These are also available as ‘ready to drink’ options, which are convenient at home or out and about.

Tips for losing weight and eating a balanced diet

A gradual weight gain, which may be due to reduced physical activity and/or medications can become a frustrating problem. The following tips can you manage or lose weight:

- Replace high fat and sugary snacks with healthier alternatives, such as nuts, fresh or dried fruit, cereal bars or wholegrain crackers.
- Avoid frying foods - grill, bake, steam or microwave instead.
- Modify recipes to include low fat ingredients, such as lean cuts of meat, chicken breast without the skin and low fat dairy options.
- Choose wholesome or wholegrain breads and cereals such as porridge.
- Have approximately 5 portions of fruit and vegetables each day. Eat a variety of different types and colours to ensure adequate vitamins and minerals are obtained.
- Watch portion sizes and suggest serving food on a smaller plate – sometimes our eyes are bigger than our stomachs!
- Encourage everything in moderation – there is no need to cut out any food group, as long as you control portions.

**EXERCISE**

Exercise is good for everyone as it contributes to our general wellbeing. In people with COPD, exercise is very beneficial as it strengthens the breathing muscles. This means you will not need to work as hard to get air into your lungs.

Exercise will also give you a feeling of well being and help you sleep better at night. It can also help with feelings of anxiety and mild depression.

Exercise programmes need to be discussed with your doctor/respiratory nurse or physiotherapist before commencing. They will advise you or refer you to a suitable programme.
What happens if food is not enough?

Eating a healthy, balanced diet plays a key role in keeping the body strong. Living with COPD can put a strain on the body. Sometimes it isn’t possible to get adequate nutrition from food alone, which can weaken the body further. In these cases medical nutrition can help to provide vital nutrients to help support the body.

In recent years, the evidence base to support the use of medical nutrition in people with COPD, in particular around the use of oral nutritional supplements, has been growing. Where people with COPD are nutritionally compromised, functional improvements, such as walking distance, can be seen when weight gains are above 2kg.

WHAT IS MEDICAL NUTRITION?

Medical nutrition has been specifically designed for those who find it difficult to get adequate nutrition from a normal diet alone. Medical nutrition in the form of oral nutritional supplements can provide additional energy (calories), protein and vitamins and minerals. These drinks and puddings are particularly helpful for those living with a medical condition, recovering from an illness or operation, or those who have become weak and frail over time.

WHAT ARE THE DIFFERENT TYPES OF ORAL NUTRITIONAL SUPPLEMENTS AVAILABLE?

Nutritional supplements are available in a variety of styles including milkshake, juice, yogurt and pudding style and in sweet and savoury flavours. Ask your pharmacist for help in finding the best one for you.

High protein, high energy, low volume milkshake style drinks are sometimes recommended for those who have COPD. Many people find it difficult to finish large volumes of drinks when they have a poor appetite. Oral nutritional supplement drinks that are low volume and ready to drink ensure people with a poor appetite are able to get the calories and protein they need.

Speak to your GP

If you feel that you are struggling with a normal diet, the practical tips within this leaflet can help improve your nutritional intake with food. You could also ask your pharmacist whether an over the counter product in a powdered format, such as Complan, is a suitable option alongside normal foods and drinks.

However, should you continue to struggle, please speak to your GP or other healthcare professional about your concerns and whether medical nutrition is right for you. Many of these products are available on prescription in a range of flavours and formats.

Medical nutrition products can help with nutritional intake but it is important to have the recommended quantities each day. Most people find that taking small amounts regularly throughout the day helps to achieve this. Once opened, you can store your nutritional drink in the fridge for up to 24 hours.

FURTHER READING

• www.indi.ie/fact-sheets
• www.ndc.ie
• Department of Health/Health Service Executive (2012) Your Guide to Healthy Eating Using the Food Pyramid for Adults and Children Over 5 Years of Age www.health.gov.ie
• www.safefood.eu
About COPD Ireland

COPD Support Ireland is a charity set up to support all those living with chronic obstructive pulmonary disease (COPD). We are Ireland’s only national COPD support and advocacy body, bringing together local support groups from around the country, to help those living with, and caring for someone with, COPD. We were founded in 2013 by patients working with the support of the Irish Thoracic Society, COPD National Clinical Programme, and health care professionals.

Visit us at our website to join us, help us, or access more resources: www.copd.ie

Call COPD Support Ireland for expert information and advice: +353 283 3500 or email info@copd.ie.

About Nutricia Advanced Medical Nutrition

Nutricia Advanced Medical Nutrition is the market leading provider of medical nutrition products and services in Ireland. Whether managing long-term conditions or recovering from illnesses, Nutricia’s products and services are specially designed to improve health outcomes, making a difference to the lives of people both in hospital and at home. Further information can be found at www.nutricia.ie or by calling the Nutricia Advanced Medical Nutrition helpline on 1800 923 404.

COPD Ireland & Nutricia

COPD Support Ireland is working in partnership with Nutricia Advanced Medical Nutrition to help improve understanding about nutrition and COPD.

Body Mass Index (BMI)

HOW TO CALCULATE YOUR BMI

Draw a line across from your weight, and up or down from your height. Where these two lines cross is your body mass index.

BMI gives a general idea of your nutritional status. However, some people who look overweight or obese, can become nutritionally compromised through unintentional weight loss and/or a poor appetite. If in doubt, speak to your doctor or nurse.
This leaflet has been adapted from resource materials designed through a partnership between Nutricia and Carers UK.