



Digestive Cancers Europe

# Dietary Advice Booklet for Patients with Oesophageal or Gastric Cancer

# Prologue

**The challenge for those of us who have experienced oesophageal or gastric cancer and have had an oesophagectomy is how to ensure we have adequate nutrition, because dietary needs change radically during the entire cancer journey.**

There is a dearth of self-help books specifically targeting people with oesophago-gastric cancers especially during the long period of recovery after surgery. After my own oesophagectomy, though I received regular dietary advice on how to manage food and drink, I could not find a comprehensive guide such as this to support me through the ordeal of pain and nutrition difficulties. Each patient seems to tolerate and react differently to food intake, which can significantly affect their quality of life. When a patient is experiencing a plethora of symptoms and side effects of treatment, it is difficult to know what type of foods might help with which symptoms.

This booklet is an informative and a useful addition to address the problem of nutrition in individual patients, covering all aspects of dietary needs of patients, from pre-surgery through to recovery, when boosting energy levels is crucial. It also deals with the most critical aspect of building and maintaining ideal weight both for pre- and post-operative management.

This educational booklet developed by Digestive Cancers Europe is a significant milestone and will be invaluable to dieticians, patients and their family carers.

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# About this booklet

This booklet aims to help you eat well before, during and after your treatment for **oesophago-gastric cancer**.

Eating and drinking is something we do every day of our lives without ever really thinking about it. It provides our bodies and minds with the fuel we need to function but should also be a pleasurable, sociable and enjoyable part of our lives and daily routine. For some, the symptoms caused by oesophago-gastric cancer or side effects of treatment can significantly affect this. You may have to make changes to your food choices and dietary habits, and you may have to think about what you eat and when you eat a lot more than usual.

You may be having trouble eating your normal diet but if you can improve your nutrition and stay well-nourished you will cope better with your treatment and recover better afterwards.

This booklet will give you some practical tips and suggestions on how to cope with some of the symptoms and side effects you may experience and how to make the most of what you are able to eat.

Remember everyone is different. Different people will have different needs, dietary preferences and nutritional concerns, so it's important to find what works for you. The advice and tips in this guide are merely suggestions and general principles. More specific advice will be available from your **healthcare team**.

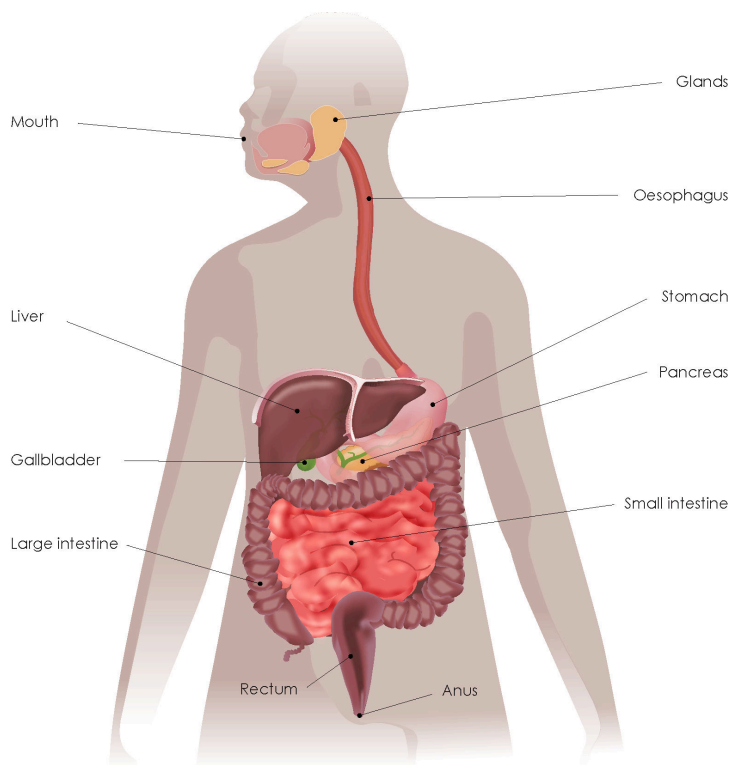
**Eating should be as important as any other treatment or medication you are receiving. Eating well and improving your nutrition is a positive step that you can take to help get through your treatment and support your recovery.**



# How does oesophago-gastric cancer affect diet & nutrition?

The **oesophagus** and **stomach** are important parts of the digestive system, also known as the **gastrointestinal (GI) tract**. The oesophagus is a tube running through the middle of your chest taking food and drink from your mouth to the stomach. The stomach is like a bag that collects the food and holds it, whilst it is mixed with acid and broken down, before releasing it into the **small intestine**. The stomach acts as a reservoir so you can eat a large meal and the bag stretches to accommodate it.

Cancer stops the oesophagus or stomach from functioning properly. If the tube (oesophagus) becomes narrowed the food cannot pass easily into the stomach and it can feel like it is getting stuck. Sometimes the food will need to come back up. If the bag (stomach) cannot stretch and accommodate the food, it will make you feel full after eating a smaller amount than usual or cause you to feel sick.



An anatomical illustration of the digestive system

**Symptoms** from oesophago-gastric cancer leading to eating problems include:



Difficulty swallowing  
(**dysphagia**)



Pain when swallowing  
(**odynophagia**)



Feeling full after a smaller  
amount of food than  
normal (**early satiety**)



Loss of appetite  
(**anorexia**)



Feeling sick (**nausea**)  
or being sick (**vomiting**)

These problems can mean that the volume or type of food that you are able to eat becomes different to what it used to be. You might need to have smaller meals or change the texture of the food you eat. You might also find food less enjoyable and mealtimes more challenging.

Treatment for cancer of the oesophagus or stomach involves chemotherapy, radiotherapy, surgery or often a combination of these treatments. Although these treatments are designed to help manage or remove the cancer, they can also cause symptoms that further impact on your diet and enjoyment of food. Side effects, such as taste changes, nausea, pain on swallowing (odynophagia) or loss of appetite, can make getting enough nutrients a huge challenge.

Oesophago-gastric cancer and its treatment can affect how and what you eat. That in turn can affect your weight, strength, fitness, ability to cope with treatment and subsequently the success of your cancer treatment.



**Unintentional weight loss is a common symptom of oesophago-gastric cancer. Research suggests 60–85% of patients lose weight prior to, during or after treatment.**

# Why is nutrition important?

Nutrition has an important impact on the ease and success of your treatment and recovery. What you eat and how much you eat can help you do better during and after treatment.

## Eating the right balance of calories and nutrients can help you:

- feel stronger and have enough energy and strength to prepare your body for treatment or surgery
- tolerate cancer treatments better with fewer side effects
- avoid treatment dose reductions and delays to treatment
- fight off infections
- speed up your recovery after treatment with less risk of complications
- spend less time in hospital and have less care and support needs when you leave hospital
- improve your quality of life

## What does 'eating well' mean?

Eating well means choosing a wide variety of **nutritious** foods every day that provide enough energy, and a good balance of **protein** and other nutrients, to maintain a healthy weight and help your body cope with, and recover from, treatment.

When you are experiencing symptoms from the cancer or side effects from treatment this may require that you make changes to your dietary choices and eating habits. If you are struggling to maintain your weight this may mean including more high-calorie foods in your diet. If you are struggling to get solid food down it may mean choosing softer foods. There is no one diet that suits everyone and you may notice your dietary needs change during your treatment and recovery.

**Focusing on good nutrition can help you cope better and recover faster.  
This could improve your chances of survival.**



# Who can you ask for advice?

If you find it hard to eat well or keep your weight where it should be, talk to your **healthcare team** or to a **dietitian**. They can recommend specific tips to help improve your dietary intake and maintain your weight.

## Dietitians

Dietitians are experts in assessing the dietary needs of people who are ill. They can review your diet and they will take into account any specialist dietary requirements you have. They can advise you on which foods are best for you and whether any additional nutritional support is required such as nutritional supplements or tube feeding.

If possible, find a dietitian who works specifically with cancer patients or people with oesophago-gastric cancer, as they will be able to provide support specific to your needs and the problems relating to your cancer.

In some European countries the term nutritionist-dietitian, nutritional therapist or nutritionist may be used. The regulation of dietitians and nutritionists differs between European countries. Speak to your healthcare team about finding appropriate support.

## Patient organisations

There are some local and national patient organisations for people with oesophago-gastric cancer or other digestive cancers that provide information, practical help and emotional support to patients. People who have already experienced the cancer and treatment that you are undergoing or about to undergo can be a valuable source of information and provide tips for managing challenging times in your treatment.

Speak to your healthcare team or have a look at Digestive Cancers Europe [member organisations](#) to discover local groups and contact details.

# Weight matters – does body weight affect cancer treatment?

## Is it OK to be underweight or unintentionally losing weight?

People who are underweight or losing weight (without trying) tend to experience more side effects from cancer treatment and take longer to recover. Weight loss can also be upsetting and a visible reminder of your illness.

Put simply, you lose weight if you do not take in enough energy to fuel your body.

The simple solution is to increase the calories you are taking in. But with symptoms from the cancer or side effects from treatment, it is rarely that simple to achieve this and can feel like an uphill battle.

The exact amount of energy (or calories) a person needs each day varies depending on their activity levels, age, build and stage of treatment. An adult man needs about 2500 calories and an adult woman needs about 2000 calories. If you do not get enough energy, your body will take from its energy stores and muscles, you lose weight and are at risk of becoming malnourished.

## What is malnutrition?

Malnutrition in people with cancer occurs when the food you eat provides you with less energy and protein than your body needs. Poor dietary intake may lead to weight loss, weakness from muscle loss, fatigue, mood changes and/or vitamin and mineral deficiencies. These issues can impact upon your quality of life, lead to breaks in treatment and slow recovery.

## Causes of malnutrition

Malnutrition can result from a variety of causes in people with oesophago-gastric cancer, including:

- Changes in digestion and metabolism because of the cancer, such as blockage of the oesophagus or following surgery.
- Side effects from treatment such as nausea, altered taste, changes in bowel habits or sore mouth that can affect your appetite or ability to eat.
- Molecules produced as a result of cancer, which may lead to loss of appetite, muscle, and physical function.
- Depression associated with a cancer diagnosis, which leads to a lack of motivation to eat.
- Dietary changes in an unhealthy or unsupervised way, for example fad diets or exclusion diets.

## Beware of malnutrition

Malnutrition can happen at any body size or weight – even in obese adults – and can have a serious impact on your health and treatment. You can become malnourished over time if you don't eat enough.

Speak to your healthcare team or dietitian about malnutrition if you:

- have recently lost weight without trying
- have lost your appetite
- find it difficult to eat for any reason
- are feeling weak or tired
- have problems with swelling or fluid accumulation

Malnutrition is not an inevitable consequence of cancer. With the right support and changes to your diet, you can limit the impact of dietary problems on your treatment and recovery.

See the section **Achieving healthy weight gain if you are underweight or losing weight** for practical tips and suggestions.



## Is it OK to be overweight?

Being overweight is not good for your health and can impact your cancer treatment, for example by making surgery more complicated. If you are overweight, careful weight loss can help to improve the outcome of your treatment.

Calculating your **Body Mass Index (BMI)** and waist circumference can help to establish if your current weight is a problem.

### BMI classifications

BMI is calculated by dividing your weight in kilograms by your height in square meters.

$$\text{BMI} = \text{weight (kg)} / \text{height (m)}^2$$

*For example: If you are 175 cm (1,75 m) in height and 75 kg in weight, you can calculate your BMI as follows:  $75 \text{ kg} / (1,75 \text{ m})^2 = 24,5 \text{ kg/m}^2$*



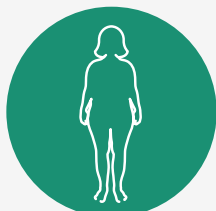
#### Underweight

Less than 18,5



#### Healthy weight

18,5–24,9



#### Overweight

25–29,9

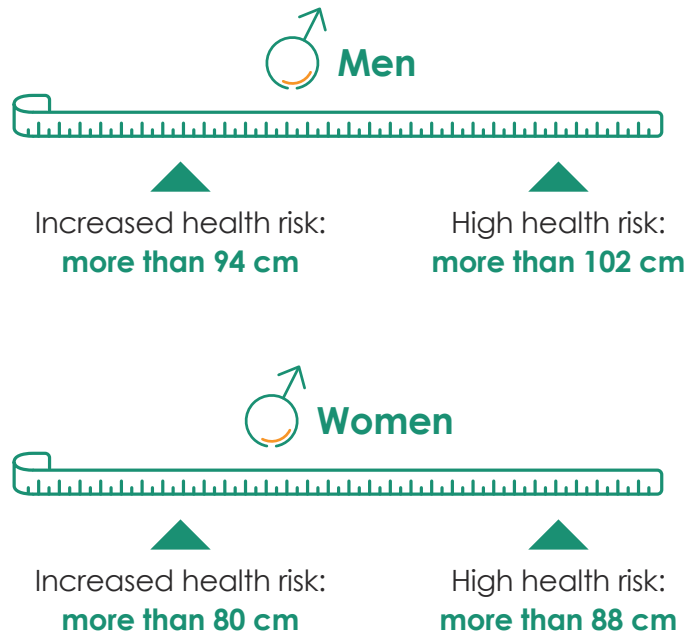
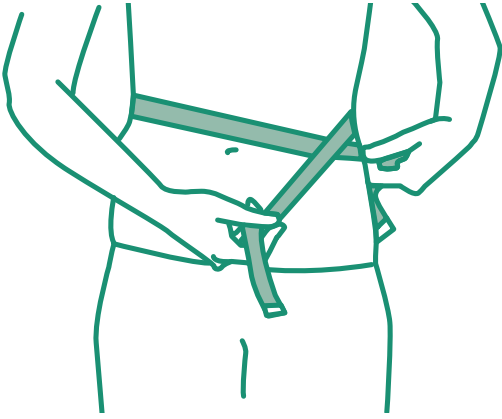


#### Obese

30 and above

## Waist circumference

Measure your waist half-way between the bottom of your ribcage and the top of your hip bone with the tape measure parallel to the floor. You must be breathing out when you measure.



Knowing your BMI and waist circumference can help you make the right changes to your diet, but large amounts of unintentional weight loss can also affect your muscle mass and strength, so it should be avoided.

**If you fall into the overweight or obese category or have a waist circumference indicating increased or high health risk, losing weight in a healthy way will help.**

Look at the section **Achieving healthy weight loss if you are overweight** for some practical advice and suggestions.

If you start to experience side effects from your treatment that lead to unintentional weight loss you may need to adjust your dietary intake to include more energy-dense and protein-rich foods. Speak to your dietitian or healthcare team if you have any changes in symptoms. Follow some of the suggestions later in this booklet to help manage these symptoms and optimise your nutrition.

### **If you are in the healthy weight category, here are some pointers:**

- try to keep your weight the same before and after your treatment by eating a consistent healthy, **balanced diet**
- eat at least five portions of a variety of fruit and vegetables every day
- include a balance of **carbohydrates**, protein and dairy (or dairy alternative) foods
- stay active
- if you lose weight during treatment (without trying) have a look at some of the tips in the section **Achieving weight gain if you are underweight or losing weight**.

# Diet & oncology treatment

Cancer treatments such as chemotherapy and radiotherapy work by stopping or slowing the growth of cancer cells, which grow and divide quickly. But these treatments can also harm healthy cells that normally also grow and divide quickly, such as those in the lining of your mouth and intestines. Damage to healthy cells can lead to side effects which can make eating and drinking a real challenge. Some side effects are temporary and improve when you finish treatment; others may last longer.

## Side effects leading to eating problems include:

- loss of appetite (anorexia)
- feeling sick (nausea) or being sick (vomiting)
- taste changes
- **diarrhoea**
- **constipation**
- pain on swallowing (odynophagia)
- sore or dry mouth

Almost everyone will have a few days when side effects from their treatment will affect their appetite or intake of food. But this rarely lasts for long and better days will follow.

See the **Practical tips for improving your nutrition** section for more suggestions on how to manage these symptoms and side effects.

Cancer treatments can also have some positive impact on the symptoms you may be experiencing due to the cancer. If you have been having difficulty swallowing (dysphagia) or feeling full after a small amount of food (early satiety) you may notice this improves once chemotherapy starts. Some people notice a difference within a couple of days and for others it takes longer.

Remember to **speak to your healthcare team if you are experiencing side effects from treatment**. They may need to adjust your treatment dose or prescribe support medication.

# Diet & surgery

Surgery for oesophago-gastric cancer involves a complex and long surgical procedure that results in the removal of all or part of the oesophagus (total or partial **oesophagectomy**) and/or all or part of the stomach (total or partial **gastrectomy**, respectively).

These procedures aim to remove the cancer but also affect the function of your gastrointestinal tract. **Your clinician should explain these surgical procedures, all possible side effects and alternatives, and you should ask any questions you may have.** You will find that after your surgery, the amount of food and drink you can manage at any one time will be less than before your operation. You may lose your appetite, food may taste different, and you may experience changes in your bowel function.

It takes time for you and your body to recover and adapt to the changes after surgery. You will need to make adjustments to your dietary habits, but in the long term you should still be able to enjoy most of the foods you ate before the surgery, just in smaller portions.

Your healthcare team and dietitian should be on hand to guide you through these changes. It can also be helpful to speak to other people who have had the surgery. Contact your local patient support group for advice and support.

## Optimising nutrition prior to surgery

An important part of having an operation is being well prepared. This means making sure you are as healthy and fit as you can be. Nutrition is an important part of this preparation. Eating well and getting the right balance of nutrition in the weeks and months before your operation will help increase your chances of having a good recovery.

Being underweight or losing weight (without trying) can increase the risks associated with surgery and slow down the rate at which you recover. It is common to lose your appetite prior to a major operation. You may be feeling anxious about the operation or still struggling with some of the symptoms of your cancer, which may be limiting your intake.

If you are underweight or losing weight it is important to take steps to improve this before your operation. Take a look at the section **Achieving weight gain if you are underweight or losing weight** for some tips and suggestions.

Being overweight or obese can also increase the risks of surgery and increase the chances of chest infections, breathing difficulties, blood clots, wound infections and poor wound healing. If you are overweight, losing just a small amount of weight prior to your surgery can help by reducing some of the risks.

If you have several months before your operation, use this time to focus on healthy weight loss by following a healthy balanced diet and doing some exercise. Rapid weight loss in the weeks before surgery should be avoided as it tends to result in muscle loss.

If you are overweight or obese see the section **Is it OK to be overweight?** and **Achieving weight loss if you are overweight** for some suggestions and advice.

## Key tips when preparing for surgery

- Ask your healthcare team lots of questions. Knowing exactly what your surgery involves, how it could affect you, how long you could be in hospital, and how soon you can expect to be up and about, will help you prepare for your operation and allay anxiety.
- If you smoke, give up smoking as soon as you can before your operation; your healthcare team can help with this.
- If you drink alcohol try to cut down or stop for a month before your operation.
- Moderate exercise and improving your fitness before an operation will strengthen muscles and improve your recovery; even a 30 minute walk every other day is a good start.
- If you have any existing health problems, such as diabetes, speak to your healthcare team to ensure they are being managed optimally; ask them if there are any steps you need to take, such as adjusting your medication.
- Plan ahead for your return home. Think about who could collect you from the hospital and ask a friend or relative to help you with tasks such as shopping, cooking and cleaning for the first couple of weeks.

If you need to improve your nutrition, gain weight, lose weight, or control your blood sugar levels before surgery, speak to your healthcare team about referring you to a dietitian who will work with you to create a nutrition plan to help you meet your goals.



## Eating & drinking after surgery

### Eating and drinking in hospital

After surgery, you will initially be kept **nil-by-mouth** or only be allowed sips of liquid until your surgeon is happy that the join in the oesophagus, known as the **anastomosis**, is healing. You will usually be able to drink normally after a few days. Your surgeons and dietitians will then advise you on how and when you can increase your dietary intake.

You will usually start with a puree or soft diet, while you are still in hospital. You may be advised to stay on this for a few weeks. Gradually, you will be able to start eating solid foods again.

As your oesophagus and stomach heal and adapt to the changes made by the surgery, you will slowly start drinking and eating. You will follow different diets as you are able to drink and eat more things.

- **Clear liquid diet:** This diet includes only liquids that you can see through such as water, tea or coffee without milk, or broth.
- **Full liquid diet:** This diet includes all the liquids in a clear liquid diet, as well as liquids that are thicker or not clear.
- **Puree diet.** This diet includes smooth or pureed textures.
- **Soft diet:** This diet includes foods that are physically soft. This means less chewing is needed to get the food into a texture that is smooth and easy to swallow.



## Tube feeding after surgery

Whilst your oral intake is so limited, you may receive some nutrition either through a **feeding tube** into your small intestine (**enteral nutrition**) or through a line that goes directly into your blood stream (**parenteral nutrition**).

If the surgeons put a feeding tube directly into the small intestine during surgery (a **jejunostomy** tube) your dietitian will prescribe a liquid nutrition, which can be digested and absorbed by your small intestine.

The tube feed may be continued on discharge to supplement your diet when you are at home. This will help you get all the protein and calories you need to have a successful recovery.

Before you leave the hospital, your dietitian will let you know which formula and supplies you will need, and they will arrange for supplies to be delivered to your home. You will be taught how to use your tube feeding pump and look after the tube. Make sure you and your caregiver feel comfortable with how it all works before you are discharged.

### **While you are in the hospital, a dietitian will manage your nutritional care.**

They will:

- check to make sure you are getting enough nutrition
- teach you about how and why you need to make changes to your diet and eating habits
- prescribe a feeding schedule and monitor how well you are getting on with it
- talk to you about using a feeding tube at home and how this is managed
- speak to your family about diet and nutrition supplies you will need at home
- be available to talk with you and answer your questions

## Small, frequent meals

After your surgery you will feel fuller much quicker than before. If you try to eat too much, you might find that you experience stomach pain, **bloating** or nausea.

In order to still get enough nutrition to support your recovery, you will need to eat smaller but more frequent meals. You may find this difficult at first, but try to eat six times a day, about every 2 hours.

When you first start eating, you may only be able to comfortably eat a very small portion (½ to 1 cup [~100–250 gr]) of food at a time. Over time, you will be able to have larger portion sizes, but initially keep them small. It may feel like you are eating all day to start with, but you will soon get used to this new routine.

The plan below shows how you can spread your meals throughout the day.



### Example of a 'small but frequent' eating plan:

<b>Small breakfast</b>	Small bowl of porridge made with whole milk (or non-dairy alternative). Add a spoonful of honey or double cream and ½ a banana
<b>Mid-morning snack</b>	Two crackers with peanut butter or soft cheese
<b>Small lunch</b>	Small portion of fish pie with vegetables topped with grated cheese
<b>Mid afternoon snack</b>	A piece of sponge cake
<b>Small evening meal</b>	Scrambled egg with two tablespoons of baked beans and grated cheese
<b>Evening snack</b>	Two crackers with butter and pâté
<b>Before bed</b>	Milky drink with a few squares of chocolate

Mealtimes can become an anxious time for you and your family. You may not feel like eating anything that is prepared for you or you may find the taste has changed. You may be exhausted and unable to prepare meals at this time. If you are the person in your family who has normally prepared the meals, it can feel strange to stand back and let someone else take charge.

Your family and friends may try to help by giving you suggestions about what to eat or by preparing a meal which they think you will enjoy. You may feel like you have let them down when you find that you are unable to eat what they have prepared.

Try not to feel guilty; maybe ask to serve your own portion or tell them that you are aiming for little and often. Try not to put too much pressure on yourself. Try and be positive about what you have managed to eat rather than worry about what you did not eat. It will get easier with time.

### Making the most of what you eat

Now that you can only eat small amounts, make the most of what you do eat. Select foods that are full of calories. This includes foods that are often thought of as being 'unhealthy' - foods such as cakes and biscuits, butter and full cream milk. Choosing these higher calorie foods will help your recovery and prevent weight loss.

Have a look at the section on **Food fortification** and **Nutritious snack ideas** for more suggestions.

#### Foods to avoid:

Textures that are not mashable on the back of a fork or which don't crumble can be harder for your new system to manage. Examples include:



Bread and stodgy pastry



Solid meat such as steak, pork chops or bacon



Uncooked raw vegetables, hard nuts, popcorn or any other food with a hard consistency



Foods with tough fibre (for example lettuce, green beans and celery)



Tough skins (for example jacket potato skin)

## Stopping your tube feed

Your dietitian will follow up with you often to see how many calories you are eating and drinking. They will help you slowly reduce the amount of tube feed you get as you are able to manage more nutrients from eating and drinking.

The goal is for you to stop having any tube feed and be able to get all the nutrients you need by following a soft diet in small, frequent meals. This usually takes a few months but may be longer if you need to have further treatment such as dilatations (for an anastomotic stricture) or chemotherapy.

When you are eating well enough to no longer need extra support, the tube will be removed.

**Remember everyone is different and recovers at a different speed.**

### Key tips for eating after surgery

- Eat small, frequent meals; ½ to 1 cup every 2 hours.
- Use a smaller plate for your main meals.
- Eat slowly. This way, you will stop eating before you get too full and feel uncomfortable.
- Chew your food well. The more you break it down with your teeth, the easier it will pass through your new system.
- Drink most of your liquids at least 1 hour before or 1 hour after your meals. This helps you avoid feeling too full and prevents dehydration.
- Aim to drink about 8 to 10 small glasses of liquid each day but sip it slowly.
- Sit as up right as possible to allow the food to move down more easily.
- Wait at least 30 minutes after a meal before having a dessert.
- As soon as you feel full, stop eating.

## In the long term

It can take a year or longer for the digestive system to adapt after surgery. Eating and drinking is not going to be the same as before your surgery. However, when you feel recovered, your weight has stabilised and you are more fit and active, it may be appropriate for you to cut back on the high-calorie food choices and focus more on a healthy balanced diet again.

This should include plenty of high-fibre foods, low in saturated fat, and more fruits and vegetables. You may still need to follow the small, frequent meal pattern. You may also be advised to continue to take a vitamin and mineral supplement.

When life starts to get back to normal, it can be easy to forget the need for small frequent meals. You might need to plan a little more about when you can take a break and have your snacks.

If you are still struggling to maintain or regain your weight you will need to continue with the high-calorie food choices.

## Dietary challenges after surgery

Surgery for oesophago-gastric cancer aims to remove the cancer but it also permanently changes the way your gastrointestinal system functions. Because of these changes, you may experience some of the problems listed below:

- loss of appetite (anorexia)
- weight loss
- dumping syndrome
- taste changes
- changes to your bowel function such as diarrhoea (loose or watery stool) or constipation (hard, difficult to pass stool)
- malabsorption (when your body cannot breakdown or use the nutrients from food)
- vitamin and mineral deficiencies
- reflux (when stomach contents come back up your throat)
- difficulty swallowing (dysphagia)

## Tracking your food intake and any problems you may experience

Keeping a record of what you eat and writing down any symptoms or problems you have, will help you make sure you are getting enough calories and identify why any problems are happening.

### Keep track of all the foods you eat and liquids you drink. Write down:

- the time you eat or drink
- the amount (portion size) and type of food or drink
- the number of calories in the food or drink

### Write down any symptoms or problems you have after eating or drinking.

- Are you feeling too full?
- Do you have pressure in your chest?
- Do you have reflux?
- Do you have pain in your abdomen?
- Do you have diarrhoea (loose or watery bowel movements)?

You can find the calorie information for packaged foods on the nutrition facts labels.

Share your list with your healthcare team or dietitian; they will help you recognise any problems and make changes.

## Loss of appetite (anorexia)

It is quite common to have lost your appetite and interest in food at some point after surgery. This can last a few weeks or sometimes years. Appetite is complex but is partly controlled by hormones produced in your stomach. As part of your stomach has been removed, it is possible you won't get the same 'brain messages' to tell you that you are hungry.

Just because you are not feeling hungry, that doesn't mean you don't need to eat. Think of food as fuel that your body needs to function. Try to eat by the clock (every 2 hours) rather than waiting until you are hungry. You might need to set a reminder, an alarm on your phone or a tick sheet on the fridge.

For more suggestions, take a look at the section **Practical tips for improving your nutrition (Loss of appetite)**.

Appetite and enjoyment of food should improve with time, and you and your family will get used to your new eating habits.

## Weight loss

Most people will lose weight at some point, and it can be very difficult to regain weight after surgery. Some people never return to the weight they were prior to their illness but find their weight stabilises at a new level. However, it is beneficial to aim to maintain your weight to aid your recovery. By eating small, frequent meals and choosing nutritious, high-calorie foods you should be able to maintain a good calorie intake. Remember to make every mouthful count.

For more suggestions, take a look at the section **Achieving weight gain if you are underweight or losing weight**.

## Tracking your weight

It is important to track your weight after surgery. Weigh yourself about every three to five days. It is best to weigh yourself around the same time each day. Make sure you are wearing the same amount of clothes each time.

If you become concerned about your weight or continue to lose weight after six months contact your dietitian or healthcare team.

## Dumping syndrome

Whilst you are encouraged to eat and drink, taking too much food or fluid in one go can sometimes cause problems. Oesophago-gastric surgery changes the normal structure and function of the stomach. Partially digested food can move into the small intestine too quickly which results in a large amount of water entering as well and changing the level of glucose (sugar) in your blood stream. This can cause you to feel unwell and is known as **dumping syndrome**.

There are two types of dumping syndrome: early and late. Early occurs immediately after eating, and the symptoms tend to include nausea, vomiting, bloating, cramping pain and diarrhoea. Late dumping occurs within one to three hours after eating and generally presents with weakness, sweating and dizziness.

### Key tips to manage dumping syndrome

- Remember to stick to a small, frequent meal pattern. Try not to overload your new system.
- Eat slowly and chew your food well.
- Drink between meals rather than at mealtimes.
- Avoid foods and drinks high in sugar, such as cordial, soft drinks, cakes and biscuits.
- Keep a record of foods that cause problems and avoid them.

Symptoms usually improve over time. If they do not, talk to your dietitian, who can help you work out how to change your meals or meal pattern to reduce the symptoms. If you still experience symptoms talk to your healthcare team about seeing a specialist doctor such as an endocrinologist.



## Taste changes

After oesophago-gastric surgery, patients often find their taste and food preferences change. It is not known what causes this, but you will find that some foods you previously liked, now taste bad. Similarly, some foods you did not like before suddenly become tasty. Experiment with different foods and flavours, you may find something new that you like.

For more suggestions take a look at the section **Practical tips for improving your nutrition – Taste changes.**

## Changes to bowel habits

In the early days after surgery, it is normal to have changes to your bowel function. A nerve, called the vagus nerve is cut as an essential part of your operation. One of the jobs of the nerve is to control bowel function and it can take time for other nerves or forms of control to take over. Diarrhoea, often in the morning, can be common. This is unlikely to be due to the food you are eating or your tube feed, unless you are eating too much, or it is caused by 'dumping' as mentioned previously.

It is also quite common to experience normal stools for a few days or weeks and then have a day or two with episodes of diarrhoea. If diarrhoea is a problem for you, speak to your healthcare team or pharmacist for advice on medications to manage this.

For more suggestions take a look at the section **Practical tips for improving your nutrition – Diarrhoea.**

Some people can become constipated after surgery. If you continue to need painkillers or **anti-sickness** drugs, also known as **antiemetics**, you will be at higher risk of constipation. Drinking extra fluid, including **dietary fibre** in your diet, such as bananas, oats and beans, and moving around more can help with this. If you have not opened your bowels for more than two days speak to your healthcare team for advice on **laxatives**.

For more suggestions take a look at the section **Practical tips for improving your nutrition – Constipation.**



## Malabsorption

Sometimes after surgery for oesophago-gastric cancer, patients experience pale, floating, or difficult to flush stools. This can be a sign that you are not digesting your food properly.

It is not known exactly why this happens. It may be that an organ, called the pancreas, is not stimulated as much so the amount of **pancreatic juice** produced is reduced. The pancreatic juice contains digestive enzymes that help your body breakdown and absorb nutrients such as fat, carbohydrates and proteins. Without **digestive enzymes**, food passes through the digestive system without being broken down and absorbed. Your body can not use the calories that you are eating, and it is likely that you will lose weight. This is called malabsorption or **pancreatic exocrine insufficiency**.

### Some of the signs of malabsorption can include:

- good appetite and food intake but with continuing weight loss
- pale stools that are smelly and difficult to flush away. Bowel movements may also be more frequent and looser than normal; this is called **steatorrhoea**
- bloating and abdominal pain after eating
- a lot of **flatulence** (wind)

If you experience these symptoms, discuss it with your healthcare team and dietitian. They may suggest a test of your stools called a **faecal elastase** test. If the problems are thought to be due to pancreatic exocrine insufficiency, they may advise you to take medication (pancreatic enzyme supplementation), which helps with digestion and absorption.

You should not try to reduce the amount of fat you are eating. This will reduce the number of calories you are taking in and result in further weight loss.

## Vitamin & mineral deficiencies

Vitamins and minerals are parts of food that your body needs to stay healthy. A vitamin or mineral deficiency is when your body does not have enough of one or more vitamins or minerals to work well.

After oesophago-gastric surgery it is harder to absorb all the vitamins and minerals you need from the food that you eat. This is due to both the surgery and some of the medications you may be taking.

Minerals you may have more difficulty absorbing include:

- **Iron:** Low iron levels can cause anaemia, which can make you feel more tired than usual and more susceptible to infections. Optimise your iron intake by including iron rich foods such as red meat, eggs, fortified breakfast cereals and oily fish. Try drinking a vitamin C rich juice (such as orange juice) with iron-rich foods, as this can help your body absorb the iron.
- **Calcium:** A lack of calcium can weaken your bones. Include in your daily diet high-calcium foods and drinks such as milk, yogurt, cheese and calcium-enriched soya milk.
- **Vitamin B12:** If most of your stomach is removed, this vitamin can no longer be absorbed from your diet. You will need to have B12 injections every three to four months for the rest of your life.

Most people will be advised to take a daily multivitamin and mineral supplement to help them get the vitamins and minerals they need. Your healthcare team may recommend routine blood tests to look at your vitamin and mineral levels and adjust your supplements accordingly.

## Reflux

**Reflux**, also known as **heartburn** or **dyspepsia**, is when food or liquids that you swallow, or digestive fluids - such as stomach acid or bile - come back up your throat into your mouth. This happens because the valve between your oesophagus and stomach was removed during your surgery. It is a common problem after oesophago-gastric surgery and occurs most commonly at night or early in the morning. The symptoms can be a burning feeling in the chest or throat, an unpleasant taste in the mouth or coughing on waking.

### Key tips to help control reflux

- Using extra pillows, a foam wedge, adjustable backrest or raising the bed head by about 10–15 cm with blocks of wood or a house brick can be beneficial. A pillow under your knees may prevent you slipping down during the night.
- Eating in the evening can cause discomfort and increase reflux at night. Avoid eating for 1–2 hours before you go to bed and have larger meals in the middle of the day.
- Taking an anti-acid medication in the evening.
- Avoiding lying flat or bending over within 30 minutes after eating or drinking.
- When bending down, try bending at your knees instead of your waist.
- Wearing loose fitting clothes around your abdomen.

If the tips above do not relieve your symptoms, let your healthcare team know as medication may help.

## Difficulty swallowing (dysphagia)

After surgery, scar tissue at the join (anastomosis) between the remaining part of your oesophagus and your stomach may make it difficult to swallow solid food or feel like there is a lump in your throat. This is called an anastomotic stricture. It can be worrying and remind you of the original symptoms but is not usually a sign that your cancer has returned. It is treated by stretching (dilating) the join during an endoscopy. This is a routine procedure but may need to be performed more than once. Do not allow the problem to persist for too long; contact your healthcare team to arrange an endoscopy and your dietitian for dietary advice.

## Eating at restaurants and social events

Food is the focus of many social events, and there is no reason you should not continue to enjoy these. Friends and family should be aware that you can only eat small portions. However, when in good company, we tend to eat more without even noticing and, for that reason, eating out with friends and family after oesophago-gastric surgery requires special attention.

### Key tips to eating out after oesophago-gastric surgery

- Select a starter as a main course or order a child's size portion.
- Choose a restaurant where you can customise your own meal or a buffet where you can make your own choices.
- Order first. When you hear what others are ordering it might be difficult to stick to your plan.
- Don't compare your portion size with that of others.
- Request to take the leftovers home. Ask for a take-out container and have it for lunch the next day.
- Don't forget that company is more important than eating. Enjoy the company and chat – the more you talk, the slower you eat.



# Diet in advanced disease

Advanced oesophago-gastric cancer is when the cancer has spread beyond the oesophagus or stomach. This may be to the **lymph nodes** or other parts of the body, such as the liver, lungs or bones.

If you are diagnosed with advanced oesophago-gastric cancer or your healthcare team feel surgical intervention is not right for you, they may talk about other treatment options. Oncological treatments, such as chemotherapy or radiotherapy, can be used to help slow the growth of the cancer and relieve symptoms, as opposed to trying to cure it. This may be referred to as **palliative treatment**.

Problems with eating and drinking may arise or intensify when the cancer is advanced. It is common for people with **advanced cancer** to lose their appetite. This often leads to weight loss and malnutrition. By controlling nutrition-related symptoms, quality of life can be maintained. During this time, it is OK to focus on eating foods you enjoy and worry less about set mealtimes or 'healthy' eating.

See the **Practical tips for improving your nutrition** section for more advice and suggestions.

## Oesophageal or pyloric stent placement

If you have difficulty swallowing due to a narrowing in the oesophagus or are experiencing nausea and vomiting due to a blockage that is stopping your stomach from emptying, your healthcare team may suggest having a **stent** placed. Your clinician should explain the procedure, all possible side effects and alternatives, and you should ask any questions you may have.

A stent is a device that, once in place, expands (opens up) to become a tube that helps hold a narrowing or blockage open. A stent can be placed in the oesophagus, or across the entrance or exit to the stomach. This allows you to swallow food and drink more easily.

Stents are made of a metal or plastic mesh material. You usually have a stent fitted in hospital in the endoscopy or X-ray department. It usually takes about 30 minutes and most patients can return home the same day, but you may need to stay in hospital overnight.

## Eating and drinking after a stent

Stents take a few days to expand, so you will gradually be able to increase the amount and textures of the food that you eat. Most patients will be able to drink fluids within a few hours of the procedure and need to remain on fluids for the first 24 hours (for example water, tea, milk and juices). If the fluids are tolerated well, you may progress to foods such as soup or ice-cream or puree food, then onto soft foods.

### Key tips for eating and drinking after a stent

- Cut your food into small pieces, take small mouthfuls and chew foods well before swallowing.
- Avoid tough lumps of meat, doughy bread and fruits and vegetables with tough fibres (such as oranges and celery).
- Avoid swallowing lumps or large chunks of food and spit out foods that you cannot chew properly.
- Use plenty of sauces, gravy and butter to moisten food.
- Sip nourishing fluids during and after meals to help keep the stent clear. Some people find fizzy drinks can help to keep the stent clear, whilst others find they can increase reflux or belching.
- Take your time, relax, eat slowly and at your own pace.
- If you wear dentures, ensure they fit well.
- Sit upright when eating and aim to stay upright for at least half an hour after eating.
- Take small, frequent meals. You may find six smaller meals, snacks or nourishing drinks easier to manage, especially if your appetite is poor or if you suffer from indigestion or reflux.

You may experience some discomfort or pain as the stent expands. In most cases, this resolves after 24–48 hours; if it doesn't improve, contact your healthcare team.

### What if my stent blocks?

If your symptoms return it may be because the stent is blocked. Stop eating, stand up and have a few sips of a drink; try a warm or carbonated drink. If the problem persists, contact your healthcare team.

# Practical tips for improving your nutrition

Symptoms from oesophago-gastric cancer or side effects from cancer treatment can make eating your normal diet and maintaining your weight and strength difficult. Here you will find some tips and suggestions to help make the most of your food and improve your nutrition despite these challenges.

Eating and drinking is about more than just nutrition; it is an important part of our social interactions and provides structure to our day. If you are finding it difficult to eat normally, you may be reluctant to eat around other people or avoid meals completely. You may find it affects your mood and quality of life. Talk to your family, friends or healthcare team; they will help you find ways to cope better.

You may experience different symptoms and side effects as you progress through treatment. Experiment to see which of these suggestions work for you.

## Achieving weight gain if you are underweight or losing weight

If you are underweight, struggling to maintain your weight or have lost weight without trying, you are not getting enough calories.

### There are a few ways to increase your calorie intake:

- dietary intake – look at what you are able to eat and drink and think about how to pack in more calories
- nutritional supplements – commercially available products that are high in calories and protein
- tube feeding – using a tube to deliver calories directly into your digestive system



## Make every mouthful count

The best way to stop weight loss is to make sure everything you eat is giving you as many calories as possible. This may mean you need to change the balance of your diet, choosing foods that are higher in calories and protein. These may be foods you have previously avoided or considered 'unhealthy'. But remember, the short-term priority is to prevent weight loss impacting upon your treatment.

Once your weight is stable, and your symptoms allow you, you should switch back to a more balanced diet.

### Key tips for adding more calories to your diet

- Eat small but frequent meals and snacks. Forget about breakfast, lunch and dinner and focus on a small meal or snack every two hours.
- High-calorie snacks such as biscuits, cake, crisps and ice cream may not be 'healthy' in the long-term but are good ways of getting in the energy that you need right now.
- Choose snacks that are high in calories and protein but easy to prepare, such as a handful of nuts, peanut butter on crackers, hard-boiled eggs, a bowl of cereal.
- Fruit and vegetables temporarily become less of a priority. They can be quite filling, and their calorie content is low.
- Don't aim too high; adding just 100–200 extra calories and 10–20 extra grams of protein daily can make a big difference.
- Start paying attention to food labels. Avoid low-fat or 'diet' products and look out for the highest calorie version of what you would like to buy.
- Don't just drink water; drinking water keeps you hydrated, but milk, fruit or vegetable juices and soups will hydrate and provide some extra nutrition too.



## Food fortification

**Food fortification** is all about adding high-energy foods into your meals to increase the calories. This is an easy way to increase your calorie intake without the need for having a bigger portion.



### For an extra 100–150 calories:

- add two teaspoons of jam or honey to puddings or porridge
- melt grated cheese into soup, mashed potato or pasta
- stir in a tablespoon of oil, butter or margarine to mash, vegetables or other foods
- add a tablespoon of double cream to a hot drink or over a pudding
- add a tablespoon of green pesto to pasta or mash
- sprinkle chopped nuts or dried fruit onto cereal, yogurt or puddings



### For an extra 150–200 calories:

- mix a tablespoon of desiccated coconut into porridge or a yogurt
- add a tablespoon of peanut butter or chocolate spread to a milkshake, or spread on biscuits
- stir a tablespoon of soft cheese into soup
- stir in a tablespoon of clotted cream to a dessert
- mix in a tablespoon of mayonnaise or salad cream to mashed potatoes or with eggs

## Nutritious (high-calorie, high-protein) snack ideas

- cheese and crackers
- peanut butter on toast
- mashed banana and peanut butter dip with breadsticks
- guacamole and black or refried beans with tortilla chips
- eggs with cheese on toast
- avocado on bagel
- cheese or bean tortilla
- slice of ham or salami
- hummus with bread sticks
- full-fat cottage cheese with canned peaches
- a handful of mixed nuts or nut bars
- pot of custard or rice pudding
- sponge cake with cream
- mini chocolate bars or biscuits

## Homemade smoothie ideas

Blend the ingredients with a hand blender or a whisk. Add in milk or protein powder for extra protein. Substitute dairy alternative products if necessary.

- vanilla ice cream with peanut butter and frozen fruit
- chocolate ice cream with fresh strawberries and chocolate spread
- plain yogurt with oats and blueberries
- milk with frozen banana and honey
- milk with pineapple and fruit yogurt

**If you have diabetes, high cholesterol, food allergies or another medical condition which has required a change of diet in the past, speak to your dietitian about which of the above suggestions would suit you best.**

## Nutritional supplements

There is a wide range of commercially produced products which are high in calories and protein and often fortified with vitamins and minerals. They can be used to 'supplement' your current diet or can be used as a sole source of nutrition if you are not able to eat or drink anything else.

The types of nutritional supplements include:

- milk-based supplements – these may be ready-made or can be made up with fresh milk
- juice-based supplements – ready-made drinks
- soups
- ready-made puddings
- fat or protein-based liquids which can be taken in small doses or added to your food

Supplements come in a variety of flavours and from a range of companies. If you try one and don't like it, try a different flavour or one from a different company. Your dietitian or healthcare professional can help you with this.

Most companies also produce recipe leaflets and ideas for adding supplements into food. Have a look at their websites for suggestions.

Some products are available to buy from a pharmacy, or supermarket or you may be able to get them on prescription from your healthcare team.

**If you are diabetic or have any food allergies speak to your dietitian before trying a commercial nutritional supplement.**

## Tube feeding

Despite your best efforts, you may not be able to get enough calories by eating food and taking nutritional supplements. In this situation your healthcare team may talk to you about using a feeding tube to supplement the food you eat.

Even though it may be essential for helping you maintain a healthy, active life during and after cancer treatment, the idea of a feeding tube can be quite daunting. If you have any concerns speak to your healthcare team. There will be plenty of support and most people independently manage their tube and feeding pump at home.

A feeding tube may be recommended if:

- symptoms from the cancer or side effects from treatment are making it difficult to take in enough nutrition from your diet such as dysphagia or nausea
- a planned treatment, such as radiotherapy or a surgical procedure, is likely to impact upon your diet, causing pain and difficulty swallowing, while limiting your dietary intake for some time

There are several different types of tubes available, and the choice will depend on your treatment plan and stage of treatment.

Your dietitian and healthcare team will discuss with you how to use the tube and feeding equipment. You will be prescribed a liquid nutrition that can be infused through the tube into your stomach or small intestine. This may be either by a pump or syringe.

If you are not able to eat or drink anything, the tube feed may provide all the nutrition and fluid you need. Or it may supplement what are you eating and drinking. It will not stop you from eating and drinking if you can.

How long you need the tube for will depend on your individual needs and may be either short term, for example while having a particular treatment, or long term, when the underlying cause is not reversible. Your healthcare team may be able to give you more of an idea about how long it will be required for. However, this can be difficult to predict and may need to be reviewed on an ongoing basis.

When you are back to eating and drinking well or if, at any time, you and your healthcare team feel that tube feeding has become more of a burden than a benefit, then it can be stopped, and the tube removed.

**Keep in mind these tubes are generally temporary.** They are merely another tool in getting you through your treatment to achieve the best possible outcome. **A feeding tube can easily be removed when it is no longer needed.**

## Achieving weight loss if you are overweight

If you are overweight or obese, your healthcare team may advise you to try to lose some weight. This needs to be done by making healthy food choices and increasing your activity.

### Key tips to achieve healthy weight loss

- Try to follow a healthy balanced diet.
- Eat a diet rich in wholegrains, pulses, fruit and vegetables, with lean meat, fish and lower fat dairy (or dairy alternatives).
- Eat at least five portions or a variety of fruit and vegetables every day.
- Limit foods and drinks that are high in added sugar or saturated fat such as butter, cream and cheese.
- Limit consumption of fast foods and processed foods high in fat or sugar.
- Reduce your portion size at mealtimes. Try using a smaller plate or bowl.
- Don't avoid meals completely. Eating at regular times helps burn calories more efficiently and reduces the temptation to snack.
- Drink plenty of water and avoid high calorie liquids and alcohol.
- Read your food labels. Knowing how to read food labels can help you make healthier food choices.
- Always avoid rapid weight-loss diets (losing more than 1–2 kg per week) because they could cause you to lose too much muscle.
- Aim to improve your fitness. Regular walking, cycling, housework and gardening can all help.



## Loss of appetite or early satiety

The feeling of hunger (or appetite) is a complex process, controlled by a lot of factors both physiological and psychological. You may not feel like eating as much as normal or not feel hungry at all. You may also experience early satiety or feeling of fullness after a smaller amount of food.

There is no easy answer for overcoming a poor appetite. Eating when you don't feel like it can be really difficult. Sometimes you will need to see food as a 'medicine' and accept that you have to have something even if you do not particularly fancy it.

### Key tips to help if you have a poor appetite

- Large portion sizes can be off-putting. Try to have small, frequent meals with planned snacks and nutritious fluids in between rather than over-facing yourself with a big portion.
- Select high-calorie or energy-dense foods. Foods we traditionally think of as being unhealthy such as chocolate, cake and biscuits can provide calories in small amounts, ideal when you don't have an appetite.
- Avoid low-fat or diet foods. Choose full-fat products such as full-fat milk and yogurt.
- Set a reminder alarm on your phone or watch or write a plan for your day of when you need to eat. If you don't feel hungry, it is easy for the day to pass without remembering to eat something.
- Keep ready-to-eat snacks close to your chair, bed or in your pocket.
- Add extra calories to your food, for example sugar, butter and cream. See the suggestions in the section on **Food fortification**.
- Don't be afraid to use convenience foods. Ready meals can save you time and energy. If the portion size is too big, split it in two and save some for later.
- Drink fluids between meals instead of with your meals, so you don't fill up on liquid.
- Choose nourishing fluids rather than water such as milk, milkshake or yogurt drinks.
- Preparing foods that smell good to you can help stimulate your appetite; wholegrain toast can be a great option.
- Get out if you can – fresh air can often help stimulate your appetite. Go for a brief stroll or simply sit outside for a while. Eating in a well-ventilated room can also help.
- Friends and family are often keen to help; ask someone to prepare some meals for the freezer or help with the shopping.
- Try eating with a friend or family member. Adults who share meals together tend to eat better.

## Taste changes

Cancer and cancer treatments can cause your taste to change. You may find sweet or salty foods become stronger in flavour or you may experience a complete loss of taste. People on chemotherapy frequently find food tastes very metallic.

It is important to try and eat as normally as possible, even if food tastes strange. Missing meals due to altered taste can lead to weight loss.

Taste changes can come and go. It is best to try and have what you fancy at the time. Avoid foods that don't appeal but try them again in a few days or weeks as your taste is likely to continue to change and you may enjoy them again.

### Key tips to help with taste changes

- Keep your mouth fresh and brush your teeth regularly.
- Try chewing gum, sucking mints or lemon drops.
- Strong flavours can be helpful if all food tastes the same; try adding herbs and spices to food.
- Sharp foods, such as lemon juice, can help stimulate your taste buds.
- Some people find cold food tastes better than hot. Cold foods also often smell less strong if food smells are off-putting.
- You may find tea and coffee no longer taste the same. Try herbal teas or squash instead.
- If you have a metallic taste in your mouth, you may find using plastic cutlery helps.
- If you find drinks taste strong, use a straw.
- By experimenting with different foods and flavours, you may find something new that you like.

## Difficulty swallowing (dysphagia)

People with oesophageal cancer often find it difficult to get food down. It can feel like the food is getting stuck in your throat. You may bring the food back or bring up white, thick phlegm. Certain types of food, such as those that do not breakdown when you chew them or those with grainy textures, may be harder for you to swallow than others.

It is important to change your diet so that you can still get enough nutrition and to prevent losing weight and strength. You may have to select softer, mashable or crumbly foods or change the consistency of your food by chopping, mincing or pureeing.

### Soft, mashable, or crumbly textures

Some people find foods that are mashable on the back of a fork or crumble when chewed easier to manage.

#### Key tips to help if you need a soft diet

- Eat slowly, take small bites and chew well. Completely swallow each bite before taking another.
- Concentrate on your eating. If you are distracted or talking to others you may swallow something without chewing it enough.
- Sip liquids in between bites of food. But try not to take too much liquid or you will feel fuller before you have managed to eat much.
- Avoid foods that need a lot of chewing and are hard to swallow such as soft doughy bread, raw fruit and vegetables and meat.
- Avoid dry foods – add extra gravy or sauce to your meals.

Constipation can be a problem when you are not able to eat a normal diet. If you become constipated take more fruit juice, pureed vegetables or stewed or tinned fruit such as prunes and apricots. If it remains a problem, discuss it with your healthcare team.

The texture of food you are able to manage can vary during your treatment. If it feels like it is easier to get the food down, experiment with different textures.

### Pureed or blenderised diet

Pureed foods are foods that do not need to be chewed. They are usually blenderised (put into a blender or food processor) to a smooth texture. Some foods are naturally a pureed consistency such as smooth soup, custard or yogurt. Other foods can be made into a pureed consistency using a liquidiser, food processor or hand-held blender. You may also need a sieve to take out any small bits.

## How do I puree food?

1. Remove skins, seeds, pith, bones, tough membranes and other inedible parts of foods.
2. Steam, boil or bake foods that require cooking until soft.
3. Cut into small pieces.
4. Place small quantities of the food into the liquidiser or blender.
5. Add fluid if required. To improve the taste and nutritional value add full cream milk, creamy soup or vegetable juice instead of water.
6. If food has cooled down, reheat to desired temperature.

It is important to try to make puree foods look appetising. Try presenting different parts of the meal separately, for example, separating a pureed meat casserole from the vegetables and potatoes. Colour is important too; try serving brighter coloured vegetables, such as carrot, with mashed potato and pureed chicken.

Fresh or frozen ready-prepared pureed meals, which are delivered to your home, are available from a few companies. Have a look on the internet or speak to your healthcare team for some local options.

In situations where swallowing a pill or tablet becomes difficult, ask your doctor to prescribe a liquid version of the medication, if it is available. Or ask your pharmacist if your medications can be crushed.



**If you are unable to swallow anything, you should contact your hospital team straight away.**



## Feeling or being sick

Feeling sick (nausea) or being sick can be a symptom of cancer or a side effect of treatment. Anti-sickness medication is frequently prescribed alongside cancer treatments and it is important to take these as you have been instructed.

### Key tips to help if you are nauseous

- Try eating something every one to two hours; longer periods of time without eating can make nausea worse.
- Some people find bland flavours easier to manage, whilst others find salty things better. Experiment a little to see what works for you.
- Dry snacks can help such as a plain biscuit, crackers, pretzels or toast.
- Ginger or peppermint can help. Try a ginger biscuit, ginger ale or peppermint tea.
- If cooking smells make you feel sick, try eating cold foods. If you prefer a hot meal, ask somebody else to do the cooking. You can also use microwave or oven-ready meals, so you do not need to be in the room whilst they are cooking.
- Make sure the room you are eating in is well ventilated. Open the windows so that food smells do not linger.
- Greasy, fatty and fried foods make symptoms worse along with spicy foods.
- Severe nausea rarely lasts for long. Don't put yourself under too much pressure to eat if you are really not up to it. But try to make up for it on the days you are feeling better.
- Take any anti-sickness medication as advised and contact your chemotherapy unit or healthcare team for further advice if things are not settling.

### Key tips to help if you are being sick

- Sip small amounts of fluids as often as possible. Try dry ginger ale, cold flat lemonade, soda water, Lucozade® or chilled tomato juice. Sucking on a hard lolly or crushed ice cubes can be soothing.
- See your doctor or contact your chemotherapy unit if you cannot keep fluids down, or if vomiting lasts for more than 24 hours, as you may become dehydrated.
- Introduce drinks slowly once the vomiting has stopped, such as diluted fruit drinks, beef extract (Bovril®), clear broth and weak tea.
- Start eating small amounts of plain foods once vomiting is under control. Try dry biscuits, pretzels, toast or bread, jelly, boiled rice, and soft stewed fruits, such as apples, pears or peaches.
- Gradually increase your food intake until your eating returns to what is normal for you.

## Sore or dry mouth

A dry mouth can allow bugs to build up and cause infections such as thrush. It is important to frequently brush your teeth and use alcohol-free mouthwash. If your tongue has a thick white or yellow coating, discuss this with your healthcare team who will be able to prescribe mouth washes or medication to help.

### Key tips to cope with a dry or sore mouth

- Aim for at least 2 litres (8–10 cups) of fluids per day. This can include water, tea and coffee, squash, fruit juice and milky drinks. Sip fluids regularly.
- Cold drinks, ice lollies and crushed ice can be quite soothing.
- Choose soft foods. These will be easier to chew and swallow.
- Add sauces and gravy to meals.
- Avoid dry and rough foods such as crackers, bread, raw vegetables and hard cereals.
- Use sugar-free chewing gum or boiled sweets. This can help to stimulate your saliva.

## Changes in bowel habit

### Constipation

If you are opening your bowels less frequently than usual and your stools are hard and difficult or painful to pass, you may be constipated. Constipation is a common side effect of cancer treatment but can also be caused by anti-sickness drugs and painkillers. You may also have cramps, nausea (feeling sick), or bloating and pain in your abdomen (stomach area).

### Key tips to help with constipation

- Keep track of bowel movements so that problems can be noticed quickly.
- Aim for at least 2 litres (8–10 cups) of fluids per day. This can include water, tea and coffee, squash, fruit juice and milky drinks.
- Gentle exercise can help to stimulate the bowels. Keep as active as possible through your treatment.
- You may need to increase the fibre in your diet. Please be aware that a high-fibre diet is not suitable for everyone. Speak to your healthcare team or dietitian if you are unsure about the amount of fibre you should have.
- Increase fibre-rich foods slowly into your diet and make sure to drink a lot of fluid to prevent increased gas, bloating and cramps.
- Don't ignore the urge to have a bowel movement. Try to go to the bathroom and allow a lot of time so you are not feeling rushed.

### Simple ways to increase the fibre in your diet:

- Choose a high-fibre breakfast cereal such as plain whole wheat biscuits (like Weetabix®) or plain shredded whole grain (like Shredded Wheat®), or porridge, as oats are also a good source of fibre.
- Choose high-fibre fruits and vegetables such as berries, pears, melons, sweetcorn, carrots or broccoli.
- Add wheat bran, oat bran or flax seeds into smoothies, cereal, yogurt or porridge.
- Add pulses, like beans, lentils or chickpeas, to soups, curries and stews.
- Choose whole grain foods such as brown rice, whole wheat bread and quinoa.
- For snacks, try fresh fruit, vegetable sticks, rye crackers, oatcakes and unsalted nuts or seeds.
- Include natural laxative foods such as prunes, prune juice, papayas, pears, apples, dried apricots and rhubarb.

Dietary changes may not be sufficient to relieve constipation caused by medicines. You may need to take laxatives. If you have not had a bowel movement for more than three days speak to your healthcare team for advice.

### Diarrhoea

Diarrhoea, or loose watery stools, is a common side effect of many cancer treatments and can continue once your treatment is finished. It is unlikely to be due to the type of food you are eating. Tell your healthcare team if you are having diarrhoea more than two or three times a day. They may prescribe suitable medications to help or recommend further investigations.

Diarrhoea may also be a sign of infection. Check your temperature and alert your healthcare team if you are worried about your symptoms.

It is important to keep well hydrated when you have diarrhoea as you may be losing a lot of fluid.

### Key tips to help if you have diarrhoea

- Aim for at least 1,5–2 litres (6–8 cups) of fluids per day. This can include water, squash, fruit juice, soup or herbal tea. Limit caffeine or alcohol containing drinks.
- Diarrhoea is usually caused by treatment, and it is not usually necessary to remove specific foods from your diet.
- Aim to eat small frequent meals and snacks. Try to eat every 2–3 hours throughout the day to avoid losing weight.
- Take care with the following foods as they can make diarrhoea worse: fatty, greasy and fried foods, fizzy drinks, foods containing the artificial sweetener sorbitol, such as chewing gum, and diet or low-calorie products.
- Isotonic sports drinks (such as Powerade®, Lucozade sport®, Gatorade®) and rehydration medications (such as Dioralyte®) may be required if the diarrhoea is severe and goes on for a long time.

## Tiredness and fatigue

Feeling very tired can make shopping, cooking and eating more challenging. One of the best ways to help with fatigue is to try and do some gentle activity every day. This has been shown to help with energy levels. Go for a short walk round the block, do some gentle housework or gardening.

### Key tips for coping with tiredness and fatigue

- Frozen, tinned and ready meals can be useful on days when you feel tired. They can be just as nutritious as homemade meals and are much easier.
- Plan ahead. On days when you are feeling well, stock up the cupboards and freezer with easy meals and snack options.
- Let family and friends help you with shopping and cooking.
- If you are too tired to have a meal, eat a sandwich, snack or nourishing drink instead such as hot chocolate, milkshake or a smoothie. Don't be tempted to go to bed without eating as you will feel much weaker and more unwell when you wake up.

## Managing special dietary requirements

There are a number of reasons you may choose or need to follow a specific diet:

- Food allergies and intolerances — such as dairy free, fish and shellfish allergies, nut free and gluten free
- Special dietary requirements — vegetarian, pescatarian and vegan
- Religious or cultural reasons — kosher and halal

It is perfectly possible to maintain a healthy weight whilst following a specific diet; however, it may take some extra attention and care to ensure you get enough calories and nutrients, especially when experiencing symptoms from cancer or side effects from treatment.

If you have any questions speak to your dietitian; they can help with specific suggestions to meet your needs.

### Key tips for boosting your calorie intake whilst following a vegetarian or vegan diet

Vegetarian and vegan diets are typically low in calories but with some careful food choices and using some food fortification techniques you will be able to boost your intake.

Getting adequate protein can also be a challenge on a plant-based diet. Vegans should focus on tofu, beans, lentils, chickpeas, nuts and seeds. Vegetarians could add in some dairy products and eggs.

Vegan diets can be low in calcium, iron and B12. These vitamins and minerals can be found in green leafy vegetables, almonds, dried fruits, and pulses or in fortified products like cereals, breads and some dairy-alternative milks.

- **Nuts** are a fantastic way to increase calories, protein and healthy fats. Macadamia nuts and walnuts are especially energy dense. If you have difficulty swallowing, nuts can be ground into a powder and incorporated into other dishes.
- **Seeds** can be high in fat and a good source of fibre. Ground flax seed can be added to baked goods, soups, or smoothies. Pumpkin seeds can be eaten as a snack, topped on salads, or added to a hot cereal.
- **Nut and seed butters** like peanut butter, almond butter, and tahini are nutrient-dense high-calorie ingredients that can be added to almost any meal or snack. Add peanut butter to porridge, smoothies, toast, ice-cream and fruit.
- **Olives** are loaded with plenty of healthy fats. Add to salads, wraps, sandwiches and snacks. Try olive tapenade on some crackers or in a sandwich.
- **Avocados** are energy dense and quite versatile. Add to the side of any savoury dish or mash them up and spread on toast. Use their creaminess in a dessert or smoothie, or simply cut in half and eat with a spoon; top with spices or herbs to add flavour.
- **Dairy alternative** products can be found in most supermarkets. They vary in calorie count significantly. Check the labels. Soya milk and oat milk are some of the highest calorie plant-based milk options. Another great option is adding full fat coconut milk or coconut cream into your smoothies, porridge, coffee, soups or curries.
- **Vegetable oils and spreads** are made from plant-based oils like soya, peanut, corn and avocado. They are an easy way to increase your calories, while cooking or baking; add some peanut oil to a sauce or salad dressing, or drizzle olive oil on a dish just before serving.

## Alternative diets

There is a lot of information, particularly on the internet, about diets that help fight cancer or potentially cure cancer. They often involve restricting certain food groups or focusing on unusual combinations of foods. However, there is no scientific evidence that following any type of 'diet' can cure cancer or replace cancer treatment.

Restricting certain food groups when there is no need to, will put you at risk of nutritional deficiencies and weight loss, which may compromise your cancer treatment.

Healthcare professionals recommend a balanced and enjoyable diet, using strategies to increase your calorie or protein intake if you are losing weight. But it can be confusing getting conflicting dietary advice, and you will find that everyone has an opinion. If you do choose to follow a specific diet, speak with your healthcare team or dietitian to ensure your diet is nutritionally complete and not missing any important nutrients.

# Oesophago-Gastric Cancer Nutrition: A to Z

## A

**Advanced cancer** – Cancer that is unlikely to be cured. It may be limited to its original site (primary cancer) or may have spread to other parts of the body (secondary or metastatic cancer). Treatment may be used to control the cancer, but it will not get rid of it completely.

**Anaemia** – Low levels of red blood cells, which may result in tiredness among other symptoms.

**Anastomosis** – The surgical join between two tubes, such as the stomach to the oesophagus or the oesophagus to the small intestine.

**Anastomotic stricture** – A narrowing at the anastomosis caused by scar tissue. You may find it difficult to swallow solid food or feel like there is a lump in your throat.

**Anorexia** – Loss of appetite or a loss of interest in food. When some people hear the word anorexia, they think of the eating disorder 'anorexia nervosa'. But there are differences between the two. Anorexia nervosa doesn't cause loss of appetite. People with anorexia nervosa purposely avoid food to prevent weight gain. People who suffer from anorexia (loss of appetite) unintentionally lose interest in food. Loss of appetite is often caused by an underlying medical condition.

**Anti-sickness drugs (also known as anti-emetics)** – Drugs that help control nausea and vomiting.

**Appetite** – The feeling of hunger or wanting to eat. Appetite is controlled by a number of factors both physiological and psychological such as depression, anxiety and stress.

## B

**Balanced diet** – Having a diet that includes a wide variety of food to give you the energy, protein, vitamins and minerals you need to stay healthy.

**Bloating** – A full, uncomfortable feeling in the abdomen (stomach area).

**Body Mass Index (BMI)** – A standardised ratio of weight to height, which is often used as a general indicator of health. BMI can be calculated by dividing your weight (in kilograms) by the square of your height (in metres). A BMI between 18,5 and 24,9 is considered normal for most adults. Higher BMIs may indicate that an individual is overweight or obese.

## C

**Calorie** – A unit of measurement for dietary energy. Also referred to as kilocalorie (kcal) or kilojoule (kJ).

**Cancer** – A disease that starts when normal cells are transformed and begin to grow in an uncontrolled way. Cancer cells may spread from one organ to another.

**Carbohydrates** – Carbohydrates are one of the main types of nutrients. Your digestive system changes carbohydrates into glucose (blood sugar). Your body uses this sugar for energy for your cells, tissues and organs. It stores any extra sugar in your liver and muscles for when it is needed. There are two types of carbohydrates: simple and complex. Simple carbohydrates include natural and added sugars. Complex carbohydrates include whole grain breads and cereals, starchy vegetables (such as potatoes, sweet potatoes and sweetcorn) and legumes (such as beans, chickpeas, lentils and soybeans).

**Chemotherapy** – A treatment using anti-cancer medicines that kill cancer cells or stop them from multiplying. It can be given as tablets or as a fluid directly into a vein.

**Constipation** – Difficulty passing a bowel motion regularly or often. Stools may be hard and difficult to pass.

## D

**Diabetes** – A disorder in which sugars are not taken up in the body properly because the pancreas does not produce enough of the necessary hormone (insulin), or the body has become resistant to the effect of insulin. Diabetes may be a risk factor for some types of cancer. Optimising blood sugar control will help limit side effects from cancer treatments and support recovery.

**Diarrhoea** – Opening your bowels more frequently than normal. Stools may be loose or watery.

**Dietary fibre** – The part of edible plants that cannot be digested. Foods containing fibre include wholegrain cereals and breads, fruit and vegetables, beans, nuts and seeds. Most fibre is contained in the outer layer of grains and therefore can be removed by refining and processing. Dietary fibre helps to keep your bowels moving regularly and prevent constipation.

**Dietitian** – A university-qualified health professional who supports and educates patients about nutrition and diet during treatment and recovery.

**Digestion** – Digestion is the process the body uses to break down food into nutrients. The body uses the nutrients for energy, growth, and cell repair.

**Digestive enzymes** – Molecules that help your body breakdown and absorb nutrients such as fat, carbohydrates and proteins.

**Digestive system (also known as the gastrointestinal tract)** – The body system that processes food and drink, absorbs nutrients and disposes of solid waste.

**Dilatation** – A procedure to widen a narrowing in the oesophagus. This is usually done in endoscopy under sedation.

**Dumping syndrome** – Dumping syndrome is a condition that can develop after oesophago-gastric surgery. Also called rapid gastric emptying, dumping syndrome occurs when food, especially sugar, moves from your stomach into your small bowel too quickly.

**Dyspepsia** – see reflux.

**Dysphagia** – Difficulty swallowing caused by a narrowing in the oesophagus.

## E

**Early satiety** – A feeling of fullness after eating a smaller amount of food than normal.

**Energy** – Dietary energy is counted in calories (kcal) or kilojoules (kJ) and provides fuel for our daily activities. Energy is obtained from food and drink. Different amounts of energy are found in different foods; some may be high in energy, while some may be low in energy.

**Enteral nutrition** – Receiving all or part of your daily nutritional requirements through a feeding tube into your gastrointestinal tract.

**Exclusion diets** – Diets designed to exclude or limit foods that may be thought to cause adverse symptoms or impact on cancer cells.

## F

**Fad diets** - Very restrictive diets that contain few foods, or an unusual combination of foods, given for a short period of time and aiming to help you lose weight very quickly.

**Fat** – A type of nutrient that is an important source of energy and of some essential nutrients. Fat is higher in calories than other nutrients. Intake should be limited as part of a healthy balanced diet, but in situations where calorie intake needs to increase higher fat foods can be helpful.

**Fatigue** – Feeling of extreme tiredness and lack of energy.

**Faecal elastase** – Elastase is an enzyme produced by the pancreas. Measurement of elastase in stool samples (faecal elastase) can help to evaluate whether your pancreas is functioning properly and allows the diagnosis or exclusion of pancreatic exocrine insufficiency (PEI).

**Feeding tube** – A fine flexible plastic tube used to insert food directly into the stomach or small bowel if a person is unable to eat. A tube may be passed down through the nose or directly through the skin.

**Flatulence** – Passage of excess wind or gas.

**Food fortification** – Fortification is the process of adding nutrients to a food or liquid. This could be to add vitamins and minerals to food products, such as cereal fortification with iron and folic acid. It could also be used to increase the calorie and/or protein content, such as adding cream to soup or honey to porridge.

## G

**Gastrectomy** – A surgical procedure to remove all (total gastrectomy) or part (partial gastrectomy) of the stomach.

**Gastric cancer (also known as stomach cancer)** – A malignant tumour in the tissue of the stomach.

**Gastrointestinal (GI) tract** – The passage from the mouth to the anus that allows you to digest food and eliminate waste. The upper GI tract includes the oesophagus, stomach and small bowel (small intestine). The lower GI tract includes the colon, rectum and anus.



## H

**Healthcare team** – A group of health professionals who are responsible for treating a person who is sick. The team may include surgeons, oncologists, specialist nurses, dietitians and physiotherapists. This may also be called the multidisciplinary team.

**Heartburn** – see reflux.

**Hormones** – Small molecules produced in the human body that control different processes such as growth, appetite, reproduction, mood changes, digestion, among others.

## I

**Indigestion** – see reflux.

## J

**Jejunostomy** – A feeding tube placed into the small bowel (jejunum) used to deliver nutrients and fluid.

## L

**Laxative** – A medicine that stimulates bowel movements and relieves constipation.

## M

**Malabsorption** – It is when your body cannot breakdown or use the nutrients from food.

**Malnutrition** – The imbalance of energy, protein or other nutrients in the body which can impact on health and how the body responds to cancer treatment and recovery.

**Metabolism** – The process your body uses to get or make energy from the food you eat.

**Minerals** – Components of food that are essential for the body and which the human body cannot make (similar to vitamins). Examples include iron, calcium and magnesium.

## N

**Nausea** – Feeling sick or wanting to be sick.

**Nil-by-mouth** – When you are unable to have food or drink for a period of time, for example before or after surgery.

**Nutritious (nourishing)** – Food that is a good source of energy and/or protein as well as vitamins and minerals.

**Nutrients** – Nutrients are compounds in food that are used by the body to function properly and maintain health. Examples include proteins, fats, carbohydrates, vitamins, and minerals.

## O

**Odynophagia** – Pain when swallowing.

**Oesophageal cancer** – A tumour found in the oesophagus.

**Oesophagectomy (also known as oesophago-gastrectomy)** – A surgical procedure to remove part (partial oesophagectomy) or all (total oesophagectomy) of the oesophagus and part of the stomach.

**Oesophago-gastric cancer** – A tumour within the oesophagus and/or stomach.

**Oesophagus** – The tube that carries food from the throat into the stomach.

## P

**Palliative treatment** – Medical treatment for people with advanced cancer to help manage pain and other physical and emotional symptoms of cancer. Treatment may include radiotherapy, chemotherapy or stent placement. It is an important part of palliative care.

**Pancreatic exocrine insufficiency (PEI)** – The inability to properly digest food due to a lack of digestive enzymes.

**Pancreatic juice** – Pancreatic juice is a fluid produced by the pancreas, an organ in the digestive system. It contains digestive enzymes, specialist molecules which breakdown nutrients such as fat, protein and carbohydrate into smaller parts so that they can be absorbed by the intestine.

**Parenteral nutrition** – The delivery of calories and nutrients directly into your blood system.

**Protein** – An essential nutrient which the body needs to repair itself and build muscle. Good sources of protein include meat, fish, eggs, dairy foods, cereal products (such as bread), soya products, nuts and pulses.

## R

**Radiotherapy** – Radiotherapy uses high energy beams of radiation such as X-rays, gamma rays or protons to kill cancer cells or stop them from multiplying.

**Reflux (also known as heartburn or indigestion)** – A sensation of tightness or burning in the chest. Reflux is caused by stomach acid backing up into the oesophagus and throat. It often happens at night; you might wake up with an unpleasant taste in your mouth or have a dry cough.

## S

**Side effect** – Undesirable effect of a drug or treatment.

**Small intestine (also known as small bowel)** – The middle part of the gastrointestinal tract, which takes food from the stomach and absorbs nutrients. It has three sections: the duodenum, the jejunum and the ileum.

**Steatorrhoea** – The presence of excess fat in the stools. Stools may be pale, float and be difficult to flush away.

**Stent** – A wire mesh tube placed into a blocked organ, such as the oesophagus or stomach to create a passage for food and fluid to pass through.

**Stomach** – The muscular bag between the end of the oesophagus and the beginning of the small intestine that stores and breaks down food.

**Stools** (faeces, poo) – The bulky mass of waste matter that leaves the body through the anus.

**Surgery** – An operation by a surgeon to remove or repair a part of the body.

**Symptoms** – Changes in the body that you might feel or see, which are caused by an illness or treatment; symptoms may include pain, tiredness, a rash or a stomach-ache.

## T

**Tumour** – A new or abnormal growth of tissue on or in the body. A tumour may be benign (non-harmful) or malignant (cancer).

## V

**Vitamins** – Essential substances found in food, which the body cannot produce. The body needs vitamins to burn energy, repair tissue, assist metabolism and fight infection.

This document was made possible with the financial support of Lilly and Baxter. The funders had no role in the content or design of this booklet.

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