

Department of nutrition and dietetics

Department of radiology

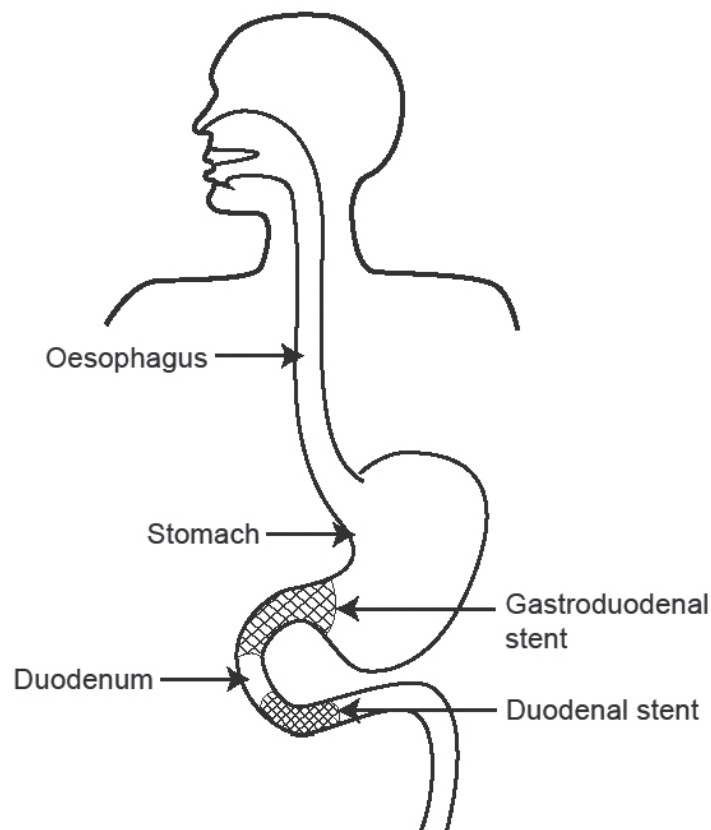
Information for patients referred for duodenal stent insertion

Introduction

This leaflet tells you about having a duodenal stent. It explains what is involved before and after insertion, including the benefits, risks and dietary advice. It may make you think of things you would like to discuss with your doctor.

Why do I need a duodenal stent?

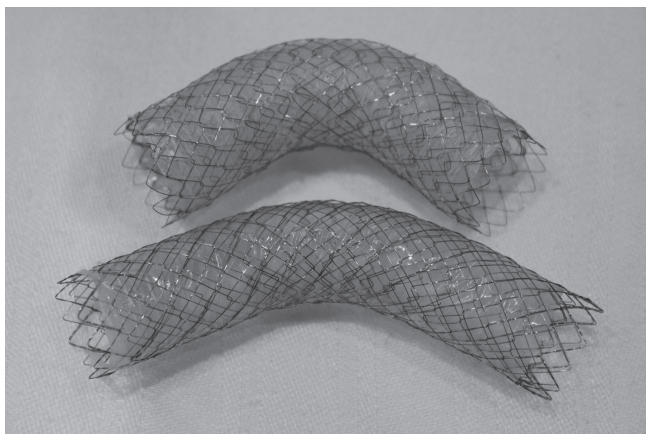
The food you eat travels down your oesophagus (food pipe) and into your stomach where the digestion process starts by breaking down food to form a thick lumpy liquid. This mixture passes from the stomach into the duodenum (first part of your bowel). Your duodenum can become blocked, either by a tumour within it or by tumour progression outside of it causing external pressure. As a result food cannot pass through as quickly, if at all. One way of overcoming this problem is by inserting a stent.



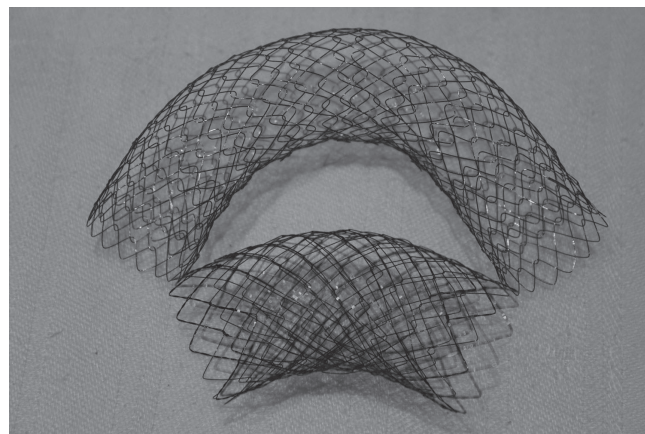
What is a duodenal stent?

Stents are flexible hollow tubes usually made of a thin metal wire which is woven into a mesh and may be covered in a plastic membrane. It is inserted down the oesophagus and through the blockage, where it expands to open up the passage. This allows food to pass through from your stomach into the bowel.

Type of stent used at The Christie



Covered



Uncovered

Where will the procedure take place?

A specialist doctor called an interventional radiologist will insert your stent in the radiology department within the Integrated procedures unit (IPU), (department 2).

What to tell the doctor before attending

- If you have any allergies.
- If you have had a previous reaction to intravenous contrast medium (the dye used for some X-rays and CT scanning).
- If you are taking medication to prevent blood clots. Below is a list of some of the medications which are used to thin the blood and help to prevent blood clots.

Apixaban	Dalteparin
Aspirin	Enoxaparin
Clexane	Fragmin
Clopidogrel	Rivaroxaban
Dabigatran	Warfarin

If you are currently taking any of these medications, please contact your referring doctor or the Radiology department on 0161 446 3325 as soon as possible, as these may need to be stopped prior to your procedure. Failure to do so may result in your procedure being postponed.

Agreeing to treatment

We will ask you to sign a consent form agreeing to accept the treatment that you are being offered. The basis of the agreement is that you have had The Christie's written description of the proposed treatment and that you have been given an opportunity to discuss any concerns. You are entitled to request a second opinion from another doctor who specialises in treating this cancer. You can ask your own consultant or your GP to refer you.

Your consent may be withdrawn at any time before or during this treatment. Should you decide to withdraw your consent then a member of your treating team will discuss the possible consequences with you.

How do I prepare for a duodenal stent insertion?

You will need to be admitted as an inpatient (usually an overnight stay). We will ask you not to eat for 6 hours before the procedure though you will be allowed to drink clear water up to 2 hours before the procedure. Usually drainage of the stomach with a tube through the nose is necessary before the procedure to prevent aspiration of stomach food. We will also ask you to put on a hospital gown for the procedure.

What actually happens during a duodenal stent insertion?

The procedure is similar to a camera examination of the stomach (endoscopy/gastroscopy) except that the tubes used are smaller than a camera.

We will ask you to remove any false teeth, glasses or contact lenses.

- You will have a cannula (needle) placed in a vein in your arm, so that you can be given a sedative and some painkillers.
- The back of your throat will be sprayed with Lidocaine (a local anaesthetic). This will numb your throat for the duration of the procedure.
- You will lie on the X-ray table, generally on your stomach. The sedative will make you feel sleepy. A mouth guard will be placed in your mouth to keep it open during the procedure to allow the radiologist to work. Throughout the procedure your pulse and blood pressure will be monitored and you will be given extra oxygen through small tubes in your nose.
- When you are sleepy an endoscope (fine tube) is passed through your mouth down your oesophagus, into the stomach and through the blockage. You may gag slightly; this is quite normal and will not interfere with your breathing. A wire is then placed through this tube and the tube is removed. The stent is then passed over this wire into the correct position and the stent is released to expand. The wire is then removed leaving the stent in place.
- The whole procedure takes approximately 30 - 45 minutes.

Will it hurt?

We will give you painkillers and sedation, so you should not feel much discomfort during the procedure.

About 1 in 10 patients have some abdominal pain after stent insertion. This can happen immediately after the stent has been placed and usually settles within 24 - 48 hours.

If you do feel any pain, you should ask your ward nurse for regular painkillers to keep it under control.

What will happen afterwards?

You will be taken back to the ward on a trolley once you are awake. Your ward nurse will carry out routine observations, such as your blood pressure and pulse. You will generally stay in bed for a few hours, until you have recovered.

How soon can I eat and drink?

You are allowed to drink once the sedation and throat spray have worn off. When you can comfortably manage drinks you should be able to build up slowly to foods with a smooth consistency (see page 5 onwards). In most cases a contrast study (dye test) will be performed the next day to ensure the stent is opening.

How long will the stent stay in?

The doctors looking after you will discuss this with you. The stent usually needs to stay in permanently. You may be offered an appointment to come back for another stent insertion if your symptoms persist.

Are there risks or complications?

Duodenal stent insertion is a very safe procedure, but there are some risks and complications, as with any medical treatment:

- Placing the stent may cause a tear (or perforation) in the wall of the duodenum. This is very rare and is usually obvious at the time of the procedure. If this happens you will not be able to eat or drink for a few days and you will be given antibiotics until the tear heals. If the tear does not heal you may need a second stent or an operation.
- The stent may take a few days to expand fully. There is a chance it may not expand fully even after a few days and you might still have difficulty managing food. If your symptoms persist you may need to have repeat procedure in the radiology department to place a small balloon within the stent to inflate it so that it expands fully.
- Your symptoms may unfortunately return. This can happen for several reasons:
 - Food may occasionally stick inside the stent causing a blockage. If this happens you may start to vomit and find that you are unable to keep food or drink down. You may need an endoscopy or repeat procedure to remove the food.
 - The stent may slip out of position in the weeks or months after placement. The likelihood depends on whether the stent is covered and whether further chemotherapy is administered. If this happens, the stent can usually be resited or replaced.
 - Your tumour may grow above or below the stent. This is treated by placing a fresh stent through the old stent, which will open up the duodenum again.
 - If you have an uncovered stent, you may get tumour ingrowth into the stent.
- If you develop any of these problems, contact your doctor at The Christie or the radiology department. If this happens in the middle of the night, contact them the following day. If this happens at the weekend you can contact The Christie Hotline on **0161 446 3658** or your GP. See contacts at end of this information.

Despite these possible risks, the procedure is normally very safe and the benefit of the duodenal stent outweighs the possible risks.

What are the alternatives?

Unfortunately there are only limited alternatives to having a stent placed in the duodenum. The most common is bypass surgery to circumvent the blockage. Your doctors have decided that stent placement is the best treatment option.

What happens next?

Depending on how well the stent has overcome the blockage, you will be encouraged to increase the amount you eat and drink. You will be discharged home once any pain is under control and you are able to eat. If you do experience severe pain or there is no improvement in your symptoms in the first 48 hours after the stent insertion you may need to go to the radiology department to investigate why. This will involve swallowing some fluid containing an X-ray dye whilst the doctor checks the position of the stent, to see if it is fully opened and whether food or fluid is able to pass through. We will tell you the results straight away and also tell you if you are able to eat or if the stent needs repositioning.

What can I eat?

- Following stent insertion, you are allowed to drink liquids once the sedation and throat spray have worn off. This includes water, tea, coffee, milk, cordial/juice and smooth soups.
- If you manage these without any nausea or vomiting, the following day you can start building up your diet. Initially try with semi-solid consistencies such as jelly, ice cream, yoghurt, custard, mousse and milk puddings. If these are tolerated well, you can then build up to the list of foods below.

- **It is vital to eat slowly and chew your food thoroughly, to make sure it is of a smooth consistency before swallowing.**
- If you wear dentures, make sure that they fit well so that you can properly chew your food.
- **Sit as upright as possible when eating and avoid lying down for at least half an hour afterwards.**
- Take sips of fluid during and after meals to help with digestion and reduce the risk of stent blockage. Be careful not to drink too much fluid before or during the meal though, as this can fill you up too much and reduce your appetite.
- Try adding sauces, gravy, custard or cream to foods to make them more moist.
- Your doctor may recommend medication for you, such as metoclopramide. **This helps stimulate your stomach to empty and to digest food. It works best if taken around 30 minutes before a meal, 3 times a day.**
- It is easier to try and spread your food into several small amounts by eating every 2 - 3 hours rather than try to eat 2 - 3 big meals a day, i.e. follow a 'little and often' pattern, with intake 5 - 6 times a day.

Ideas for meals

Breakfast

- Porridge/instant oat cereal made with milk or cream
- Wheat biscuits or breakfast cereals (avoid any with nuts/dried fruit) soaked in plenty of milk
- Skinless sausages
- Yogurt/fromage frais
- Omelette, scrambled, fried or poached eggs
- Fruit such as banana, stewed apple or pear

Savoury snacks or main meals

- Soup: homemade, tinned or packet
- Macaroni cheese or ravioli
- Baked beans or tinned spaghetti
- Jacket potato (with skin removed) with soft filling
e.g. cream/cottage/grated cheese, tuna mayonnaise, bolognese
- Tender meat with gravy
- Cottage/shepherd's pie
- Fisherman's pie
- Fish in a sauce
- Chicken/beef stew (tender meat, cooked slowly)
- Pasta dishes such as spaghetti bolognese with plenty of sauce
- Corned beef hash
- Tofu, Quorn or soya mince in gravy/sauce
- Cauliflower cheese
- Well cooked vegetables
- Vegetable curry or other soft rice based dishes
- Mashed potatoes

Desserts and sweet snacks

- Milky puddings: rice pudding, semolina, tapioca, custard
- Trifle
- Stewed fruit with custard, cream, condensed/evaporated milk
- Yogurt/fromage frais
- Egg custard/crème caramel
- Ice-cream/sorbet
- Sponge and custard
- Mousse/blancmange/instant whip/milk or fruit jelly
- Biscuits dipped in a hot drink to soften
- Moist sponge cake
- Jelly babies/wine gums/chocolate/boiled sweets/toffees

Please see 'Eating a regular, easy to chew diet' for further ideas and suggestions for food fortification.

Some foods present a higher risk of becoming stuck in the stent and causing a blockage. The list below indicates which foods to be careful with:

Food Group	Foods to AVOID which may cause stent blockage
Breakfast cereals	<ul style="list-style-type: none"> ✗ Hard cereals that do not easily soften with milk, e.g. granola, museli, fruit and fibre ✗ Cereals containing nuts or dried fruit
Meat and poultry	<ul style="list-style-type: none"> ✗ Tough, fibrous or gristle-containing cuts ✗ Poultry skin
Fish	<ul style="list-style-type: none"> ✗ Any fish which may contain bones ✗ Fish skin
Cheese	<ul style="list-style-type: none"> ✗ Any cheese containing nuts or dried fruits
Potatoes and starchy foods	<ul style="list-style-type: none"> ✗ Jacket potato skins
Vegetables	<ul style="list-style-type: none"> ✗ Hard raw vegetables ✗ Stringy vegetables, even when cooked, e.g. celery, French beans. ✗ Vegetables with tough or coarse skins/husks, e.g. sweetcorn
Fruits & nuts	<ul style="list-style-type: none"> ✗ Hard under ripe fruits which are difficult to break down to a soft consistent mass in the mouth. ✗ Pith/skins which are difficult to break down in the mouth, e.g. oranges, satsumas, grapes, apples. ✗ Seeds/pips ✗ Any whole or chopped nuts
Snacks	<ul style="list-style-type: none"> ✗ Cakes/biscuits containing dried fruit or nuts ✗ Popcorn ✗ Seeds such as sunflower or pumpkin

What do I do if I have diabetes?

The advice given above includes foods containing higher levels of sugar and fat. We advise you to consult your doctor, dietitian or diabetes specialist nurse for individual advice as some of the recommended foods and drinks may not be suitable for you.

How will I know if my stent is blocked?

If you feel that your stent has become blocked:

- try not to panic
- stop eating
- try drinking to see whether fluid clears the blockage

If it remains blocked contact your doctor or specialist nurse.

If you need further ideas or advice on soft dietary options or find your appetite has decreased please ask for a copy of The Christie booklets; 'Eating a regular, easy to chew diet' or 'Nutritional products – availability of nutritional drinks, powders and puddings'.

Contacts

Stent-related problems

If you have any problems or worries please contact:

From 9:00am to 5:00pm:

Radiology nurse on **0161 918 2346** or
Radiology department on **0161 446 3325**

Out of hours and at weekends (for emergencies): **0161 446 3000** and ask for the on-call radiologist

The Christie Hotline

0161 446 3658 (24 hours)

If you need any further information, please call:

Department of nutrition and dietetics

0161 446 3729

Other useful contacts:

Macmillan Cancer Support

0808 808 0000
www.macmillan.org.uk

Cancer Research UK

www.cancerhelp.org.uk

Digestive Disorder Foundation

www.digestivedisorders.org.uk

British Society of Interventional Radiology

www.bsir/patients

If you need information in a different format, such as easy read, large print, BSL, braille, email, SMS text or other communication support, please tell your ward or clinic nurse.

The Christie is committed to producing high quality, evidence based information for patients. Our patient information adheres to the principles and quality statements of the Information Standard. If you would like to have details about the sources used please contact **the-christie.patient.information@nhs.net**

For information and advice visit the cancer information centres at Withington, Oldham, Salford or Macclesfield. Opening times can vary, please check before making a special journey.



Contact The Christie Hotline for
urgent support and specialist advice
The Christie Hotline: 0161 446 3658
Open 24 hours a day, 7 days a week