



Department of Nutrition and Dietetics  
Department of Radiology

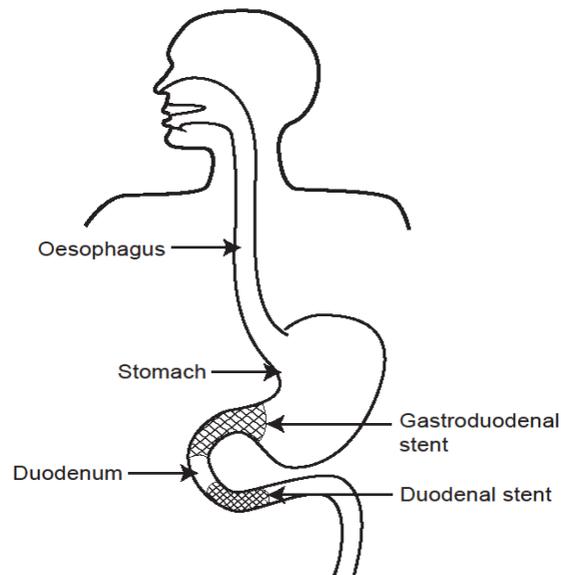
## Information for patients referred for duodenal stent insertion

### 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 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 without hold up.

## 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).

### How do I prepare for a duodenal stent insertion?

#### What to tell the doctor

- 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).
- It is important to tell the doctor or the radiology department **before attending for admission**.
- 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.

**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.**

Apixaban	Dalteparin
Aspirin	Enoxaparin
Clexane	Fragmin
Clopidogrel	Rivaroxaban
Dabigatran	Warfarin

You will need to be an inpatient in hospital (usually an overnight stay). We will ask you not to eat for six hours before the procedure though you will be allowed to drink clear water up to two hours before the procedure. Often drainage of the stomach with a tube through the nose is necessary before the procedure. 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. At The Christie most procedures are performed under x-ray control without endoscopy.

- We will ask you to remove any false teeth, glasses or contact lenses.
- 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. 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 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 a 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 to 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 soft and moist consistency (see below). 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 will need to stay in permanently. You may be offered 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 develop any of these problems you must 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 to a soft moist 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 soft and moist foods (as below).

- **It is vital to eat slowly and chew your food thoroughly, to make sure it is of a soft and 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 prokinetic 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, three 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
- Yoghurt / fromage frais
- Omelette, scrambled, fried or poached eggs
- Soft fruit such as banana, stewed apple or pear

### **Savoury snacks or main meals**

- Soup: home made, 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, bolognaise
- 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 bolognaise with plenty of sauce
- Corned beef hash
- Tofu, Quorn or soya mince in gravy / sauce
- Cauliflower cheese
- Soft, well cooked vegetables
- Vegetable curry or other soft rice based dishes
- Mashed potatoes

## Desserts and sweet snacks

- Milky puddings: rice pudding, semolina, tapioca, custard
- Soft trifle
- Soft stewed fruit with custard, cream, condensed / evaporated milk
- Yoghurt / 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 'Advice about soft and liquidised food – a guide for patients and their families' 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 take care with
Breakfast cereals	<ul style="list-style-type: none"> <li>• Hard cereals that do not easily soften with milk, e.g. granola, museli, fruit &amp; fibre</li> <li>• Cereals containing nuts or dried fruit</li> </ul>
Meat and poultry	<ul style="list-style-type: none"> <li>• Tough fibrous or gristle-containing cuts</li> <li>• Poultry skin</li> </ul>
Fish	<ul style="list-style-type: none"> <li>• Any fish which may contain bones</li> <li>• Fish skin</li> </ul>
Cheese	<ul style="list-style-type: none"> <li>• Any cheese containing nuts or dried fruits</li> </ul>
Potatoes and starchy foods	<ul style="list-style-type: none"> <li>• Jacket potato skins</li> </ul>
Vegetables	<ul style="list-style-type: none"> <li>• Hard raw vegetables</li> <li>• Stringy vegetables, even when cooked, e.g. celery, French beans.</li> <li>• Vegetables with tough or coarse skins/husks, e.g. sweetcorn</li> </ul>
Fruits & nuts	<ul style="list-style-type: none"> <li>• Hard under ripe fruits which are difficult to break down to a soft consistent mass in the mouth.</li> <li>• Pith / skins which are difficult to break down in the mouth, e.g. oranges, satsumas, grapes, apples.</li> <li>• Seeds / pips</li> <li>• Any whole or chopped nuts</li> </ul>
Snacks	<ul style="list-style-type: none"> <li>• Cakes / biscuits containing dried fruit or nuts</li> <li>• Popcorn</li> <li>• Seeds</li> </ul>

### **If you 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; 'Advice about soft and liquidised foods' or 'Nutritional products – availability of nutritional drinks, powders and puddings'.

## **Contacts**

### **Stent-related problems**

If you have any problems or worries please contact:

From 9am to 5pm:	Radiology nurse on <b>0161 446 3325</b> or Radiology department on <b>0161 446 3322</b>
Out of hours and at weekends (for emergencies):	<b>0161 446 3000</b> and ask for the on-call radiologist
The Christie Hotline	<b>0161 446 3658</b> (24 hours)

### **Further dietary information is available from the following:**

Department of nutrition and dietetics	<b>0161 446 3729</b>
---------------------------------------	----------------------

### **Other useful contacts:**

Macmillan Cancer Support	<b>0808 808 00 00</b> <b><a href="http://www.macmillan.org.uk">www.macmillan.org.uk</a></b>
Cancer Research UK	<b><a href="http://www.cancerhelp.org.uk">www.cancerhelp.org.uk</a></b>
Digestive Disorder Foundation	<b><a href="http://www.digestivedisorders.org.uk">www.digestivedisorders.org.uk</a></b>
British Society of Interventional Radiology	<b><a href="http://www.bsir/patients">www.bsir/patients</a></b>

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.

We try to ensure that all our information given to patients is accurate, balanced and based on the most up-to-date scientific evidence. If you would like to have details about the sources used please contact **patient.information@christie.nhs.uk**

© 2017 The Christie NHS Foundation Trust. This document may be copied for use within the NHS only on the condition that The Christie NHS Foundation Trust is acknowledged as the creator.

For more information about The Christie and our services, please visit **www.christie.nhs.uk** or visit the cancer information centres at Withington, Oldham or Salford.

The Christie NHS Foundation Trust  
Wilmslow Road  
Withington  
Manchester M20 4BX  
Tel: 0161 446 3000  
[www.christie.nhs.uk](http://www.christie.nhs.uk)

The Christie Patient Information Service  
June 2017 - Review June 2020

