

*The* ROYAL MARSDEN

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# Biliary drainage with or without insertion of a stent

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**Interventional Radiology**

**Patient Information**



**NHS**



## Introduction

Your doctors have recommended that you have a procedure known as biliary drainage, with or without an insertion of a stent. The aim of this procedure is to relieve the blockage affecting the drainage of bile from your liver into your small intestine. They will have weighed the benefits of having this procedure against the possibility of complications. Your doctor will have discussed these with you. If you are still unsure about the benefits of having the procedure, please ask.

This leaflet explains what the procedure involves and the possible risks and complications you may experience.

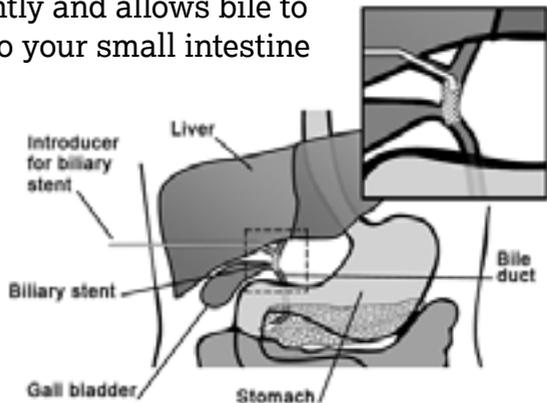
## What is a biliary drainage?

Bile is a body fluid that helps your body digest fats. It is produced by the liver and collected in tiny ducts known as the bile ducts (like a tree) that empty into a larger duct (common bile duct). Finally, the common bile duct carries bile to the first part of the bowel after the stomach (small intestine). Biliary drainage is a procedure in which a fine tube (catheter) is placed through your skin and into your liver to drain bile into a bag, outside your body.

## What is biliary stent?

A biliary stent is a small plastic or metal tube inserted into the bile duct to relieve a narrowing of the duct (duct stricture). It stays there permanently and allows bile to flow from your liver into your small intestine as normal.

### Diagram to show biliary stent and introducer



## **Why do I need biliary drainage and/or a stent?**

One or more bile ducts can narrow or get blocked. This can be caused by gallstones, cancer, or injury to the bile duct. As a result, the liver cannot not function properly. Bile may back up and cause problems such as jaundice or a leaking bile duct which may allow bile to flow into the abdominal cavity causing severe pain or infection. Depending on the cause of the blockage, it may be necessary to put a thin flexible tube (catheter) in to drain the bile into a bag outside the body (biliary drainage) or into the small intestine through a plastic or metal tube (biliary stent).

Following the procedure, you should feel much better because the level of toxins in your blood will be lowered and the risk of infection reduced. It also avoids the risks of surgery.

## **Who has made the decision?**

The consultant in charge of your case, and the doctor carrying out the procedure will have discussed your situation, and feel that this is the best treatment option for you. However, your opinion will also be taken into account and if, after discussion with your doctors, you do not want the procedure carried out, you can decide against it.

## **Who will be carrying out the procedure?**

A doctor called an interventional radiologist will carry out the procedure. They are able to see what they are doing by using x-rays. They will be assisted by radiology nurses and radiographers who will look after you throughout the procedure.

## **Where will the procedure take place?**

This procedure is carried out in a room in the x-ray (radiology) department.

## Are there any risks or complications?

- Occasionally, we are unable to place the catheter to drain the bile duct. You would then need an operation to overcome the blockage.
- Sometimes the area where the catheter is inserted can get infected. We reduce the risk of this happening by giving you antibiotics just before starting the procedure.
- It is common to have a small amount of bleeding from where the catheter is inserted.
- Rarely, the bleeding may be severe and a blood transfusion or surgery becomes necessary.

All the benefits and risks will be discussed with you in detail before your procedure.

## How do I prepare for biliary drainage and stent insertion?

- You will need to have had some blood tests beforehand (within seven days of your procedure day) to check that you do not have an increased risk of bleeding.
- If you are not already an inpatient, you will need to be admitted to the hospital as an inpatient, on the day of the procedure or the day before.
- You will be asked not to eat anything for six hours before the procedure although you will be allowed to drink clear fluids until two hours before the procedure.
- If you are taking any medication that thins your blood such as aspirin, tinzaparin, clopidogrel and warfarin you must contact the radiology department.
- You should not bring any valuables with you in case of loss or theft.

- If you have any allergies, you must tell your doctors. If you have previously reacted to intravenous contrast medium (the dye used for kidney x-ray and CT scans) also let your doctors know.
- This procedure is now mostly done under general anaesthesia, but if it needs to be done urgently due to you been very ill, it will be done under local anaesthesia with sedation, as anaesthetic support may not be available at that time.

## Can I bring a relative or friend?

You may bring someone with you, but for safety reasons they cannot accompany you into the x-ray room.

## When you arrive at The Royal Marsden

- Please report to the day care area, which is written on your appointment letter, if you are an outpatient.
- You will have a fine plastic tube (cannula) put into a vein in your arm or hand, so that you can be given fluids and receive medication while in the x-ray department. Once in place, this tube does not cause any pain.
- You will be allocated a bed on the ward, although you may not go there until after the procedure.
- Before you go to the x-ray department, we will ask you to change into a hospital gown.
- You can either walk to the x-ray department or be taken on a trolley.
- When you arrive in the x-ray department, a nurse will greet you and the radiologist will explain the procedure and discuss it with you before you sign the consent form. If you have any questions, this is a good time to ask the radiologist.

## What happens during insertion of a biliary drain/ stent?

- You will lie on the x-ray table on your back. If this is difficult for you, we can help you to get comfortable with pillows.
- We will give you painkillers and other medication through the cannula in your arm or hand.
- You will also have monitoring devices attached to your arm and finger, and may be given oxygen through small tubes into your nose by a nurse who will be with you throughout the procedure.
- The doctor will use ultrasound or x-ray machines to determine the most suitable point for inserting the tube.
- The radiologist will keep everything as sterile as possible, and will wear a sterile theatre gown and operating gloves. Your skin near the point of insertion will be cleaned with cold antiseptic. The rest of your body will be covered with a sterile theatre sheet.
- The doctor will give you an injection of local anaesthetic which will cause some stinging initially then numbness.
- The doctor will put a needle into your liver, a fine wire will be passed through the needle and used to guide the catheter in your bile duct. The catheter will then be fixed to your skin surface with an adhesive dressing and the free end attached to a drainage bag.
- We will explain what is happening throughout the procedure. It usually takes about an hour, but can sometimes take longer. If a stent is placed across the blockage to open it, a temporary catheter may be left in place with a drainage bag attached.

## Will it hurt?

You may feel some discomfort in your skin and deeper tissues during injection of the local anaesthetic. After this, the procedure should not be painful. There will be a nurse, or another healthcare professional, close by throughout the procedure. You will be awake during the procedure and able to tell the radiologist if you feel any pain, or become uncomfortable in any other way. If the procedure does become painful, the nurse will be able to arrange for you to have some painkillers through the cannula in your arm or hand.

## How long will it take?

Every patient is different, and it is not always easy to predict; however, expect to be in the department for about one hour.

## What happens afterwards?

- You will be taken back to your ward on a trolley
- Nurses on the ward will carry out routine observations, such as taking your pulse and blood pressure to make sure that there are no problems
- You will stay in bed for a couple of hours until you have recovered
- Generally you can eat and drink normally after the procedure
- Once the bile starts to drain, you will feel much better
- Your specialist doctor will tell you when your temporary catheter will be removed.

## Contact details

If you have any questions or concerns about your procedure, or you are unable to attend for this appointment, please call:

**The Radiology Department** 020 7808 2571

Alternatively, please call:

**The Royal Marsden Macmillan Hotline:** 020 8915 6899  
(available 24 hours a day, 7 days a week)

## Further information

### **The Royal College of Radiologists**

General and high level information about radiology examinations.

Website: [www.rcr.ac.uk](http://www.rcr.ac.uk)

### **The British Society of Interventional Radiology**

Information on interventional radiology procedures including patient leaflets.

Website: [www.bsir.org/patients/biliary-drainage-and-stenting/](http://www.bsir.org/patients/biliary-drainage-and-stenting/)

### **Macmillan Cancer Support**

Information on cancer types and treatment, as well as support on the emotional impact.

Website: [www.macmillan.org.uk](http://www.macmillan.org.uk)

Support line: 0808 808 00 00  
(7 days a week, 8am–8pm)



## References

This booklet is evidence based wherever the appropriate evidence is available, and represents an accumulation of expert opinion and professional interpretation.

Details of the references used in writing this booklet are available on request from:

The Royal Marsden Help Centre

Telephone: Chelsea 020 7811 8438 / 020 7808 2083

Sutton 020 8661 3759 / 3951

Email: [patientcentre@rmh.nhs.uk](mailto:patientcentre@rmh.nhs.uk)

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Should you require information in an alternative format, please contact The Royal Marsden Help Centre.

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[royalmarsden.org](http://royalmarsden.org)

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