The Royal Wolverhampton NHS Trust

Radiologically inserted balloon gastrostomy (RIG)

Radiology

The prevention of infection is a major priority in all healthcare and everyone has a part to play.

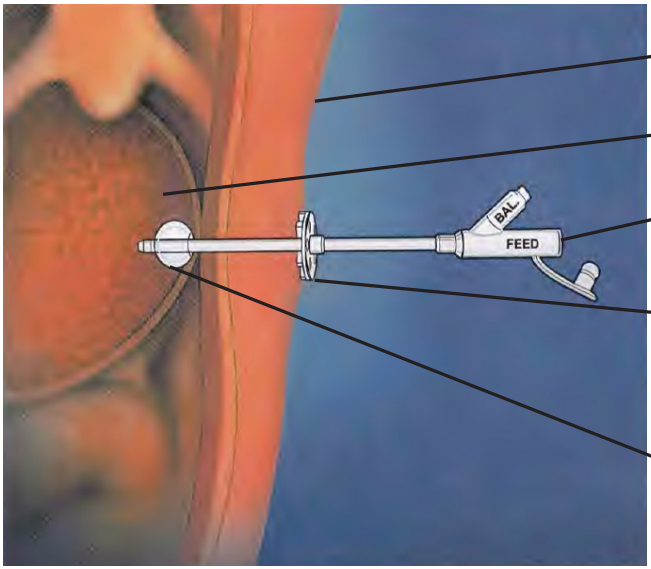
- **Please decontaminate your hands frequently for 20 seconds using soap and water or alcohol gel if available**
- **If you have symptoms of diarrhoea and/or vomiting, cough or other respiratory symptoms, a temperature or any loss of taste or smell please do not visit the hospital or any other care facility and seek advice from 111**
- **Keep the environment clean and tidy**
- **Let's work together to keep infections out of our hospitals and care homes.**

Introduction

The aim of this leaflet is to explain the procedure for patients undergoing a radiologically inserted balloon gastrostomy (RIG). This leaflet is not meant to replace an informed discussion between you and your doctor but can act as a starting point for outlining risks and benefits.

What is a radiologically inserted balloon gastrostomy (RIG)?

This is the insertion of a hollow tube through the skin and into the stomach, through which food, fluids and medicines can be given.



Why do I need a radiologically inserted balloon gastrostomy (RIG)?

A RIG tube bypasses the throat and gullet. It can be used for people who have difficulty with swallowing or if there is a risk of food or drink 'going the wrong way' into the lungs. A RIG may also be used for people who have a blockage at the back of the throat, in the mouth or in the gullet, which prevents food or drink from getting into the stomach.

If you suffer from reflux or regurgitation of food or acid, it is important that you understand that this problem will not be improved by having a RIG.

RIG feeding will not alter the outcome of your underlying disease or condition.

Who has made the decision?

The choice about which treatment is best for you will be made together with your doctor. This will be based on the risks and benefits of the treatment and your individual circumstances.

Who will do the procedure?

An interventional radiologist will perform the radiologically inserted balloon gastrostomy (RIG). Interventional radiologists are doctors who have special expertise in interpreting the images and using imaging to guide catheters and wires to aid diagnosis and treatment.

Consent

We must seek your consent for any procedure or treatment beforehand. A written consent will be obtained from yourself by a doctor to give permission to have the procedure done.

Your doctor will explain the risks, benefits, and alternatives where relevant before you sign the consent. A referral will be made, and your appointment will be arranged. If you are unsure about any aspect of the procedure or treatment proposed, please do not hesitate to ask for more information.

What are the benefits of a radiologically inserted balloon gastrostomy (RIG)?

If swallowing becomes troublesome for you, the amount of food and drink you can manage may decrease. This will result in weight loss, dehydration, and lack of energy. Also, for a variety of medical reasons, you may not be able to eat and drink enough orally and this too may result in weight loss, dehydration, and lack of energy. RIG feeding provides the extra calories and fluids to help build up energy levels and strength.

Following RIG insertion, many people report an improved sense of wellbeing and increased energy levels. Patient who have had a RIG insertion have also said that the good quality nutrition provided has reduced fatigue and exhaustion.

Difficulty with swallowing, or not having the ability or appetite to eat, can be upsetting for you, your family, and carers. The RIG can help remove the anxiety and pressures, which often accompany meals by providing some or all the nutrition from a specially prepared liquid feed.

RIG feeding can also reduce the risk of chest infections, which can follow when food or drink accidentally passes into the airways or lungs during swallowing. RIG feeding can also have the additional benefits of helping manage symptoms such as constipation, diarrhoea and dehydration.

What are the potential risks?

Although the procedure is relatively safe and major complications are rare, there are risks involved as with any medical treatment. Should there be any major complications it may be necessary to carry out an operation.

There is a major complication rate of about 6% this includes:

- Bleeding, this is extremely rare and may require another procedure or an operation to stop the bleeding
- Breathing problems
- Bowel perforation
- Inflammation or infection in the abdomen

There is a 1% mortality directly related to RIG placement

Occasionally it may not be possible to place the tube safely into your stomach. This may require a different method of placement or occasionally you may need an operation to place the tube.

Minor complications include leakage or infection around the tube resulting in red and sore skin. There is also a small risk that the balloon holding the tube in place can burst and the tube may fall out.

Radiation:
This procedure involves exposure to radiation. For most patients the risk of causing cancer from this exposure is less than 1 in 1000. It may be more than this if your procedure is complex or depending on factors such as body type, height, and weight. The requesting doctor and the doctor that will be performing your examination feel that the benefit of having the test or treatment outweighs the risk from the exposure to radiation. If you have further questions about the risk of exposure to radiation, please talk to your doctor during consent.

Please contact the X-ray Department as soon as you receive this appointment if you think you may be pregnant.

Contrast agent:
The "dye" that is used to show the stomach can have side effects for a minority of patients:

- 3 in 100 patients experience nausea and hot flushes
- 4 in 10,000 may have more serious effects including breathing difficulties

If a side effect does occur the doctors, nurses and radiographers are trained to deal with it.

Are there any alternative treatments and what if I decide not to have it done?

The Consultant in charge of your care will discuss the alternatives with you, which may include surgery. They will also discuss the consequences of no treatment.

Are you required to make any special preparations?

RIG insertions are usually carried out as an inpatient using local anaesthetic (a medication used to numb an area of the body to reduce pain). On admission you will have your blood taken (if you have no recent blood test results) to ensure you have no abnormalities, especially with your haemoglobin (iron levels in your blood) and your blood clotting levels.

A cannula will be inserted (a small plastic tube inserted on a needle) for the administration of drugs, such as Omeprazole (stops stomach acid secretion), sedation (a medication used to produce a state of calm or sleep) and antibiotics if required.

If you do not already have one, a naso-gastric tube will be inserted into your stomach, this may have to be done in the X-ray department just before your RIG insertion, using X-ray guidance (as sometimes it can be difficult to be done on the ward due to a variety of reasons). This is a long thin tube that is passed through the nose and into the stomach. This is used to inflate your stomach with air to make it easily visible on X-ray during the procedure.

You must have no food from midnight (fluids only) and then nil by mouth or naso-gastric tube from 6.00am.

If you have any allergies or have previously had a reaction to the dye (contrast agent), you must tell the radiology staff before you have the procedure.

If you are taking the following medication and the doctor has not discussed them during consent, please contact the X-ray Department when you receive this information:

Acenocoumarin, Apixaban, Aspirin, Bivalirudin, Dabigatran, Dalteparin, Danaparoid, Dipyridamole, Edoxaban, Enoxaparin (Clexane) Fondaparinux, Heparin, Phenindione, Tinzaparin, Warfarin, Rivaroxaban, Clopidogrel (Plavix).

Where will the procedure take place?

The procedure will take place in the angiography suite; this is located within the radiology department. This is similar to an operating theatre in which specialised X-ray equipment has been installed.

If you are on a different ward, the angiography suite will liaise with your ward nurse and porters to arrange transport to your procedure.

What actually happens during a radiologically inserted balloon gastrostomy (RIG) insertion?

On arrival in the department your name, address, date of birth and hospital number will be checked. Then you will be asked to get undressed and put on a hospital gown if you are not already in one. Your blood pressure, heart rate and how much oxygen is in your blood will be checked. This is routine.

You will then be taken into the X-ray room and asked to lie down on the X-ray table on your back; a radiographer will check your details who, along with the nurses will assist the radiologist during the procedure. The radiologist will come and do an ultrasound scan of your tummy to locate the position of your liver and bowel and using X-rays will check where the tip of the naso-gastric tube is, if you need a tube to be placed this will be done now. You will be attached to a patient monitor so that your blood pressure, heart rate and oxygen in your blood can be monitored throughout the procedure.

Once all the checks have been done the nurse will clean the upper part of your tummy with an antiseptic liquid and cover the rest of your body with sterile towels. A medicine will be given to stop your bowel or stomach moving during the procedure and using the naso-gastric tube your stomach will be inflated with air. The interventional radiologist will, using X-rays, inject local anaesthetic (a medication used to numb an area of the body to reduce pain) in the most suitable place for the RIG tube. This may sting for a few seconds but will then go numb. The radiologist will then place two or three stitches through your skin and into your stomach to hold it in position. These are called gastropexy stitches. These stitches are held in place by small plastic buttons which you will see on your skin.

See image below

The radiologist will again pierce the stomach with a needle, between the stitches, through which a guidewire will be passed and over this wire a graduated plastic tube will be passed to make the hole wider. When this has been achieved the central part of the tube will be removed and over the guidewire the feeding tube will be placed, the remaining plastic tube will be removed by splitting along the seams leaving the feeding tube in place. The balloon toward the end of the tube will be inflated with sterile water and the tube pulled back until the balloon is against the stomach wall and the external retention ring will be pushed down onto your skin.

Will it hurt?

The local anaesthetic will sting a little when injected but will soon wear off. Patients do experience some discomfort during this procedure. You can be given sedation and strong injected painkillers in order for the procedure to be as pain free as possible.

How long will it take?

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

What happens afterwards?

You will be transferred back to your bed and taken back to your ward. If you have had sedation, you may feel drowsy.

The naso-gastric tube will be removed.

You may feel sore when the local anaesthetic wears off.

The feeding tube can be used almost straight away.

The nutrition nurse will explain how to use and take care of the tube when you are back on your ward.

Trainee doctors

A Radiology trainee (qualified experienced doctors training in Radiology) or occasionally a student may be present during the examination. If you would prefer them not to attend, please let a member of Radiology staff know.

How to contact us

If you have any personal access needs, require wheelchair access and wish to speak to a member of staff for further information please contact the Interventional Radiology department on 01902 307999 ext. 6344 between 9.00am and 5.00pm.

Angiography Suite / Interventional Radiology
Second floor Radiology A2
New Cross Hospital
Wolverhampton
West Midlands
WV10 0QP

Patient Advice and Liaison Service
New Cross Hospital
01902 695362
Email: rwh-tr.pals@nhs.net

Further information

https://www.clinicalradiologyonline.net/article/S0009-9260(12)00073-6/fulltext

https://www.evidence.nhs.uk/document?id=2369668&returnUrl=search%3fq%3drig%2bfeed

https://www.bsir.org/patients/gastrostomy/

English

If you need information in another way like easy read or a different language please let us know.

If you need an interpreter or assistance please let us know.

Lithuanian

Jeigu norėtumėte, kad informacija jums būtų pateikta kitu būdu, pavyzdžiui, supaprastinta forma ar kita kalba, prašome mums apie tai pranešti.

Jeigu jums reikia vertėjo ar kitos pagalbos, prašome mums apie tai pranešti.

Polish

Jeżeli chcieliby Państwo otrzymać te informacje w innej postaci, na przykład w wersji łatwej do czytania lub w innym języku, prosimy powiedzieć nam o tym.

Prosimy poinformować nas również, jeżeli potrzebowaliby Państwo usługi tłumaczenia ustnego lub innej pomocy.

Punjabi

ਜੇ ਤੁਹਾਨੂੰ ਇਹ ਜਾਣਕਾਰੀ ਕਿਸੇ ਹੋਰ ਰੂਪ ਵਿਚ, ਜਿਵੇਂ ਪੜ੍ਹਨ ਵਿਚ ਆਸਾਨ ਰੂਪ ਜਾਂ ਕਿਸੇ ਦੂਜੀ ਭਾਸ਼ਾ ਵਿਚ, ਚਾਹੀਦੀ ਹੈ ਤਾਂ ਕਿਰਪਾ ਕਰਕੇ ਸਾਨੂੰ ਦੱਸੋ।

ਜੇ ਤੁਹਾਨੂੰ ਦੁਭਾਸ਼ੀਏ ਦੀ ਜਾਂ ਸਹਾਇਤਾ ਦੀ ਲੋੜ ਹੈ ਤਾਂ ਕਿਰਪਾ ਕਰਕੇ ਸਾਨੂੰ ਦੱਸੋ।

Romanian

Dacă aveți nevoie de informații în alt format, ca de exemplu caractere ușor de citit sau altă limbă, vă rugăm să ne informați.

Dacă aveți nevoie de un interpret sau de asistență, vă rugăm să ne informați.

Traditional Chinese

如果您需要以其他方式了解信息，如易读或其他语种，请告诉我们。

如果您需要口译人员或帮助，请告诉我们。

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New Cross Hospital, Wolverhampton, WV10 0QP Tel: 01902 695377.

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