

Radiologically inserted gastrostomy (RIG)

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Aim of the patient information

This patient information tells you about having a radiologically inserted gastrostomy (RIG). It explains what is involved and what the possible risks are. It is not meant to replace discussions between you and your doctor, but can act as a starting point. If you have any questions about the procedure please ask the doctor who has referred you or the Interventional Radiology department.

What is a gastrostomy?

A gastrostomy is a technique where a narrow plastic tube is placed through the skin of the abdomen into your stomach. Once in place, the tube can be used to give you liquid food directly into your stomach to provide nutrition. Gastrostomy tubes can be placed endoscopically (PEG) or percutaneously (RIG).

Why do you need a gastrostomy?

You may be unable to eat or drink sufficient amounts to satisfy your nutritional needs or there may be a problem with swallowing that makes it unsafe for you to eat or drink. There are several reasons for this. You may have had a small plastic tube inserted through your nose, down into your stomach, to help with your feeding. This can only be left in place for a relatively short period of time. Obviously, if you do not receive enough nutrition, you will become very ill.

Who has made the decision?

The consultant in charge of your care and the interventional radiologist feel that this is the best option. However, you will also have the opportunity for your opinion to be considered and if, after discussion with your doctors, you no longer want the procedure, you can decide against it.

Are there any risks?

A RIG is a very safe procedure, but as with any medical procedure there are some risks and complications that can arise.

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

Sometimes there is a leak around the tube. This is less likely to happen if the stomach has been attached to the muscles beneath the skin, but it can still sometimes occur. This can lead to the skin around the tube becoming very red, sore and painful (localised peritonitis). An attempt will be made to treat this but it may become necessary to remove the tube to allow healing to occur or an operation may be needed to sew up the hole in your stomach.

An infection can occur after the procedure which can usually be treated with antibiotics. There is the small chance that an infection can spread to the blood (sepsis) and make you unwell.

Very rarely, a blood vessel can be punctured accidentally when passing the needle into the stomach. This can result in bleeding. This may stop by itself, or if not, you may need a blood transfusion. Occasionally it may require another radiological procedure to block the bleeding artery or an operation to stop the bleeding. However, this is extremely rare.

Very rarely this procedure can damage the oesophagus (the hollow muscular tube, which takes food from the mouth down to the stomach) or the stomach which can require further procedures or surgery.

There are important structures near the stomach e.g. bowel, liver. This is why this procedure is performed using image guidance so these can be avoided. It is very important that you try to remain as still as possible, otherwise there can be a risk that these structures could be injured.

In extremely rare cases, usually in those patients who are very unwell, a severe complication such as a significant bleed or infection can lead to death.

During the procedure you will receive a dose of radiation as a result of the X-rays used. There is a possible risk of cancer induction from exposure to X-rays. However, we are constantly exposed to radiation from the air we breathe, the food we eat, the ground and from space. This is known as background radiation and has a cancer risk of around 1 in 10,000 per year. Having the procedure could result in you receiving an additional dose of radiation equivalent to a few months to a year of background radiation. The associated risk of possible cancer induction from receiving a dose of radiation equivalent to a few months to a year of background radiation is considered to be very low. Your doctor has agreed that this procedure is the best examination for you compared with others and that the benefit of having it outweighs the risks from radiation.

Despite these possible complications, the procedure is normally very safe and will almost certainly result in an improvement in your medical condition. If you do not receive enough nutrition, you will become very ill.

Are you required to make any special preparations?

A RIG is usually carried out as a day case procedure under local anaesthetic or you may require an overnight bed. If you are not an inpatient you will be asked to attend the ward early in the morning so all required paperwork can be completed. You will be asked not to eat or drink for four hours before the procedure. You may receive an antibiotic prior to the procedure.

You may be sent a blood form and asked to arrange a blood test prior to the procedure to check your bloods are within safe limits to have the procedure.

If you are taking anti coagulation or anti platelet medication, such as warfarin, you will be given instructions detailing if this medication needs to be stopped and for how long. If you have not been given this information please contact the Interventional Radiology department.

If you have had a reaction to the dye (contrast agent) or a local anaesthesia please contact the Interventional Radiology department.

If you are going home you should have someone to drive you home following the procedure. Someone should be at home with you for 24 hours following the procedure. If you do not please let the Interventional Radiology department know.

Who will you see?

A specially trained team led by an interventional radiologist who has special expertise in reading the images and using imaging to guide catheters and wires to aid diagnosis and treatment.

Where will the procedure take place?

In the Interventional suite, which is located within the X-ray department and is similar to an operating theatre.

What happens during the procedure?

Before the procedure, a member of the interventional team will explain the procedure and ask you to sign a consent form. Please feel free to ask any questions that you

may have and remember that even at this stage, you can decide against going ahead with the procedure if you so wish.

On the ward you will be asked to get undressed and put on a hospital gown. A small cannula (thin tube) may be placed into a vein in your arm in case you need any medication.

You will lie on the X-ray table, generally flat on your back. The X-ray machine will be positioned above you. You will have monitoring devices attached to your arm, chest and finger.

A RIG is performed under sterile conditions and the interventional team members performing your procedure will wear sterile gowns and gloves.

If sedation is being used this will be given in the interventional suite.

If you do not already have one, a small tube will be placed through your nose into your stomach. The skin below your ribs will be cleaned with a cold antiseptic and you will be covered with sterile drapes. The person performing the procedure may use ultrasound to identify the edge of your liver and may draw the location on your skin. Air will be passed through the small tube in your nose to inflame your stomach to allow it to be seen on X-ray and to press it against the abdominal wall. Once the best location for the RIG has been decided, local anaesthetic will be injected into the skin of your abdomen to numb the area. Several small needles are then placed into the stomach. X-ray dye, which usually contains iodine, is used to confirm their position. Small devices are then deployed to hold the stomach against the abdominal wall. A further incision is made and the feeding tube is placed. You will then be assisted back on to your hospital bed.

Will it hurt?

When the local anaesthetic is injected, it will sting for a short while, but this soon wears off. There may be a little discomfort during the procedure, but any pain that you have can be controlled with painkillers. You may be aware of the tubes being passed into your stomach, but this should just be a feeling of pressure.

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 about an hour.

What happens afterwards?

You will be taken back to your ward. Nursing staff will carry out routine observations. You will generally be required to stay in bed, initially lying flat. If you have an issue lying flat please contact the Interventional Radiology department. After which you will be allowed to sit up, then to walk around the ward, until you have recovered. If you are going home you are usually ready to go home 4 to 6 hours post procedure.

The tube in your nose can be removed and the RIG can generally be used after a few hours. Your stomach may feel a little sore for a few days. If necessary, this can be controlled with painkillers.

In 1 to 2 weeks the devices which were used during the procedure to hold the stomach against the abdominal wall will fall off (they look like small buttons). This is normal. Your feeding tube will remain in place.

How long will the tube stay in?

This is a question that can only be answered by the doctors looking after you. It all depends on why you need the tube. You will need to discuss this with your consultant. The tube needs to stay in place until you can eat and drink safely and normally. In some cases, this might not be for a very long time. You will have a specially trained dietitian looking after you who will show you how to look after the tube properly. If your tube has stitches holding it in place, these will be removed after about ten days. The tube should stay in by itself although it is best covered with a light dressing, which the nurse looking after you can apply. Other tubes are kept in place by a small balloon.

If you have any concerns after discharge; for non-urgent issues please contact your GP or 111, for urgent issues please come to A&E.

Finally, some of your questions should have been answered by this patient information, but remember that this is only a starting point for discussion about your treatment with the doctors looking after you. Make sure you are satisfied that you have received enough information about the procedure.

Interventional Radiology

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