

# Understanding Capsule Endoscopy

Patient Information

## What is Capsule Endoscopy and why should I have one?

Capsule endoscopy provides pictures of your small bowel to help us diagnose gastrointestinal conditions such as sources of bleeding, problems absorbing food nutrients, pain or diarrhoea. Capsule endoscopy is mainly used to pinpoint bleeding in the small bowel. A capsule investigation may also be offered when other investigations have not been able to find the cause of your problem or suggest the small bowel is the place to look.

Capsule Endoscopy involves swallowing a small capsule containing a camera, battery, light source and transmitter. Once swallowed, the camera moves naturally through your body. The camera takes 2-6 pictures every second for eight hours, transmitting images to a small data recorder worn around your waist. After you return the recorder, images are downloaded and reviewed. The capsule is disposable and will be passed in your bowel movement.

Capsule endoscopy is painless and does not require sedation. Most people find the capsule easy to swallow. With a few restrictions you can carry out your usual activities for the remainder of the day including going to work as long as your job is not physical.

You may be asked to have a test called a patency capsule first. This is a capsule of the same size that does not contain a battery, light or camera and dissolves naturally in the body if it gets stuck. If you are asked to swallow a patency capsule an x-ray will be arranged 1-2 days later to check the patency capsule has successfully passed through your small bowel. If it has, then a capsule endoscopy is likely to be safe.

See page 2 for how to prepare

See page 3 for patency capsule preparation

See page 4 for dietary instructions

## What are the risks?

Capsule endoscopy is a safe procedure and complications are rare. Thousands of these tests are performed around the world each year. The risks you should be aware of include:

### ***Capsule retention (1-2%)***

Capsule retention means the capsule gets stuck in your small bowel. This can happen if your digestive tract is abnormally narrowed, for example if you have had surgery and have a narrowing at the site of a surgical join or adhesions from the surgery, or if you have problems in your small bowel such as scarring or inflammation. If we think you are at risk of capsule retention we will arrange for a patency capsule.

When you have the capsule study we can tell if the capsule has passed completely through your small bowel. If there is suspicion of capsule retention we will arrange for you to have an abdominal X-ray to check if the capsule has passed. The capsules are not broken down naturally by the body, but can stay safely in the body for months or years, and they are usually passed or removed when the abnormal narrowing is identified and treated. Very rarely endoscopy or surgery may be needed to remove the capsule.

### ***Capsule aspiration (less than 1/1000)***

If the capsule is accidentally inhaled instead of swallowed it can affect your breathing and a bronchoscopy will be required to remove the capsule.

**If you have trouble swallowing please tell us.** We can plan to place the capsule directly into your small bowel.

### ***Failed examination***

If the capsule battery runs out before the whole bowel is examined we may not have enough information for a useful study. This can happen if the capsule gets held up, for example if your stomach doesn't empty properly. Sometimes these problems may mean the examination may have to be repeated, and we may need to place the capsule directly into

your small bowel during a procedure called a gastroscopy. Very rarely technical problems with the recorder, capsule or downloading process can occur and will mean the test needs to be repeated.

### **We will contact you before the procedure**

You will receive a phone call from a nurse before your procedure. Please let us know if:

- There is a chance that you might be pregnant - we cannot do this test if you are pregnant
- You have difficulties swallowing.
- If you have had surgery on your abdomen in the past – for example if you have had a gastric bypass we may need to place the capsule directly into your small bowel.
- You have a history of bowel obstructions or narrowing in the gastrointestinal tract.
- You have Crohn’s Disease or diabetes.
- You are taking any of the following medications:
  - o Iron tablets - please stop these 7 days before the test
  - o Non-steroidal anti-inflammatory drugs such as Ibuprofen, Diclofenac or Naproxen – we will want you to stop these for at least two weeks before the test
  - o Aspirin- continue unless specifically instructed. **Never stop aspirin without consulting your doctor.**
  - o Insulin or other diabetic medications as the dose will need adjusting around the procedure.

The nurse will explain the preparation for the procedure, including any special instructions, and advise you which medications you can take on the day of the procedure.

### **How do I prepare for a capsule endoscopy study?**

For a successful test your small bowel needs to be empty so that the capsule has a clear view. This means we want you to avoid seeds, skins and other residue in your diet.

**To give you the best chance of a good quality result please follow these instructions:**

- **Eat a low fibre diet for 2 days before your test (see low fibre diet information leaflet).**
- **Eat lunch at midday on the day before your test.**

- **Take only clear fluids after midday until midnight on the day before your test, this includes water, coffee or tea without milk, diabetic or diet soft drinks (avoid red or purple), strained fruit juice without pulp e.g. apple, clear soups (strained), or clear ice blocks (avoid red or purple).**
- **Do not eat after midday or drink after midnight.**
- **You can take the medications you have discussed with the nurse on the morning of your test with a few sips of water. Non-essential medications should not be taken.**

### **What should I wear for the test?**

Wear a t-shirt or similar light top. Over this a belt is placed around your waist and a small bag around your shoulders. You will then be able to put clothing on top of these if you need to throughout the day.

### **What happens on the day of your test?**

You will be seen in the gastroenterology department early in the morning. Please be prepared to stay for at least one hour.

On arrival at the gastroenterology department:

- A nurse will confirm your details and you will be asked to sign a consent form for the procedure.
- A belt containing the data recorder will be placed around your waist.
- You will then swallow the capsule with a drink of water containing simethicone, a medication that stops bubbles forming.

You are then free to resume your normal day with the following restrictions:

- After you leave the department you must not eat.
- You may drink clear, colourless fluids once the capsule has been swallowed, but please avoid effervescent “fizzy” drinks.
- After **six hours** you can eat a light snack.
- Avoid strenuous exercise or physical activities that involve stooping/bending or cause sweating.
- Move around regularly and do not lie down.
- You should avoid any powerful electromagnetic fields particularly MRI scans and amateur (ham) radios until the capsule has passed.
- Contact the Endoscopy Unit immediately if you experience any abdominal pain or vomiting

## [Understanding Capsule Endoscopy continued]

In the evening:

- You may eat a normal evening meal.
- At bed time carefully remove the recorder belt and place it close to you (within 1 metre) on a flat surface while you sleep. The capsule battery will run out sometime during the evening/night and recording will stop.

The next day:

- When you wake you can shower/eat as normal as the test will now be over. Please bring the belt and recorder back to the endoscopy department by 9am on the day after your test.
- The capsule is disposable and will be passed from your body naturally in your bowel movement. Passage of the capsule in the motions may go unnoticed, so please do not worry if you do not see it pass.

**Please take care not to expose the equipment to water or heat while in your possession and return it to the department without damage.**

Sometimes we may ask you to return the equipment on the same day as you swallow the capsule.

### What happens next?

After the procedure is completed the information from the data recorder will be processed and a video will be created and reviewed. A report will be sent to the doctor who ordered your test, who will contact you with the result.

If we can see from the video that the capsule has not passed into your colon, we will contact you to arrange an X-ray which will show if the capsule is still inside you.

**You should avoid any powerful electromagnetic fields particularly MRI scans until the capsule has passed. Please contact the department if this is a concern.**

### I am having a patency capsule first, how do I prepare and what will happen?

For a successful test we recommend you follow the patency preparation instructions below:

Eat a low residue diet for 2 days before your test. You can continue eating until midnight the day before your test. **This instruction is only for patency capsules.**

- You can drink any kind of fluid up until midnight.
- Do not eat or drink after midnight.
- Take your usual medications on the morning of your test with a small amount of water.

You will need to come into the endoscopy department to swallow the capsule and can then leave immediately and go about your normal day. An appointment will be given for an x-ray approximately 30 hours after swallowing the patency capsule. If the patency capsule passes into your colon then a capsule endoscopy study is likely to be safe. If you do not pass the patency capsule, it will not cause you a problem as it will dissolve. In this case a capsule study is probably not safe for you.

### Contact us

Gastroenterology Department

Level 6, Clinical Support Block,

Wellington Regional Hospital

Phone: (04)385 5999 Extension 6223

Appointment enquiries: (04) 385 5999

Extension 5169

Hours: 8am-4.30pm, Monday to Friday  
(excluding public holidays)

# Dietary preparation for capsule endoscopy

## Low Fibre Diet Instructions

	ALLOWED	AVOID
<b>BREAD</b>	White bread or rolls only	Wholemeal, grain, fruit, seeds
<b>CEREALS AND PASTA</b>	Puffed rice, cornflakes, noodles, Spaghetti, white rice	Wholemeal, grain pasta or cereals, brown rice
<b>BISCUITS AND BAKING</b>	Plain biscuits or crackers, foods made with white flour, like wraps or pancakes	Rich pastries, fruits, nuts, seeds
<b>PROTEIN</b>	Chicken and steamed fish Egg, tofu	Other meats
<b>VEGETABLES</b>	<b>Mashed with no skins:</b> potato, pumpkin, carrots, kumara	All other vegetables
<b>FRUITS</b>	<b>Cooked</b> apples, pureed fruits, pear or peaches <b>without skins</b>	Skin, pips, orange pith and membrane, dried fruit
<b>SOUP</b>	Clear or strained soups	Creamy soups, chowders, anything with chunks
<b>SWEETS</b>	Marshmallows, jelly, sweets, Barley sugars and boiled sweets	All other sweets
<b>FATS</b>	Small amounts of butter, margarine and oils	Fried foods
<b>OTHER</b>	Jelly (yellow, orange or green), popsicles	

- Eat a low fibre diet for two days before your test including lunch at midday the day before
- Take only approved clear fluids after midday until midnight the day before your test
- Do not eat or drink after midnight the day of your test

## Sample Low Fibre Diet Plan

<b>BREAKFAST</b> Glass of milk Egg White toast with smooth jelly Canned peaches	<b>PM SNACK</b> White toast, bread or crackers Cheese or cottage cheese Flavoured water
<b>AM SNACK</b> Yogurt without seeds or nuts	<b>DINNER</b> Lean meat, poultry or fish White rice Cooked vegetables, such as carrots or pumpkin White dinner roll with butter Hot tea
<b>LUNCH</b> Chicken noodle soup Crackers Sandwich of drained tuna with mayonnaise on white bread Canned applesauce Flavoured water or iced tea	

## Vegetarian or Vegan

- ✓ Well-cooked canned or fresh vegetables in small amounts, pureed, as a smoothie, juice or soup (ripe avocado, zucchini, cucumber without seed, pureed spinach)
- ✓ Pureed beans and peas
- ✓ Small amounts of low fibre fruits (list above plus ripe banana, melon, canned fruit)
- ✓ Cooked and strained rolled oats, semolina
- ✓ Creamy nut butter

## Approved Clear Fluids

- Drink plenty of clear liquids. Avoid red, blue and purple drinks.**
- Water, clear salty fluids (e.g. clear broths/soups)
  - Water with squeeze of strained lemon juice
  - Clear fruit juices without pulp (e.g. apple and pear)
  - Plain/clear jelly
  - Black tea or coffee (no milk)
  - Carbonated beverages, barley, clear fruit cordials, lemonade
  - Clear iceblocks