

2012 update

# Bowel Cancer



Information for people at increased  
risk of bowel cancer



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# Contents

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Introduction	1
The bowel	1
Bowel cancer	3
What are the symptoms of bowel cancer?	4
Early diagnosis and treatment	5
How common is bowel cancer?	6
What can I do to reduce my risk of bowel cancer?	8
I have bowel polyps	9
I have had bowel cancer	10
I have inflammatory bowel disease	10
I have a family history of bowel cancer	12
Tests to check the bowel	17
Contact details	21
Genetic Services	
New Zealand Familial Gastrointestinal Cancer Registry	
Further information	Back page

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# Introduction

**Bowel cancer is the second most common cancer in both men and women in New Zealand.**

Each year about 2800 people in New Zealand are diagnosed with bowel cancer.

This booklet is for people who have an increased risk of developing bowel cancer.

**It is recommended that most people who have an increased risk of developing bowel cancer have checks.**

## The bowel

**The bowel is part of the digestive system and is a long tube made up of the small bowel and the large bowel.**

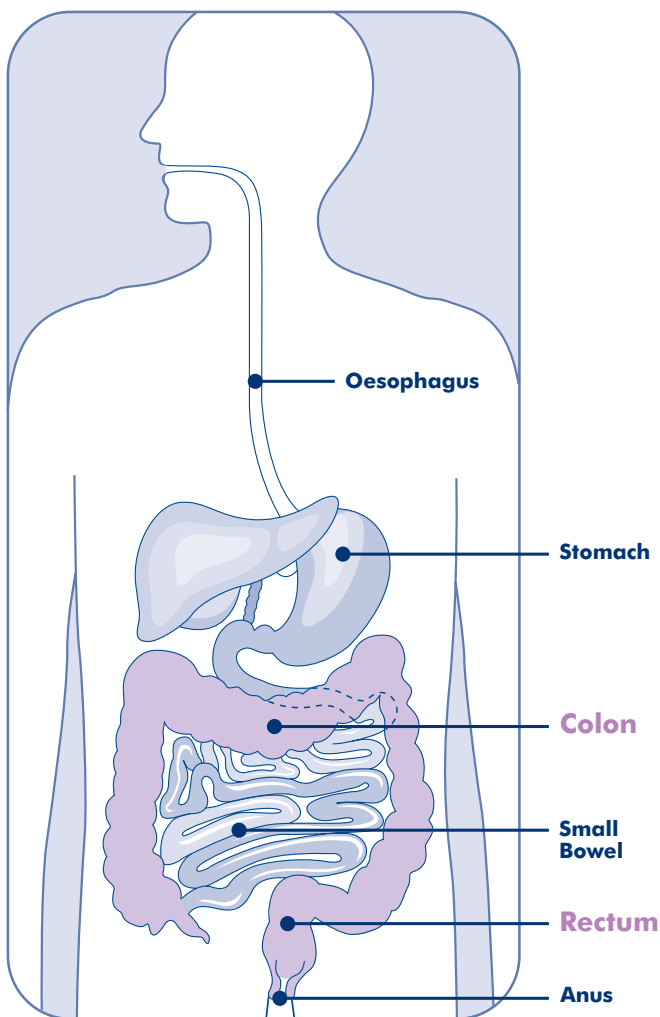
After food and liquid are swallowed they are broken down in the stomach and then pass into the small bowel to be digested. The remains then pass into the large bowel (see Figure 1 on page 2).

The large bowel is much wider than the small bowel and is made up of two parts:

1. the colon (the first 80–100 centimetres of the large bowel)
2. the rectum (the last 15–20 centimetres ending at the anus).

The colon removes liquid from the digested food leaving solid waste (poo/faeces/stools), which then passes into the rectum. The rectum holds this solid waste until you go to the toilet and have a bowel motion.

**Figure 1:** The bowel



**Large bowel** (which includes the colon and rectum).

## Bowel cancer

**Bowel cancer occurs when cells in some parts of the bowel grow abnormally and form a lump or tumour.**

The most common form of bowel cancer occurs in the large bowel, which is made up of the **colon** and **rectum** (see Figure 1 on page 2). It is sometimes called colorectal cancer. Cancer can also occur in the small bowel, but this is unusual.

Bowel cancer usually starts in the cells in the lining of the colon or rectum, most commonly inside polyps. Polyps are non-cancerous (benign) fleshy growths that occur on the lining of the inside of the bowel. They become very common as people get older. Up to 30–40% of people will develop polyps at some stage in their life.

There are different types of polyps. Occasionally, a change can take place inside the **adenomatous** type of polyp, and bowel cancer can start developing.

However, the majority of adenomatous polyps will not turn into cancer.

The more adenomatous polyps you have and the larger they are, the greater the chance that they will turn into cancer. It usually takes 5–10 years for abnormal cells inside these polyps to develop into cancer.

Bowel cancer usually grows slowly over a number of years, and as the cancer grows it can start to block the bowel. It can also spread outside the bowel to other parts of the body, such as the liver or lungs.

## What are the symptoms of bowel cancer?

There are various symptoms that could mean bowel cancer. The most important is bleeding from the bowel.

You should see your doctor if you have:

- bleeding from the back passage (anus)
- changes in your bowel habit that last for more than 6 weeks, especially more frequent or looser bowel motions.

## Early diagnosis and treatment

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**If bowel cancer is diagnosed early and treated, then there is a very good chance of the treatment being successful.**

Most people who develop bowel cancer will have surgery to remove the cancer.

Some people receive additional treatment, depending on the size of the cancer and whether it has spread.



## How common is bowel cancer?

Most people in New Zealand have an average risk of developing bowel cancer. The risk of bowel cancer is very low when you are young, but increases with age (see Figure 2 on page 7). Most cases occur in people over the age of 60 years.

There is about a 1 in 23 chance of developing bowel cancer by the age of 75 years. It is slightly more common in men, with about a 1 in 20 chance for men and a 1 in 26 chance for women of developing bowel cancer by this age. Non-Māori men and women have a higher risk of developing bowel cancer than Māori men or women of the same age.

In New Zealand, about 4 in 100 deaths each year are due to bowel cancer. However, many more people die from other cancers, strokes or heart disease (see Figure 3 on page 7).

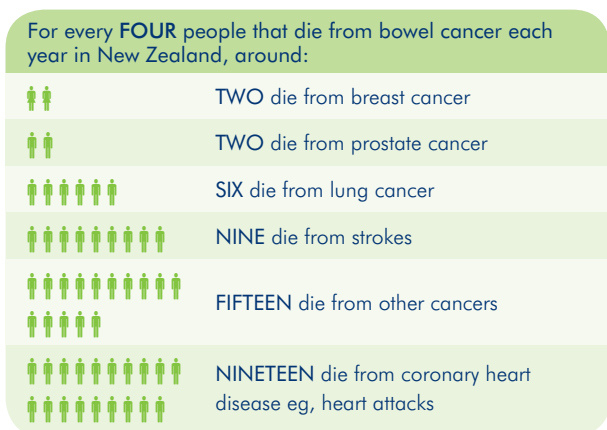


**Figure 2:** Average chance of developing bowel cancer by a certain age

Age	Average chance of developing bowel cancer by this age
35 years	Less than 1 in 1000
40 years	1 in 1000
45 years	2 in 1000
50 years	3 in 1000
55 years	5 in 1000
60 years	1 in 100
65 years	2 in 100
70 years	3 in 100
75 years	1 in 23
80 years	1 in 15
85 years	1 in 11
Older than 85 years	1 in 9

**Source:** Ministry of Health, 2011. *Cancer: New Registrations and Deaths 2008*. Wellington: Ministry of Health.

**Figure 3:** Bowel cancer deaths compared with other causes of death in New Zealand



**Source:** Ministry of Health, 2011. *Cancer: New Registrations and Deaths 2008*. Wellington: Ministry of Health.

# What can I do to reduce my risk of bowel cancer?

Although the exact causes of bowel cancer are still uncertain, lifestyle factors may contribute to the development of bowel cancer. You can lower your risk by making healthy lifestyle choices.

Here is some healthy lifestyle advice (see Figure 4 below) for reducing your risk of bowel cancer and other diseases (eg, heart disease, stroke and diabetes).

**Figure 4:** Healthy lifestyle choices

## Healthy lifestyle choices

- Maintain a healthy body weight.
- Be physically active for at least 30 minutes on most days of the week. It is even better if you increase the 30 minutes to 45–60 minutes and make some of the activity vigorous.
- Eat plenty of vegetables and fruit.
- Choose wholemeal and wholegrain breads, cereals or grain products.
- Choose foods low in salt, sugar and fat, particularly animal (saturated) fat.
- If drinking alcohol, do so in moderation.
- Be smoke free – your GP or QUITLINE (0800 778 778) can help if needed.

## I have bowel polyps

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### What is my risk of getting bowel cancer?

**If you have polyps, the risk of bowel cancer will depend on the number, size and type of polyps.**

In a small number of people, a change can happen in the adenomatous type of polyp and cancer can slowly develop.

To reduce your risk of getting bowel cancer your specialist will usually remove any polyps when you have a colonoscopy (see page 17) to see what kind of polyps you have and test them for any signs of cancer.

The results from these tests may take several days to come back from the laboratory.

If you have adenomatous polyps you should have a follow-up colonoscopy to check your bowel for further polyps that may have formed or for signs of early cancer.

Your specialist will advise you when you should have another colonoscopy.

Even if you are having regular colonoscopies, it is important to report any symptoms to your doctor that suggest the possibility of bowel cancer (see page 4) and make healthy lifestyle choices (see Figure 4 on page 8).



## I have had bowel cancer

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### What is my risk of getting bowel cancer again?

Some people who have had surgery to remove part of their bowel to treat bowel cancer are at risk of developing new bowel cancers and having their previous bowel cancer recur.

To lower your risk:

- attend follow-up visits and have regular colonoscopies as advised by your specialist
- even if you are having regular colonoscopies, report any symptoms to your doctor that are of concern or that may suggest the possibility of bowel cancer (see page 4)
- make healthy lifestyle choices (see Figure 4 on page 8).

## I have inflammatory bowel disease

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### What is my risk of getting bowel cancer?

If you have inflammatory bowel disease (either ulcerative colitis or Crohn's disease) then you may be at increased risk of developing bowel cancer. The risk depends on how long you have had inflammatory bowel disease and how much of the large bowel is involved.

## Recommended checks

If you have had a diagnosis of inflammatory bowel disease for 8–10 years or longer, then you should have a colonoscopy to check how much of the large bowel has been affected by the disease.

Biopsies will be taken from throughout the bowel and sent to the laboratory to make sure that there are no early signs of cancer. Some people with inflammatory bowel disease may already be having regular colonoscopies for other reasons.

If the inflammation involves more than the end part of the large bowel, you should have regular colonoscopies to check for early signs of bowel cancer.

Your specialist will advise you on how often this should occur.

If your inflammatory bowel disease involves only the end part of the large bowel, then you usually do not need to have regular colonoscopies as your risk of developing cancer is low.

Report any symptoms to your doctor that suggest the possibility of bowel cancer (see page 4) and make healthy lifestyle choices (see Figure 4 on page 8).

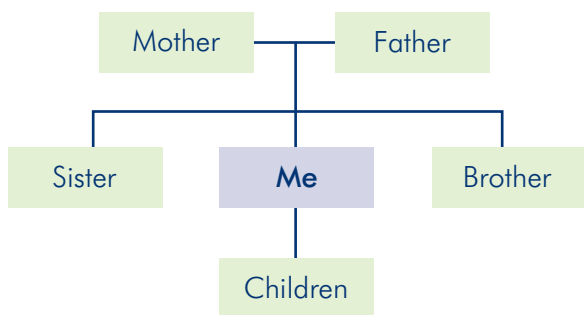
# I have a family history of bowel cancer

## What is my risk of getting bowel cancer?

Your risk of cancer generally depends on how closely related you are to the relatives who had bowel cancer, the number of relatives who were affected and their age at diagnosis.

Check to see if you have any first-degree or second-degree **blood** relatives who have had bowel cancer. **First-degree relatives** (see Figure 5 below) are parents, brothers, sisters and children. **Second-degree relatives** are grandparents, aunts, uncles, nieces and nephews.

**Figure 5:** Family tree for **first-degree** relatives



Having other relatives with bowel cancer that are more distantly related does not increase the potential risk of developing bowel cancer, except if you have a family history of certain rare inherited bowel cancer syndromes (see Group 3 on page 15).

See which of the following three groups you belong to:

**Group 1:  
Slightly above average risk for  
bowel cancer**

You are at slightly above average risk if you have one first-degree relative who was diagnosed with bowel cancer at age 55 years or older.

Most people with a family history of bowel cancer will be in this group.

**What can I do if I'm at slightly increased risk?**

- Report any bowel symptoms to your doctor (see page 4).
- Make healthy lifestyle choices (see Figure 4 on page 8).

No specific checks for bowel cancer are currently recommended in New Zealand, but you may wish to discuss this with your family doctor.

## **Group 2:**

### **Moderately increased risk of bowel cancer**

You are at moderately increased risk of bowel cancer if you have:

- one first-degree relative with bowel cancer diagnosed before the age of 55 years **OR**
- two first-degree relatives on the same side of the family with bowel cancer who were diagnosed at any age. See Group 3 to make sure these relatives haven't got certain features that would put you at potentially high risk of bowel cancer.

### **What can I do if I am at moderately increased risk?**

- Have a colonoscopy to check your bowel every 5 years from the age of 50 years or from an age 10 years before the earliest age at which bowel cancer was diagnosed in your family, whichever comes first. If bowel polyps are found, the time interval advised between colonoscopies may change. These checks are usually recommended until you reach the age of 75 years, depending on your general health.
- Report any bowel symptoms (see page 4) to your doctor.
- Make healthy lifestyle choices (see Figure 4 on page 8).



## Group 3:

### Potentially high risk of bowel cancer

You are at potentially high risk of developing bowel cancer if you have **any** of the following:

- a family history of rare inherited bowel cancer syndromes, including familial adenomatous polyposis (FAP), hereditary non-polyposis colorectal cancer (HNPCC), other familial colorectal cancer syndromes
- one first-degree relative PLUS two or more first-degree or second-degree relatives (all on the same side of the family) who were diagnosed with bowel cancer at any age
- two first-degree relatives, OR one first-degree relative PLUS one or more second-degree relatives (all on the same side of the family) diagnosed with bowel cancer, AND one of these relatives:
  - was diagnosed with bowel cancer under the age of 55 years, OR
  - had multiple bowel cancers, OR
  - had cancer in other organs (stomach, pancreas, brain, uterus, ovaries or kidneys), as well as bowel cancer
- at least one first- or second-degree relative who was diagnosed with bowel cancer who also had multiple bowel polyps
- you developed bowel cancer under the age of 50 years OR if you have one first-degree relative who was diagnosed with bowel cancer under the age of 50 years.

*Continued...*

## **What should I do if I am in this high-risk group?**

- Be referred to either a genetic service or the New Zealand Familial (family history) Gastrointestinal Cancer Registry (see page 21 for contact details).

These organisations can make a more accurate assessment of your and other family members' risk of bowel cancer.

Rare bowel cancer syndromes that run in some families may need to be confirmed with a blood test that looks for the genetic (DNA) abnormalities that cause these syndromes.

- Be referred to a bowel cancer specialist to discuss a plan for regular checks of your bowel for polyps and cancer.
- Have regular colonoscopies to check your bowel.
- See your doctor if you have any bowel symptoms (see page 4).
- Make healthy lifestyle choices (see Figure 4 on page 8).

## Tests to check the bowel

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There are a number of ways to check the inside of the bowel for signs of bowel cancer or conditions that may lead to the development of bowel cancer.

### About colonoscopy

Colonoscopy is often advised to check bowel symptoms. It is also the recommended test to check for bowel cancer in people who have a higher risk of it developing.

A small flexible tube or hose with a microscopic telescope attached is passed through your back passage (anus). This enables the specialist to look inside your large bowel all the way from your rectum to the beginning of the colon.

During this examination the specialist will check for bowel diseases (eg, polyps, inflamed tissue or early signs of cancer).

Colonoscopy is generally a safe procedure, but there are risks. Although not common, these risks include bleeding, perforation (a hole in your bowel), infection or side-effects from the sedation or pain medication.

Before the colonoscopy you will be given a laxative drink to help empty out your bowel. This is so the specialist can get a better view of the insides of your bowel. It normally takes about 30 minutes for the colonoscopy to be carried out.

Sedation and pain medication are given to reduce the discomfort of the colonoscopy. You will be conscious but sleepy. People often don't remember much about the procedure.

If cancer, polyps or inflamed tissue are seen, the specialist can take a biopsy (a small piece of tissue), which is sent to the lab for testing.

Even though polyps are usually non-cancerous, they are often removed, as occasionally cancer can develop within polyps. Also, follow-up colonoscopies are often advised if adenomatous polyps are found.

You can expect to stay at the hospital for about 1–2 hours until the sedation has worn off. You will need to arrange for someone to take you home.

## About CT colonography (virtual colonoscopy)

This test may be used to check the bowel for cancer. The test uses CT (computerised tomography) scanning. CT scans are taken with you lying on your front and back to create a moving picture of the inside of your bowel.

Most people will be asked to take laxatives to empty out the bowel before the test. This is so the specialist can get a better view of the insides of your bowel. Some people who cannot complete this bowel cleansing may be given a special barium mixture to take before the test. This 'stains' the bowel contents so the specialist can separate out and identify possible cancers from other bowel contents.

Sedation is not required for the test. During the test, a small tube is put into your back passage (anus) to fill the bowel with air or gas. After the test, you may feel a little uncomfortable and bloated for a short while.

The test involves low dose radiation exposure as occurs with x-rays and other CT scans.

## About sigmoidoscopy

Sigmoidoscopy involves putting a small flexible or rigid tube with a telescope through your back passage (anus). The doctor can then look at the lower part of your large bowel to check for signs of cancer, polyps or inflammation. Sigmoidoscopy does not look at as much of the large bowel as a colonoscopy.

## About FOBT (faecal occult blood test)

This test is used to find tiny traces of blood in your bowel motion, which may be a warning there is something wrong with your bowel. It involves collecting a small sample of your bowel motion, which is then sent to a lab for testing.

If blood is found in your bowel motion it doesn't mean you have bowel cancer, but you should have a further test to find the cause of the blood.

FOBT is not generally recommended as a check for people at increased risk of bowel cancer.

## About barium enema

Barium enema is a special x-ray of the large bowel, which includes the colon and the rectum.

You will be asked to take laxatives before the procedure to empty your bowel so the specialist can clearly see the inside of your bowel.

For the procedure, you will lie on the x-ray table. A small tube is put through your back passage (anus) and a dye (barium) is poured into your bowel.

You will then be gently moved in different directions to coat the inside of your bowel with dye. X-rays are then taken to look for abnormalities such as bowel cancer or polyps.

Barium enema is now used less often as a test to check for bowel cancer.

## Contact details

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### Genetic Services

#### **Genetic Health Service NZ – Northern Hub**

Auckland City Hospital  
Freephone 0800 476 123

#### **Genetic Health Service NZ – Central Hub**

Wellington Hospital  
Freephone 0508 364 436

#### **Genetic Health Service NZ – Southern Hub**

Christchurch Hospital  
Freephone 0508 364 436

### New Zealand Familial Gastrointestinal Cancer Registry

#### **National Office/Auckland**

Freephone 0800 554 555

#### **Wellington**

Freephone 0800 262 780

#### **Canterbury**

Freephone 0800 023 445

## Further information

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**More information on bowel cancer can be obtained from:**

- your GP or specialist
- Cancer Society of New Zealand  
Cancer Information Helpline  
0800 CANCER (0800 226 237)  
[www.cancernz.org.nz](http://www.cancernz.org.nz)

**Download this booklet free from:**

- the New Zealand Guidelines Group  
website [www.nzgg.org.nz](http://www.nzgg.org.nz)
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The information in this brochure is drawn from the New Zealand Guidelines Group evidence-based guidance document *Guidance on Surveillance for People at Increased Risk of Colorectal Cancer* (2011), available at [www.nzgg.org.nz](http://www.nzgg.org.nz)

We wish to thank all those who contributed to the development of this resource.



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