



YOUR GUIDE  
TO UNDERSTANDING  
**INFLAMMATORY  
BOWEL DISEASE**





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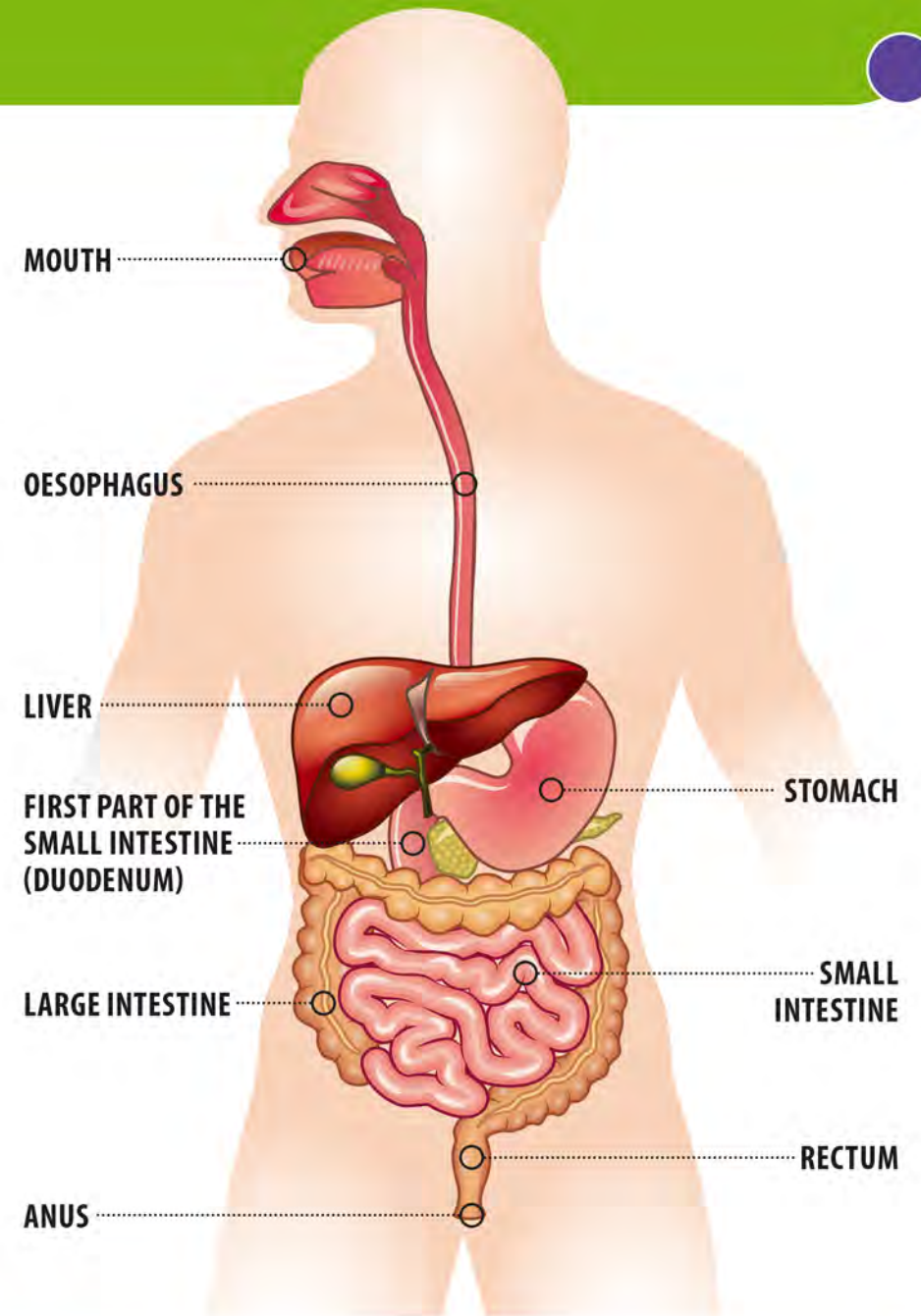
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# NORMAL DIGESTIVE FUNCTION

**T**his section of the booklet provides a brief description of the normal processes and body parts involved in digestive function. This is to help you understand what happens to your body when you have inflammatory bowel disease.

The digestion process begins in the mouth as soon as you ingest any food. The food moves from the mouth to the stomach through a structure called the oesophagus. The digestive juices in the stomach help to break down the food into smaller particles. These small food particles now move into the small intestine where they are absorbed into the bloodstream and carried to all parts of the body. The small intestine is made up of 3 parts called the duodenum, jejunum and ileum. Water and any of the food material that was not absorbed by the small intestine now move into the large intestine. The main function of the large intestine is to absorb water into the bloodstream and then pass the remaining solid waste products out of the body through the anus.<sup>1</sup>



## WHAT IS INFLAMMATORY BOWEL DISEASE?

**A**s the name suggests, inflammatory bowel disease (IBD) refers to conditions where various areas of the digestive tract, particularly the intestine (also known as the bowel), becomes chronically inflamed. This causes recurring episodes of abdominal pain and diarrhoea.<sup>2,3</sup> People with IBD may experience periods of remission (when they feel well) and then relapse (when they feel ill again).<sup>1</sup>

### THE MOST COMMON INFLAMMATORY BOWEL DISEASES<sup>4</sup>

**ULCERATIVE COLITIS**

**CROHN'S DISEASE**

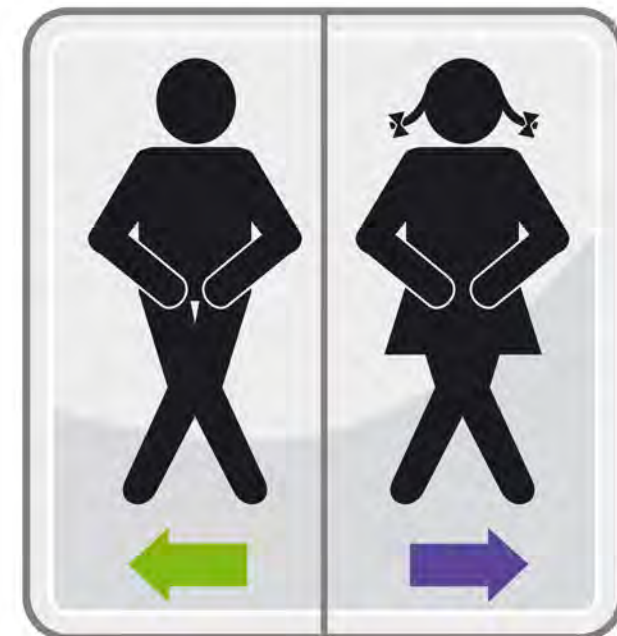
IBD affects both men and women equally. People of all ages can develop IBD however it usually begins before the age of 30, most commonly from the age of 14 to 24.<sup>3</sup>

It is important not to confuse IBD with a much less serious condition called irritable bowel syndrome (IBS). IBS affects the muscle contractions of the colon but does not cause the harmful intestinal inflammation associated with IBD.<sup>4</sup>

## WHAT CAUSES INFLAMMATORY BOWEL DISEASE?

**T**he exact cause of IBD is not known.<sup>2</sup> It is thought that genetic makeup may play a role, especially as first-degree relatives (mother, father, sister, or brother) of people with IBD have a greater risk of also developing the disease.<sup>3</sup>

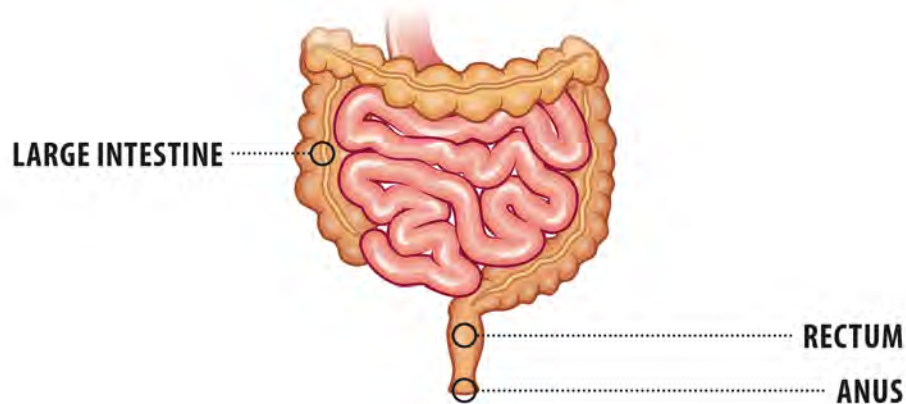
Both Ulcerative colitis (UC) and Crohn's disease (CD) occur because of an abnormal response of the body's immune system. In people with IBD, the immune cells that normally protect the body from infections, mistake food, bacteria as well as other materials that occur normally in the intestines as foreign substances. The immune cells launch an attack against the cells of the intestines which results in chronic inflammation and the symptoms of IBD.<sup>4</sup>





## ABOUT ULCERATIVE COLITIS

**UC** causes inflammation of the lining of the large intestine. It usually begins in the area closest to the anus called the rectum. Sometimes the disease only affects the rectum, but it can extend to include other continuous stretches of the large intestine. On rare occasions, almost the entire large intestine may be involved.<sup>5,6</sup>



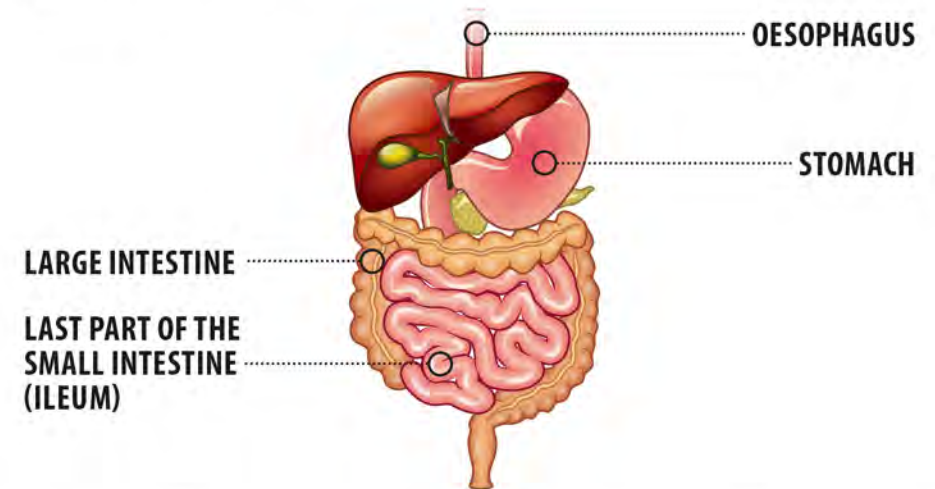
The symptoms of UC usually occur gradually but may occur suddenly and severely. Symptoms also vary depending on the severity of the flare-up and how much of the large intestine is involved.<sup>6,7</sup>

### THE MOST COMMON SYMPTOMS OF UC THAT OCCUR DURING FLARE-UPS<sup>1,7</sup>

- Severe diarrhoea that contains blood and mucus
- Abdominal cramps
- High fever
- Urgency to have a bowel movement (defecate)

## ABOUT CROHN'S DISEASE

**CD** can occur in any part of the digestive tract however it most commonly affects the last part of the small intestine (ileum) and the large intestine. The disease tends to affect some segments of the intestinal tract while leaving normal segments known as 'skip areas' between the affected areas. Unlike ulcerative colitis which causes inflammation of the lining of the intestine, CD can extend deep into all the layers of the intestinal wall.<sup>8</sup>



Symptoms of CD can vary from mild to severe, and brief or prolonged.<sup>8</sup> Symptoms may also vary depending on where it occurs in the digestive tract.<sup>6</sup>

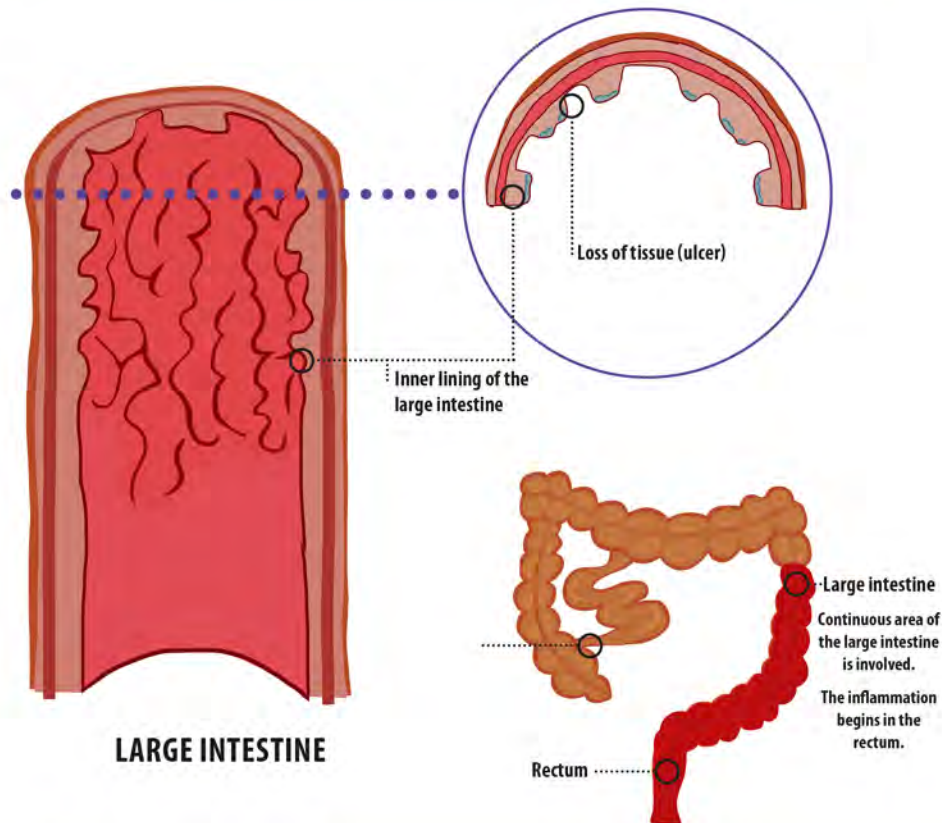
### THE MOST COMMON SYMPTOMS OF CD THAT OCCUR DURING FLARE-UPS<sup>1,8</sup>

- Chronic diarrhoea which sometimes contains blood when the large intestine is affected
- Abdominal pain
- Fever
- Weight loss

# SOME OF THE DIFFERENCES BETWEEN ULCERATIVE COLITIS AND CROHN'S DISEASE

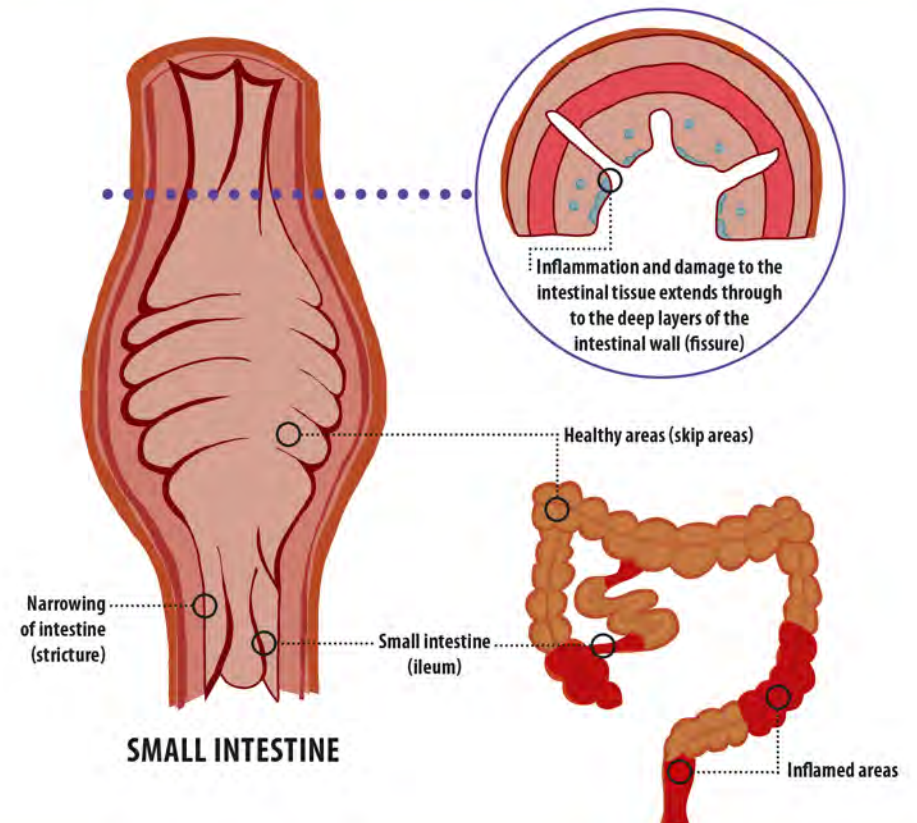
## ULCERATIVE COLITIS<sup>2</sup>

- Only occurs in the large intestine
- The rectum is always involved
- Primarily involves continuous lesions of the lining of the intestine



## CROHN'S DISEASE<sup>2,8</sup>

- Can involve any segment of the digestive tract from the mouth to the anus
- 'Skip areas' are common (normal areas of the bowel interspersed with diseased areas)
- Lesions may extend through the entire thickness of the intestinal wall





# COMPLICATIONS OF INFLAMMATORY BOWEL DISEASE

## COMPLICATIONS OF ULCERATIVE COLITIS

<b>Bleeding</b>	Bleeding is the most common complication of UC. It often causes iron deficiency anaemia. <sup>7</sup>
<b>Ulcers</b>	Chronic inflammation can result in open sores (ulcers) along the digestive tract. <sup>6</sup>
<b>Toxic colitis</b>	This is a very serious complication that involves the entire thickness of the intestinal wall. Damage to the nerves and muscles of the large intestine causes a condition known as ileus where the normal contractile movements of the intestinal wall temporarily stop. This prevents the intestinal contents from being propelled forward resulting in distension of the intestine. This results in high fever and abdominal pain. Sometimes the large intestine may even perforate. <sup>7</sup>

## COMPLICATIONS OF CROHN'S DISEASE

<b>Intestinal obstruction (blockage)</b>	Chronic inflammation of the entire thickness of the intestinal wall can cause parts of the intestine to thicken and narrow over time. This can block the flow of digestive contents through the affected part of the intestine. In some cases, surgery may be required to remove the diseased portion of the intestine. <sup>6</sup>
<b>Ulcers</b>	Chronic inflammation can result in open sores (ulcers) along the digestive tract. <sup>6</sup>
<b>Abscesses</b>	Ulcers that penetrate deep into the intestinal wall can create abscesses which are pus-filled pockets of infection. <sup>8</sup>
<b>Fistulas</b>	Ulcers that extend completely through the intestinal wall can create a fistula which is an abnormal connection between different parts of the intestine, between the intestine and skin, or between the intestine and another organ such as the bladder or vagina. <sup>6</sup>
<b>Anal fissure</b>	These are cracks or tears in the skin of the anus which can cause painful bowel movements. <sup>6,8</sup>



## GENERAL COMPLICATIONS ASSOCIATED WITH IBD

<b>Nutritional deficiencies</b>	Several factors can result in nutritional deficiencies. These deficiencies can result from malabsorption (the intestine is not able to absorb the nutrients it needs), decreased food intake (e.g. due to abdominal pain and cramping), medications, and/or intestinal losses (e.g. from diarrhoea). Nutritional deficiencies occur more commonly in patients with CD as the disease can occur anywhere in the digestive tract. <sup>9</sup>
<b>Colon cancer</b>	IBD is associated with an increased risk of developing cancer in areas of the intestine that are affected. <sup>3</sup>
<b>Other health problems</b>	In addition to inflammation and ulcers in the digestive tract, IBD can cause problems in other parts of the body such as inflammation of the joints (arthritis), inflammation of the white of the eyes (episcleritis), inflamed skin nodules (erythema nodosum), and blue-red skin sores containing pus (Pyoderma gangrenosum). Inflammation of the liver and bile ducts can occur. Long standing IBD can also result in osteoporosis, a condition that causes bones to be weak and brittle. <sup>6,7</sup>



## MANAGING INFLAMMATORY BOWEL DISEASE

There is currently no cure for either UC or CD. Management options to prevent flare-ups and complications include:<sup>10</sup>

- Medication and possibly surgery
- Diet
- Lifestyle



## MEDICATION USED TO TREAT INFLAMMATORY BOWEL DISEASE

The treatment goal is to reduce the inflammation that triggers the signs and symptoms of IBD. Treatment with medication may also lead to long-term disease remission (absence of symptoms).<sup>6,10</sup>

Your doctor will decide the best course of treatment for you. The following are examples of the types of medication used to treat IBD:

<b>Anti-inflammatory drugs</b>	These are often the first step in the treatment of IBD. They reduce inflammation and can suppress symptoms when they develop. <sup>6,8</sup>
<b>Immune system suppressors</b>	These drugs influence the immune system and suppress the immune response that originally caused the disease. <sup>6</sup>
<b>Biologic drugs</b>	Tumor necrosis factor (TNF) is a protein in the body's immune system. This protein can cause the immune system to attack healthy tissues in the body resulting in inflammation and damage. Anti-TNF medications block the action of TNF which can reduce the inflammation associated with IBD. <sup>1</sup>
<b>Other medications</b>	Antibiotics: these are commonly used to treat abscesses and fistulas around the anus in patients with CD. <sup>6,8</sup> Anti-diarrhoeals: these are used to help relieve cramps and diarrhoea. <sup>8</sup> Pain relievers: your doctor may prescribe a pain reliever if symptoms are bothersome. Do not use over the counter preparations without consulting your doctor as some medications may make your symptoms worse. <sup>6</sup>





# SURGERY

If medication, diet and lifestyle changes do not relieve IBD symptoms, your doctor may recommend surgery. Surgery may be needed in people with CD to relieve intestinal obstructions and abscesses or fistulas that do not heal.<sup>8</sup>

## DIET

There is no special diet that can effectively treat IBD. People with IBD should eat a normal, healthy diet as long as the foods are tolerated.<sup>9</sup> A person's diet does not cause IBD however certain foods may aggravate the symptoms of IBD in some people.<sup>6</sup>

In general, if you notice specific foods tend to make your symptoms worse, it may be worth eliminating these foods from your diet.<sup>6</sup>



### DIETARY DO'S AND DON'TS

<b>Eat smaller, frequent meals<sup>9,10</sup></b>	Dividing your daily food intake into 5 – 6 smaller portions and eating every 2 – 3 hours is better than eating less often but larger portions. Smaller portions help to reduce the load on the digestive tract and help to digest the food better.
<b>Limit dairy products</b>	Milk and dairy products (e.g. cream, cheese, yoghurt) can aggravate symptoms of IBD. Avoid these foods during flare-ups and then gradually re-introduce them into your diet if tolerated. In some cases, dairy may need to be completely eliminated from the diet. <sup>6,10</sup>
<b>Limit foods high in fibre</b>	Foods high in fibre such as fresh fruits and vegetables and whole grains can aggravate the symptoms of IBD, particularly during a flare-up. Cooking these high fibre foods (e.g. steaming, baking or stewing them) may improve their tolerability and help to avoid having to eliminate these healthy foods from your diet. <sup>6,10</sup>
<b>Avoid foods that can cause gas<sup>10</sup></b>	Foods that may cause gas include beans, cabbage, broccoli, caffeine, and carbonated drinks. <sup>10</sup>
<b>Drink plenty of fluids</b>	Water is the best fluid to drink. Drinks that contain caffeine stimulate the intestines and can make diarrhoea worse. As mentioned above, carbonated drinks often produce gas. <sup>6</sup>
<b>Multivitamins</b>	Multivitamins can supply missing nutrients when IBD interferes with the absorption capabilities of the intestine. Vitamin B12 may need to be administered by injection as inflammation of the last part of the small intestine significantly affects its absorption. <sup>6,10</sup>



## THE EFFECT OF SMOKING ON INFLAMMATORY BOWEL DISEASE

**S**moking is known to increase the risk of developing CD and can exacerbate the disease. Smokers with CD are more likely to have relapses, need medication and repeat surgeries. Quitting smoking improves the overall health of your digestive tract.<sup>6</sup>



## THE EFFECT OF STRESS ON INFLAMMATORY BOWEL DISEASE



**S**tress does not cause IBD, however it can affect the immune system and inflammatory responses which can trigger flare-ups or aggravate symptoms.<sup>6,11</sup> Exercise can help to reduce stress, relieve depression and normalise bowel function. Other techniques to promote relaxation such as breathing exercises, hypnosis and any other activity you find relaxing may be beneficial.<sup>6,11</sup>

## ORAL CONTRACEPTIVES AND INFLAMMATORY BOWEL DISEASE

**O**ral contraceptives are mainly absorbed in the small intestine. Their efficacy is dependent on the absorptive capability of the small intestine which means that patients with reduced absorption ability or chronic diarrhoea may experience reduced effectiveness of their oral contraceptive. Pregnancy could therefore result even if the pill is taken correctly. Women with CD are therefore more likely to experience contraceptive failure with their oral contraceptive as their disease often involves the small intestine. It is much less likely that women with UC will experience the same problem as their disease primarily affects the large intestine.<sup>12</sup>

Antibiotics that are often used to treat the complications of IBD may also compromise the efficacy of the oral contraceptive pill.<sup>12</sup>

Prevention of pregnancy is particularly important in women receiving certain immune suppressing medication as these drugs can result in abnormal foetal development. Additional contraceptive protection such as a barrier method is therefore necessary.<sup>12</sup>





## PREGNANCY AND INFLAMMATORY BOWEL DISEASE

**M**ost women with IBD will have a normal pregnancy and a healthy baby.<sup>13</sup> You may need to take special precautions during your pregnancy and your doctor may change your treatment to a more suitable medication if he knows you intend on becoming pregnant. It is recommended that women who are thinking of getting pregnant should try to get their IBD under control first. If you are well when your pregnancy begins, you are more likely to have an uncomplicated pregnancy and to remain well for the duration of the pregnancy.<sup>13</sup>

If you have active disease when you conceive, or experience flare-ups during your pregnancy, you are more likely to give birth early or have a baby with a low birth weight. However, your doctor should be able to bring your symptoms under control. Many women who conceived while their IBD was active have had successful pregnancies and healthy babies. Severe IBD may put the baby at greater risk and it is therefore essential to consult your doctor if you notice your symptoms becoming worse.<sup>13</sup>



## TRAVELLING WITH INFLAMMATORY BOWEL DISEASE

**I**BD when in remission does not cause problems while travelling. However, when people with IBD experience a flare-up, they may become very concerned about being in a car or plane for a long period of time. Unfamiliar foods are also a cause for concern as you don't know if they could aggravate your symptoms.<sup>10</sup>

### TIPS TO HELP YOU WITH YOUR TRAVEL PLANS

#### Medication<sup>10</sup>

- Bring enough medication to last throughout your trip. Filling a prescription abroad can be complicated
- Medication that needs to be refrigerated should be stored in a small cooler bag
- Take a copy of your prescription (including the active ingredient names as the brand names can differ from country to country) just in case you need to purchase additional medication
- Keep your medication in its original container so it is easy to identify
- Take a supply of over-the-counter medications approved by your doctor such as anti-diarrhoeals, anti-spasmodics, rehydration sachets and pain killers
- Use pillboxes to carry small amounts needed during the course of a day, so you always have your medication with you
- If you are travelling by air, store your medication in your hand luggage, in case your baggage is lost

#### Information from your doctor<sup>10</sup>

- Get a letter from your doctor documenting your medical history and medications you are taking
- Ask for a written plan of action in case your condition deteriorates while you are travelling
- Keep your doctor's phone number and your medical aid card and/or travel insurance card in your wallet



## TIPS TO HELP YOU WITH YOUR TRAVEL PLANS (CONTINUED)

<b>Transportation and getting around<sup>10</sup></b>	<ul style="list-style-type: none"> <li>• When making airline reservations, request an aisle seat near a bathroom</li> <li>• Give the airline advance notice so that it can accommodate your dietary requirements</li> <li>• Carry a number of snacks and simple foods with you in case the local food aggravates your symptoms</li> <li>• Find out in advance whether the buses and trains you are using have toilets</li> </ul>
<b>Public toilets<sup>10</sup></b>	<ul style="list-style-type: none"> <li>• Find out where public toilets are located</li> <li>• Take extra toilet paper and clothing with you in case of an accident</li> </ul>
<b>Vaccinations<sup>10</sup></b>	<ul style="list-style-type: none"> <li>• Depending on the destination of your journey, make sure you have the relevant vaccinations and malaria medication</li> <li>• Medication that suppresses the immune response may affect the ability of the body to react to the vaccines</li> <li>• Make sure that you consult your doctor about which vaccines will be suitable for you</li> </ul>
<b>Be careful what you eat<sup>10</sup></b>	<ul style="list-style-type: none"> <li>• In certain countries you may need to pay careful attention to what you eat and avoid sushi, raw vegetables (including salads), ice-cream and ice lollies</li> <li>• Use bottled water for drinking water (even when brushing teeth)</li> <li>• Remember to ask for drinks without ice, unless the ice is prepared using bottled water</li> <li>• Cooked vegetables and meat from reputable and clean establishments should be fine to eat</li> <li>• Avoid roadside and street foods</li> <li>• Always peel fruit before eating</li> </ul>
<b>Security checks<sup>10</sup></b>	<ul style="list-style-type: none"> <li>• A body search could result in your stoma bag or added sanitary protection being felt</li> <li>• A letter from your doctor explaining your condition and medication and any appliances you may need will help to explain your situation</li> </ul>

## CHECKLIST TO HELP YOU WHEN YOU ARE OUT AND ABOUT



Pack some spare underwear



Carry some tissues and wipes - just as a precaution



Carry medication with you



Make sure you know where the toilets are as soon as you arrive at a new place such as a restaurant, café or workplace



If you are travelling, try and book a seat close to the toilets







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