

IBS Introduction

Thank you for taking the time today to learn more about Irritable Bowel Syndrome, (IBS) .

In this video I'm be talking about what IBS is and our understanding of what causes it, as well as information about how the gut works and why this sometimes goes wrong.

In a separate video, I will be discussing how Doctors make a diagnosis of IBS and what tests may be needed, as well as how lifestyle changes and other treatments can help.

Irritable Bowel Syndrome, or IBS, is a common disorder affecting the gut. It causes abdominal pain and a disturbance in bowel function. It can be a short-lived problem, for example after a gut infection, or a longer term - what we call a chronic condition. The symptoms might come and go and may also be more or less severe over time.

In this video, I am going to talk about who gets IBS, and why we think people get it. I will speak about how the gut is put together and what it does and how this can sometimes go wrong.

During the video, you'll hear me use the words 'gut' and 'bowel', I just want you to know that these two terms mean the same thing.

IBS is one of a group of conditions called "Functional Gastrointestinal Disorders".

The term "Functional" refers to the fact that there is a disorder of a particular function of the body, but that this is not accompanied by any abnormality in the structure of the body, or the way the body is put together. In the case of functional gastrointestinal disorders it also implies that there is no inflammatory disorder affecting the gut, such as Crohn's disease or Ulcerative colitis.

Who gets it?

IBS is far and away the commonest disorder causing ongoing problems with abdominal pain and disturbed bowel function. Approximately 10% of women and 5% of men suffer from IBS at some stage. While the onset of the problem is very often as a young adult, it can start at any age. Symptoms can range from a mild nuisance to being very intrusive and difficult to live with.

Why do we get it?

The reason why people develop IBS is complex and we are only beginning to understand the causes now. Indeed, there probably is not one single cause but rather a combination of several different factors at work, interacting with one another to cause these symptoms.

Recent evidence suggests there is a genetic basis for IBS, a family history is common and some individuals may be predisposed to the gut nervous system being more easily disturbed.

Lifestyle factors such as physical inactivity, irregular eating habits, skipping meals, eating too much highly processed food and too little fibre may be important for some people. Excessive consumption of alcohol and caffeine may be important factors for other people.

In up to a quarter of people with IBS the condition is triggered by an initial gut infection which disturbs gut function. For reasons which we do not fully understand, in some people the gut then struggles to get back to normal functioning as before.

This so-called post-infective IBS is particularly common after the more severe types of infection, such as the food-poisoning bugs campylobacter and salmonella, but it can occur after quite trivial gut infections that a person may not even have been aware of having.

It is likely that a disturbance of the normal mixture of our own bacteria in the gut might play a role in causing the symptoms of IBS. Much more needs to be done to understand this properly and how these bacteria might interact with our diet and with each other to cause gut disorders.

It is often thought that anxiety and stress play an important role in IBS.

The fact that what goes on in the brain may influence the nervous system in the gut is hardly surprising as these 2 parts of the nervous system are so closely connected.

Many people may have experienced the effects of stressful situations on their gut function- a feeling of “butterflies in the stomach” or bouts of diarrhoea before an exam or a job interview. For most people it seems that stress acts more as an “amplifier” or “magnifying glass” for these symptoms, making them feel much worse, rather than being the underlying cause itself.

Disturbance of the gut nervous system

Although there are probably a number of factors which contribute to people getting IBS, a disturbed functioning of the gut nervous system is the underlying reason behind symptoms in most people.

In the past, IBS was known as “spastic colon” because it was thought that abnormal contractions or “spasms” of the bowel muscles were the main cause of the symptoms. More recent research has shown that while this may be true in some people, it is abnormal functioning of the nerves which detect what is going on in the gut and the messages that these nerves send to the brain which play a more important role in IBS.

Nowadays IBS is largely considered to be a disorder of the nervous system of the gut and the way in which this interacts with the brain. The gut appears to be more sensitive in affected people and that increased sensitivity creates an exaggerated reaction to what is going on in the gut. There are almost as many nerve cells in the gut as there are in the brain and the interactions between them are very complex. It is not surprising with such a complex system that things can sometimes go wrong.

How the bowel is put together

Before I go any further I think it would be helpful to provide a bit more detail about what the bowel, or colon, is and how it works.

It is much more than just a long hollow tube.

If you look at the wall of the bowel cross ways you see it is made up of 1,2,3 layers of muscle.

Sandwiched in between these layers there are 1,2 layers of nerves.

So, your bowel has its very own nervous system, or, you could say, it has a mind of its own.

To know when to contract, or squeeze, and when to relax there are “sensors” within the wall of the bowel.

Some of these pick up changes in pressure when the muscles squeeze hard.

Some pick up changes in stretch when wind or gas in the bowel expands and stretches things.

The “sensors” gather the information needed to allow the bowel to work properly.

How the bowel works

These different parts must work together very closely, telling each section of muscle when to contract, (to push things along), and when to relax ,(to allow things to pass).

This sets up a “wave” of muscular contractions a bit like a “Mexican wave” at a football stadium, pushing things along.

Just like a Mexican wave at a football stadium, the muscles and nerves need to know what is happening upstream and downstream from themselves. If they don’t work together then the wave breaks down or fails to work properly.

The bowel has several tasks to perform and most of the time it carries them all out quietly and efficiently and we never even have to think about it.

We might even forget all about it so long as it is working normally.

Some of the work your bowel does includes:

- Digesting the food you eat- this means breaking it down so your body can get the good of the nourishment in the food. This takes place in the small intestine.
- Removing water from what is left over after digestion, (or waste products), to make it more solid. This takes place in the large intestine or colon.
- Storing those waste products until you can go for a poo.
- Passing those waste products out of your body as poo.

These functions all need the long hollow tube of the bowel to be able to move food and waste products from one end of the bowel to the other- food goes in at one end and poo comes out of the other. This requires the “waves” of muscular contraction to push things along.

The **FASTER** things move along the **LESS** time there is for water to be taken out of the waste products

- This means looser, more watery poo or going to the toilet more often

The **SLOWER** things move through the **MORE** time there is for water to be taken out of the waste products

- This means harder poo or going to the toilet less often

The bowel’s own nervous system works independently from the brain and the rest of the nervous system, but it remains connected to these so that information can be sent to the brain telling it what is going on in the bowel. This warns the brain of problems by triggering sensations of pain or discomfort.

Likewise, messages can be sent from the brain to the gut, for example to tell the bowel that right now may not be a good time to function! In some people these channels of communication between the gut and the brain may be more active than in others.

A Hypersensitive Bowel

The sensory nerves or “sensors” within the gut are there as a way of warning us of problems which might be occurring deep inside, problems which we cannot see. They respond to changes in pressure or stretch within the gut as if to warn us against “overfilling” the gut, or eating large or unsuitable things which might cause us harm.

Sometimes these “sensors” are set at too low a level or threshold and so can pick up minor changes that might otherwise go unnoticed or be ignored.

They will still send that information to the brain and the brain will still feel a sensation which is sore or uncomfortable - it doesn't know that these signals are “false alarms” - it just has to deal with whatever information it gets.

This system is a bit like the warning systems in a car. If the sensors malfunction, or are too sensitive, warning signals, in this case pain, will be sent to the dashboard, or in a human being the brain.

In most people with IBS, the sensors tend to be too sensitive, meaning their warning signals may be “false alarms”, like a warning light on the dashboard of a car due to a faulty sensor rather than indicating any serious problem. Our brains find it difficult to filter out these “false alarm” signals and in IBS this may especially be a problem.

The things going on in our lives, our feelings and thoughts can also affect how sensitive these sensors might be. If we are nervous, under pressure or feeling down, this can act like a magnifying glass to these sensations, making us even more aware of what is going on. In other circumstances, we might not even notice these normal workings of the bowel or might just ignore them.

How treatments can work

Although a problem of an oversensitive bowel can be difficult to change we can try to look at avoiding things which might cause more pressure or stretching in the bowel.

Certain foods or drink can cause more gas to build up in the bowel causing more stretching and more pain, just like a balloon being pumped up with air.

Some of the commonest foods to cause problems are things like too much fibre, especially insoluble fibre, things like wheat and other starchy carbohydrates, lactose or dairy products, caffeine and sorbitol – a sweetener in some foods.

Some of the medicines used to treat IBS work by making the bowel less sensitive.

Certain forms of psychological treatment, including hypnotherapy and relaxation therapies, have been shown to be useful in treating IBS. It is probable that these work by reducing the brain's response to the unnecessary signals it is getting from an oversensitive gut.

Please have a look at our separate video which discusses how your Doctor makes a diagnosis of IBS and things which can help the condition.

Thank you very much for taking the time to watch this video today.