- Digestion



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Getting to know your gut

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Let's start at the beginning: what is the gut, what does it do, and how do we know if something's wrong?



Your gut includes the whole of your gastrointestinal system. It starts at your mouth and ends at your anus and it's about nine metres long. It forms a continuous passageway that includes the main organs of digestion, namely the stomach, small intestine, and large intestine.

The gastrointestinal tract (GI tract) contains the gut microbiota, with some 1,000 different strains of bacteria having diverse roles in the maintenance of immune health and metabolisms.

Its main function is to digest the food that you eat, take the nutrients and energy out of it and supply them to the rest of your body. It also excretes waste from the body which it packages it up into your poo.

In recent years it's become clear that the gut is very much more than just food digestion and waste excretion, but it also plays a crucial role in the overall function of the body. Having a healthy gut is a vital key to having good general health.

A trip along the digestive tract

Following a piece of food through the gastrointestinal tract can help to give us a good understanding of the different parts of the gut.

The time it takes for food to move right through the body varies hugely. It depends on the type of food and your individual digestion. The whole process can be as quick as 12 hours, but it may take up to five days for some foods to make their way along the entire tract.

WHY IS GUT HEALTH IMPORTANT?

It's essential to look after your gut. Having a healthy gut will mean you can:

- Get the nutrients and energy your body needs to function
- Effectively excrete harmful waste products from your body
- Maintain a healthy gut microbiome
- Lower your risk of other long-term medical conditions
- Reduce your risk of contracting bowel cancer
- Have a regular and manageable bowel habit
- Easily spot changes in your gut that might indicate disease
- Feel more in control of the gut-brain connection and your mental health

Investing time and energy into looking after your gut will have huge rewards, both now and in the future.

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30 DAYS TO Better Gut Health



When things go wrong...

With so many players involved in the gut it's easy to see why sometimes things don't work as they should. Understanding the normal process helps you to understand how different problems might affect you. If food isn't travelling smoothly through the oesophagus you might get indigestion. If the stomach is over-producing acid, that can damage the stomach lining and give you pain or stomach ulcers.

If the sphincter at the bottom of the oesophagus doesn't close properly, then stomach acids might reflux into your oesophagus and give you heartburn. Similarly, if you have inflammation of the lining of the bowel such as in Crohn's disease or ulcerative colitis, it's easy to see how that can affect the way your body absorbs nutrients and water.

Talking to your doctor about your bowels

All of us will experience symptoms from our gut at some point in our lives. Gut conditions are very common, for example, around one in five adults have irritable bowel syndrome (IBS), a condition that causes pain, bloating and a change in bowel habit. Bowel habits can feel very personal and remain a taboo topic, but we need to get comfortable talking about them so that we don't miss important conditions such as bowel cancer.

Getting a diagnosis early can save your life. Remember, your doctor is very used to conversations about bodily functions and won't bat an eyelid when you talk about your poo. In fact, they want to hear about it. Don't put off going to your doctor because you feel embarrassed.

It's more than just digestion

Have you ever had a feeling in your gut about something? This sensation just highlights that the gut doesn't function alone. Feeling nervous can give you diarrhoea, feeling stressed can make you feel sick, while a stomach rumble makes you feel hungry. The brain and gut are communicating all the time and an issue in one affects the other.

Other body systems are intertwined with the gut too such as your immune system. Even your bone health can be affected, as oestrogen influences how much calcium is absorbed from your gut and calcium is needed for healthy bones. For women, getting diarrhoea linked to your menstrual period or developing constipation in menopause are examples of how hormones can cause gut problems.

IS YOUR POO NORMAL?

Spot the signs of potential health issues with regular poo checks





Colour

Poo colour is influenced by what you eat, but essentially it should be brown. Black stools can indicate blood loss. Very pale stools can be a sign of liver disease, while green stools may suggest infection. Red poo can indicate fresh blood loss; the blood may be on the surface or mixed in with the poo. Speak to your GP if you notice any of these changes.



Smell

No poo smells great and certain food such as broccoli or eggs can make it more stinky than usual, but really offensive smelling poo could be a sign that something's not right. Infections or constipation can result in very smelly poo. Medical conditions such as coeliac disease or IBS make poo smell bad, although this is not usually the only sign.

Consistency

The Bristol Stool Chart is a popular scale of poo description. We should be aiming for stools of type 3 or 4 which are sausage shaped (find out more on page 36). Small or watery stools are not ideal, neither are pellets or large, hard to pass poo. Poo should sink to the bottom of the toilet bowl. Mucousy or greasy stools can be a sign of an underlying bowel condition.

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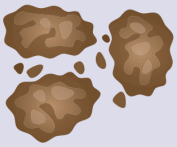


What's the gut microbiome?

Bacteria, viruses and fungi have a bad name. We automatically think of disease, but having a diverse and healthy population of these in our gut is essential for good gut health. Your gut microbiome is the community of microbes in your gut. Not only is it a perfect place for them to live, but they ensure our gut functions at its optimum. They help with digestion of food, support our immune system by getting rid of harmful bacteria and influence the gut-brain connection. We're just at the beginning of understanding the role of the gut microbiome in our overall health.

Know your poo!

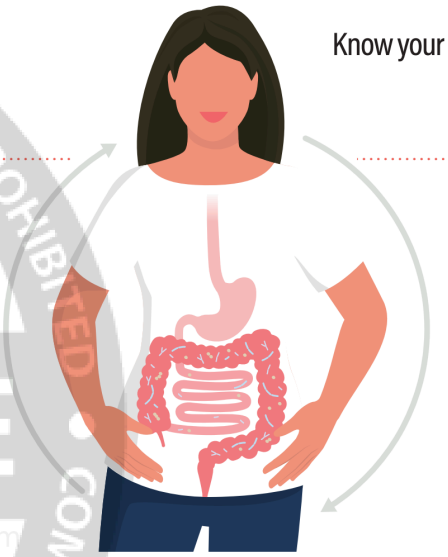
Your poo can give very valuable information about your health. It does change day to day according to what you've eaten, but if you notice persistent changes in your poo or your bowel habit, then speak to your doctor.



Frequency

Some people move their bowels twice a day, others, twice a week. Infections can cause a sudden change in the number of times you need to poo, but a persistent change in your normal habit should be reported to your doctor. You should be able to hold onto your stool until you reach a toilet, but if you're leaking or have poo accidents then see your doctor.

Know your gut



A TRIP ALONG THE *digestive tract*

The mouth Food is mashed up by the teeth, churned by the tongue and broken into smaller pieces to make digestion easier. Saliva squirts out of the salivary glands and it contains enzymes to begin the breakdown of starch in the food. It also moistens the food parcels (boluses) so they slip down more easily.

The oesophagus (gullet) This is the muscular tube that takes food from the mouth to the stomach. The food boluses are pushed down the oesophagus by waves of muscular contractions. There's a sphincter (muscular ring) at the bottom of the oesophagus and, when that relaxes, food can move into the stomach.

The stomach This contains gastric juices including acids which destroy harmful bacteria in food and digestive enzymes to continue the food break down. Food stays in the stomach between 40 minutes and two hours.

The small intestine Food leaves the stomach through another sphincter and moves into the small intestine (small bowel). This is where most of the digestion and absorption of nutrients occurs. The pancreas squirts digestive enzymes into the small intestine to break down carbohydrates, protein and fats. The gall bladder squirts in bile to break down fat too. The lining of the small intestine is specially designed to maximise its surface area and allow as much absorption of nutrients into the blood stream as possible. Food spends between two and eight hours here.

The large intestine The journey continues in the large bowel where gut bacteria break down remaining food, and water is reabsorbed into the body to make the faeces more solid. Progress through the large intestine is slower, ranging from four hours to three days. The lower part of the large intestine (the rectum) is where faeces are stored. When the time is right (hopefully) and the anal sphincter is relaxed, the faeces are expelled and digestion is complete.

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