Gut transit time can be big indicator of your digestive health

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A lot happens to food in the time between you chewing it and its appearance out the other end. Every single mouthful has to make its way through your stomach and round the seven meandering metres of tubing that make up your small intestine, during which nutrients are absorbed and toxins are extracted.

What's left then enters the 1.5 metres of the large intestine, where trillions of bacteria get to work extracting anything else useful that's left behind. Reactions that occur here also produce nutrients including vitamin K and other helpful compounds that we now know impact everything from our immunity to our mood.

"The gut is more than a mere food processing system and it needs time to do all its work on food effectively," Professor Kerryn Phelps, a leading medical academic and author of The Mystery Gut, says. It can take between four and 11 hours for food to pass into the large intestine (six to eight is average), and it will spend up to 70 hours there before being excreted (the average is 40) – the exact timing depends on your metabolism and what you've eaten, and it may vary day to day. The sum of these two figures is your gut transit time or GTT.

Your own highly personalised piece of plumbing.

"Ideally it should be about 12-48 hours in total," nutritionist Despina Kamper says. "If food passes through faster than this you won't absorb the optimum number of nutrients; if it passes through much slower, too much water is drawn from the stool which makes it harder to pass, causing issues like constipation and associated concerns such as haemorrhoids or diverticulitis [inflammation or infection of the colon wall]."

But these aren't the only downsides – a group of Danish researchers recently discovered a slow transit time also affects the gut at a cellular level.

THE BACTERIA CONNECTION

Those trillions of bacteria that feed on the contents of the large intestine have a preferred fuel: carbohydrates found in the fibre we take in from wholegrains, fruits and veg.

As they consume these carbs they create healing by-products that fight inflammation and help restore the mucus layer that protects the intestine against toxins.

However, a slow gut transit time can have a negative effect on this process, as researcher Henrik Munch Roager from the National Food Institute at the Technical University of Denmark explains: “The bacteria run out of carbs to consume and start to feed on any leftover protein instead, which changes the by-products.” So, rather than the bowel-restoring compounds, they instead generate by-products from protein degradation such as ammonia and sulphur compounds, which at high concentrations might damage the cells of the bowel directly.

Even worse, the lack of dietary fibre also means the bacteria start to feed on the protective mucus layer of our intestinal cells, causing it to become thinner. This is problematic since a thinner mucus layer makes the intestinal cells more prone to DNA mutations, thus increasing the risk of developing colorectal cancer. Knowing and adjusting your gut transit time is therefore an essential part of maintaining good health.

HOW TO TEST YOUR OWN GTT

The length of a person’s gut transit time depends a lot on their diet, but there are other elements involved. Diabetics, for example, often have slower transit times as high blood sugar can decrease sensitivity in the nerves that control bowel movements, and having an underactive thyroid slows many bodily functions, including the bowel. Regularly suppressing the urge to go to the toilet can also result in your bowel holding stools for longer. Women have a naturally lazier large intestine than men, while high levels of stress will speed up transit time in men and women.

The appearance of your poo can give clues about extremes of gut transit time – tiny nut-like pellets that are hard to pass signify a very slow transit time, while diarrhoea can suggest as little as 10 hours have passed between eating and evacuation.

Outside of these extremes you’ll need to do a simple test to determine your own GTT.

“Simply eat 1 tablespoon of sweetcorn or a lot of beetroot and see how long it takes for you to notice corn kernels or a bright pink colouring in the stool,” Kamper says.

“But don’t just look once – you need to see how long that hangs around for. It might be that you see the first glimpses in a healthy 18 hours, but if you’re seeing corn kernels 72 hours later then your bowel is still sluggish.”

IMPROVING YOUR TRANSIT TIME

The results of your DIY digestive check-up will help reveal how you should react. Phelps says that a bowel that regularly moves too quickly needs to be checked by a doctor as there might be a medical cause – for example an allergy, intolerance, IBS, inflammatory bowel disease or long-term infection.

More common, though, is a sluggish bowel that needs help speeding up, and that can easily be tackled at home. It probably won't surprise you to learn that the number-one way to do this is to increase the level of fibre in your diet. Fibre actively speeds up how fast food moves through the gut.

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"Everyone thinks this is boring advice and that they're getting all the fibre they need if they eat breakfast cereal, but very rarely do people eat the amount we actually need," Kamper says. In fact, to reach the 25-30g of fibre recommended daily you'd need to eat two Weet-Bix with a pear (10g), three cups of vegetables (about 12g) and 1 or 2 cups of brown rice (3g each) daily – and that's a mix of high fibre sources. Most of us consume far lower fibre options.

Hydration is also key as water makes up about 75 per cent of faeces. Water also swells fibre, increasing its ability to stimulate the gut wall.

Exercising speeds up gut transit time as well. And it's important to listen to Mother Nature when she calls, so you don't reset your internal signals. One thing that's not yet clear is the role of probiotics in all this.

Some studies have shown they can speed up transit times in people with constipation, but recent studies have also shown that the more types of bacteria someone has in their stool the slower their gut transit time, which might mean they're not so helpful in every case.