Your good TUMMY GUIDE

Digestive health can be confusing - all that talk about intestine flora and fauna. And what is the difference between pro- and prebiotics? Here's the lowdown

Your gut is amazing

And it's complicated! It contains around 100 million neurons - the same number as in a cat's brain,’ says TV doctor Michael Mosley, author of The Clever Guts Diet. ‘And it includes a richer diversity of life than in a rainforest.’

There are 50 trillion (1.2kg) of microbes living in it - the weight of a couple of bags of sugar - made up of more than 1,000 different species, including bacteria, fungi and viruses. It's called your microbiome and its effects are felt way beyond just your gut (large intestine) by way of your stomach and toilet habits. Scientists now believe it has a huge impact throughout your body, including regulating your moods, altering your immunity levels and even dictating how much weight you gain.

The brain link

Your microbiome takes bits of food your body can't digest and converts them into hormones and chemicals, which can impact your moods and could help reduce anxiety and depression. This relationship between bacteria and our mental health is why scientists sometimes call our gut 'the second brain', says Dr Anthony Hobson from the Functional Gut Clinic. ‘Signals from the gut go to the brain, and vice versa.’

Research from the APC Microbiome Ireland at University College Cork found low levels of gut microbes raised the risk of anxiety and depression, while higher amounts lowered it.

Is your gut making you fat?

It could be. Because the balance of your microbiome helps regulate your weight, according to Dr Mosley. ‘It decides how much energy you take from each meal, which foods you crave, as well as controlling hunger pangs and blood-sugar spikes.’

A study of sets of twins at Washington University found that those who were overweight had fewer types of gut bacteria. Scientists think that a broad range of different bacteria has an effect on how dietary fats are absorbed in the intestines and stored as fat in the body. It's not exactly known yet what makes up the perfect microbiome, but the belief is that the more diverse your range of bugs, the better.
Get to know the biotics
Prebiotics and probiotics are important for digestion – but do you know the difference? It can be confusing but here’s what you need to know.

**PROBIOTICS** These are live bacteria and yeasts (often called ‘good’ or ‘friendly’ bacteria), usually added to foods, such as yogurts, or taken as a food supplement. They are believed to help restore the balance of gut bacteria after it has been affected by illness or treatment and can help ease the symptoms of IBS.

While probiotics are the live bacteria themselves, the lesser-known prebiotics are what feed the good bacteria, helping them thrive – like a fertiliser for your own gut flora,” says Glenn Gibson, Professor of Food Microbiology at the University of Reading.

They’re not found in food in huge amounts, so you may want to take a prebiotic supplement. Try Bimuno Daily (£1.99 for 30 sachets, Boots).

Fermented foods
These have undergone controlled microbial growth and fermentation, and often contain higher levels of the gut-friendly probiotics and prebiotics. Try sauerkraut, miso and cultured milk and yoghurt.

Cuts back on red and processed meat.
There’s evidence that eating too much increases bowel cancer risk. Aim for less than 500g a week (cooked weight).

IBS relief
Healthy gut bacteria are vital, particularly when you suffer from Irritable Bowel Syndrome (IBS). ‘If you get an imbalance of the types of bacteria, then this can create IBS symptoms,’ says Dr Hobson. ‘Either you produce too much gas or acids in the bowel and that can create tummy upsets and cramps, or the bacteria can escape from the colon and move up into the small bowel. This is known as small intestinal bacterial overgrowth, which can interfere with digestion. Try Silicalgol (£3.29 for 200ml, from chemists and supermarkets). It coats the stomach and upper gastrointestinal tract with a protective lining of silicic acid gel for the relief of reflux, heartburn, flatulence, stomach pain and nausea.

Make sure...
...you get regular exercise (aim for 30 minutes a day) and drink enough water (6-8 cups a day) to help move food through your gut.

5 WAYS TO BOOST YOUR BACTERIA

1 Limit antibiotics
   They kill off crucial gut bugs, some of which can take years to return.

2 Head outdoors
   To increase your exposure to a variety of microbes and vitamin D, which help gut flora flourish.

3 Control stress
   High levels of the stress hormone cortisol restricts your nutrient absorption and digestion.

4 Reduce processed food intake
   Artificial sweeteners, flavourings and preservatives can kill off your gut bugs.

5 Get your hands dirty
   A spot of gardening will bring you into contact with the trillions of bacteria found in the soil.