



# THE *fibre* FACTOR

In the hustle of everyday life, it's easy to overlook how much fibre you're eating. But it's essential for the wellbeing of your gut microbiome.

➤ BY CHARIS TORRANCE

**Y**our gut is like a busy city, teeming with trillions of microbial inhabitants who work tirelessly to keep things running smoothly. But what exactly fuels this thriving microbiome? According to the experts, the answer lies in fibre.

'Fibre, found in plant-based foods such as fruit, vegetables, wholegrains, nuts and seeds, plays an important role in supporting



a healthy gut microbiome,' says Mbali Mapholi, a registered clinical and consultant dietician.

Picture fibre as the friendly neighbourhood janitor in your gut. It sweeps through, keeping things tidy and in top-notch shape – but its role goes beyond just cleaning up. 'Not only does fibre aid digestion and nutrient absorption, but it also serves as a prebiotic, nourishing the beneficial bacteria residing in your gut,' Mbali explains.

## The lifeblood of your gut

Dr Charlene Wolberg, a GP with a master's degree in nutritional sciences, emphasises the pivotal role of dietary fibre in shaping the gut microbiome, thus influencing metabolic health. 'With sufficient intake of dietary fibre, we can modify the gut microbiome to achieve better health outcomes,' she says. This interplay forms the foundation of the fibre-microbiota metabolic axis, where various types of fibre confer metabolic benefits that are crucial for overall wellbeing.

According to Dr Wolberg, the benefits of increasing our fibre intake range from mitigating the risk of gut diseases to combating obesity, type 2 diabetes mellitus, cancer and cardiovascular diseases. 'Dietary fibre is fermented by the gut microbiota, resulting in the production of beneficial metabolites such as short-chain fatty acids (SCFAs),' she says. These SCFAs play a role in fortifying the gut barrier, fine-tuning immune responses

and orchestrating crucial metabolic processes such as glucose and lipid metabolism.

By bolstering gut barrier function, SCFAs contribute to shielding our bodies from harmful pathogens and toxins, thereby reducing the likelihood of gut-related illnesses.

Moreover, they play a key role in modulating immune responses, ensuring that our immune system functions optimally to fend off infections and maintain overall health. Additionally, SCFAs exert a beneficial influence on metabolic processes, helping to regulate blood sugar levels and lipid profiles, which in turn lowers the risk of developing conditions such as diabetes and cardiovascular disease.

Researchers have also increasingly seen a link between a high-fibre diet and improvements in mental health.

In a 2021 review, scientists investigated the relationship between dietary fibre intake and depression symptoms by analysing nine studies. They discovered that individuals with depression tended to consume less fibre, while those with greater fibre intake had lower odds of experiencing depression.

A larger study tracked post-menopausal women over a period of 18 years, involving 14 129 participants from the Iowa

Women's Health Study. This study revealed that individuals consuming more fibre reported better mental health scores over time. Additionally, the study underscored the significance of the fibre source, indicating that wholegrain fibre was positively associated with mental health, whereas refined fibre showed no such link.

## The numbers game

Despite the increasing awareness of fibre's importance, Mbali has observed that many of us still fall short of the recommended intake. Based on studies of fossilised faeces, our ancestors may have consumed more than 100g of fibre in a day. 'But most adults in my clinical practice don't even reach the minimum recommendation of 25g of fibre per day,' she says.

So what happened? Well, back then, humans were eating a diet rich in plants – the only place fibre is found. Today, as Dr Wolberg points out, many of us have adopted a low-fibre 'Western' diet. Mbali identifies several reasons behind the prevalence of low-fibre diets in modern society. 'There has been a surge in processed and refined foods, which often lack the fibre found in wholefoods,' she says. 'With convenience as a priority,

*Those with greater fibre intake had lower odds of experiencing depression.*

## Nutrition

many people opt for fast, pre-packaged meals that are typically low in fibre. Additionally, certain regions or communities face limited access to fresh produce and wholegrains, exacerbating the fibre gap. And many individuals simply don't understand the significance of fibre, or how to incorporate it into their meals.'

So how much fibre do we actually need to keep our gut happy? To maintain optimal health, adult men are advised to consume 30 to 35 g of fibre daily, and adult women should consume 25 to 32 g per day.

*'It is essential to include both kinds of fibre in your diet as they have a symbiotic relationship.'*



Children and older adults typically require less fibre; for example, it's recommended that women over 50 consume about 22 g of fibre per day.

### Which fibre is which?

According to Dr Wolberg, there are two types of fibre; both are vital for a healthy gut microbiome. 'It is essential to include both kinds in your diet as they have a symbiotic relationship,' she says.

Soluble fibre, which forms a gel-like substance when



mixed with water, nourishes the gut microbiome, and aids in slowing digestion and stabilising blood sugar levels. Insoluble fibre acts as a bulking agent, promoting regular bowel movements and preventing constipation.

If you're looking to boost your fibre intake, Dr Wolberg recommends incorporating a variety of fibre-rich foods into your diet. Soluble fibre sources include beans, peas, oats, barley, apples and citrus fruit; and insoluble fibre is found in wholegrain foods, nuts, and vegetables such as cauliflower, green beans and potatoes.

## Boosting your intake

There are several myths and misconceptions surrounding fibre, including the belief that fibre-rich foods are generally bland or unappetising. Not true at all, says Mbali, who also has several practical tips to increase the amount you consume.

Fruit such as berries, apples and bananas are easy additions to breakfast, and work great as snacks. Vegetables such as broccoli, spinach and carrots can be incorporated into various dishes or enjoyed as sides. She

also suggests switching to brown rice and wholewheat bread for a daily dose of wholegrains; experimenting with lentils, chickpeas and beans in soups, salads or curries; and sprinkling nuts and seeds over salads, yoghurt or oatmeal for a fibre-packed crunch.

'To meet your daily fibre requirements, make small swaps in your diet: choose wholegrains over refined grains, snack on raw vegetables instead of chips, and opt for fruit as a sweet treat,' Mbali says. 'And remember to stay hydrated! Fibre works best when it's paired with plenty of

*'Fibre works best when it's paired with plenty of water.'*

water.' Fibre from the food you eat absorbs water, which makes stools bulkier, so they move faster and are easier to eliminate – hence the recommendation to drink eight glasses of water per day.

Your fibre intake may vary based on individual health conditions or your dietary preferences. For example, individuals

with digestive disorders such as irritable bowel syndrome may need to adjust their intake to manage symptoms effectively. A healthcare professional or a registered dietician can help to tailor fibre recommendations to specific health needs, ensuring optimal digestive function.

In the end, your gut knows best – so pay attention to how different foods make you feel. If something doesn't sit well, it might be time to tweak your diet. Remember, Rome wasn't built in a day. Be patient with yourself as you embark on your fibre-filled journey to gut health. ❖

