Bugs in the gut

WOMEN'S WORLD
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Of friendly and not-so-friendly bacteria in the gut, and how they can affect overall health.

HOW much do you now about your intestines? Probably not much, so it should surprise you to learn that, at any one time, you have about one hundred trillion bacteria inside your digestive tract, particularly in your intestines.

These trillions of bacteria are made up of about 500 different species, which began settling into your body from the very first day you were born. The weight of these bacteria is about 1.5 to 2kg.

About 85% of these bacteria perform beneficial functions, such as digesting food, protecting against infection, and influencing a few physiological processes in the body. The remainder of the bacteria in the body are sometimes referred to as “bad” bacteria and do not provide any benefits to the body.

At the same time, most of the body’s immune system is housed in the digestive tract, and the gut is home to about 70% to 80% of immune cells. So any changes that occur in the gut have a strong impact, not only on your digestive health, but also on your overall health.

There are trillions of bacteria in the gut. If you weigh them, they will tip the scales at about 1.5 to 2kg. – Reuters

Good vs bad

In the womb, babies are sterile, with no good or bad bacteria in their systems. But from the minute they are born, these microorganisms start populating their digestive tracts. The bacteria may originate from the mother’s breastmilk, vaginal or faecal bacteria, or from the hospital environment.
The balance of good and bad bacteria in the gut has to be maintained in a fragile balance. This ratio between the “good” bacteria and the other bacteria becomes one of the critical factors determining optimal health. The ideal balance between them is 85% good, 15% “other”. Our environment greatly influences this balance, and a poor diet, stress, medications, and an unhealthy lifestyle can disrupt it, causing bad bacteria to flourish.

When that happens, a person is likely to experience digestive health problems, such as bloating, intestinal pains, constipation, and diarrhoea. Furthermore, these microbes are suspected to play a role in inflammatory bowel disease, including Crohn's disease and ulcerative colitis.

On the other hand, a healthy, balanced environment in the gut can protect the immune system from pathogenic bacteria, toxins, allergens, chemicals, and pollutants. For instance, research suggests that a particular strain of bacteria may help to suppress inflammation caused by inflammatory bowel disease. Other health benefits of probiotics is in preventing traveller’s diarrhoea and mild diarrhoea.

As I mentioned above, the intestines are home to 80% of the body’s immune cells, so an overgrowth of unhealthy bacteria will affect the body’s immune response adversely. An imbalance of gut bacteria is believed to be associated with an increased risk of asthma and allergies.

**Where have all the good bacteria gone?**

The modern world has become fastidious about hygiene, and for good reason. The lessons learnt from the Western industrial revolution in the 18th- and 19th-century taught us that rapid urbanisation and poor standards of living can lead to disease epidemics.

With the knowledge that microbes like bacteria and viruses are the cause of these diseases, we have filled our lives with antibiotics, antibacterial products, sanitising products, and sterilisers.

Our food products are also subjected to strict food safety regulations, and often have to undergo processes like pasteurisation and sterilisation.
Refreshing lassi (yogurt based drinks) are made using fresh milk.

As a result, we’re less exposed to bacteria now, but we have also excluded the “good” strains of bacteria.

How probiotics can make our guts happy again

Of course, this is not to say that we should start living in filth. We should live a healthy lifestyle as much as possible. This is to avoid the microbial balance in our digestive tracts from being disrupted.

One way to boost our good bacteria count is by taking probiotics with our food. Probiotics are live bacteria that help to re-establish a healthy bacterial balance in the intestines. Probiotics can be found in certain cultured foods, like yoghurt and lassi, or in supplement form.

As more probiotic products appear in the market today, it is important to ensure that you are choosing a product that provides the best benefits. Not all probiotic products are created equal and certainly not all can deliver the benefits that they claim to.

Choose wisely

The first criteria of a good probiotic product is the strain of bacteria used. It should be clinically documented in published clinical studies, safe to be consumed, able to withstand stomach acids and bile during the digestive process, and able to attach to the intestinal lining.

*L. acidophilus* and Bifidobacterium are two groups of bacteria commonly used in probiotic products, of which a few strains have been scientifically proven to be effective.
The next time you go to a supermarket or pharmacy, you may see some products with the words “live bacteria” on the packaging. Before you squirm in disgust, remember that this is an important characteristic of a good probiotic product.

The bacteria must be alive, or viable, gastric acid- and bile salt-resistant, and have a better survival rate, in order to perform their benefical functions after they have been consumed.

Probiotics that contain highly stable microencapsulated strains with the right stabilisation processes during packaging and transportation will protect the bacteria against light, heat, humidity, and moisture breakdown.

The amount of live bacteria contained in the product is also important. This is known as the colony-forming units (CFUs), and the number of CFUs should last until the date of expiry, as not all the bacteria will survive after production. A decent probiotic should contain between 1.5bil and 15bil CFUs per serving.

Finally, a good probiotic formula should also contain prebiotics. Prebiotics act as food for the probiotics to selectively help the growth of healthy bacteria.

Furthermore, the probiotics produce breakdown products when they eat the prebiotics, which lower the pH of the digestive tract and prevent the growth of bad bacteria. So look out for words like fructooligosaccharides (FOS) and inulin on labels of probiotics.

Our modern lifestyles today make it difficult to avoid environmental pollution, unhealthy diets, and stress.

But we should try to do what we can to right the balance of bacteria in the digestive tract so that we do not fall victim to digestive and other health problems that make life miserable.

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