

Go with your gut



The pandemic exposed chinks in India's healthcare sector. Till date there have been 1.47 lakh deaths in our country with the global deaths standing at 1.74 crore. With compromised immunity, people resorted to alternate medicine and probiotics to increase their body's resistance to fight the Coronavirus. Yoga and exercising took the front seat as did following a healthy eating pattern. Meanwhile, countries have been scrambling to find a cure and an effective vaccine is in the pipeline with India starting vaccination in 2021

Who could have thought that an invisible virus could hold the world to ransom? And that the trillions of microbes inside us orchestrate our lives : literally determine who we are inside out! What we look like to how well we are!

Twenty five hundred years ago, when Hippocrates stated that: All disease begins in the gut. He had an incredible intuition that only recently has been fully appreciated because of new insights into the pathogenesis of many chronic inflammatory diseases (CIDs) afflicting humankind. Until 30 years ago, when the Human Genome Project was still in

its planning stage, the general hypothesis was that genetic predisposition and exposure to an environmental trigger were both necessary and sufficient to develop CIDs, including infectious, allergic, neuroinflammatory/neurodegenerative, autoimmune diseases, and cancer.

However, the epidemiological observation showing a major surge of CIDs during the past four decades in the Western hemisphere coincident with the declining rate of infectious diseases was at odds with the gene/environment paradigm. This generated the hygiene hypothesis supporting the notion that we had made ourselves too clean for our own good and that people embracing a Western lifestyle would slowly die of CIDs instead of rapidly succumbing to infectious diseases as still is happening in developing countries. (Alessio Fasano January 2020)

It is now clear that the gut microbiota is central to the pathogenesis of immune system disorders. While multiple mechanisms are involved, the immune system clearly plays a special role. Indeed, the breakdown of the physiological balance in gut microbial composition leads to dysbiosis, which is then able to enhance inflammation and to even influence gene expression.

Many might be surprised to learn that more than two-thirds of the immune system is located in the gut. The function of this system is to try and eliminate an invader by creating inflammation and activating antibodies to fight it. The immune system also eliminates the body's own cells when they become diseased.

In order to perform these activities, the cells of the immune system need to be able to tell friends from foes. Gut microbes again play a central role in this: during digestion, they break down fibre into small molecules which include short chain fatty acids (SCFAs). These SCFAs influence the immune function of the Gut and the activity of the T cells, the informants which help the body recognise friend from foe and decide whether or not to attack a cell.

A disturbance in the gut microbiome directly affects diseases such as inflammatory bowel disease, diarrhoea and many other digestive disorders. It can also be the starting point of several other chronic degenerative diseases outside the gut including asthma, skin diseases, autoimmune diseases and metabolic diseases.

Professor Sarkis Mazmanian, Professor of Microbiology at CalTech, who has studied the effect of Gut microbes on health for more than a decade, points out that: The balance of different bacterial species in the gut can influence whether the immune system becomes activated or not.

The connection between probiotics and immunity, although well-established in the scientific circles, is not easily understood by the common person. Decoding the role of probiotics in building immunity can lead to greater acceptance of these foods.

Probiotic organisms exert a direct antagonist effect on harmful microbes by decreasing their numbers, impairing their metabolism, and also by directly stimulating our immune system. Seventy per cent of our immune system is governed by our gut (intestines).

Clearly, the gut is not just a digestive organ but is also the largest immune organ. The discourse around the health of the heart, liver and lungs has always been prevalent, but thanks to the pandemic, we have begun to take gut health more seriously.

The simplest way to maintain a healthy gut is to ensure an adequate supply of macronutrients (carbs, proteins, fats) and micronutrients (vitamins, minerals) that can support the cells and tissues of the immune system. Besides a wholesome balanced diet, regular consumption of probiotics is linked to good immunity. The immune response relies upon the balance of the microbes residing in the gut. Manipulating the population of these microbes through the consumption of probiotics is a sureshot way to better immune health. Several strains of bacteria, including the genera lactobacillus and bifidobacterium, have been recognised for their ability to suppress pathogens and build up resistance to infections. However, it is critical to choose a scientifically proven and established probiotic strain for this purpose.

The modus operandi of probiotics in their immunity-providing avatar is varied and complex. Explained in simple terms, on reaching the intestines, the probiotic bacteria get into a competitive mode to oust any disease-causing and aberrant microbes. Probiotic bacteria occupy the sites on the intestinal cell wall wherever adhesion is possible such that the disease-causing microbes do not get outnumbered.

All in all, probiotics augment our defense through antibody production, increasing natural killer-cell activity and the process of engulfing of foreign matter particles.

Today we know that all diseases begin with inflammation in the gut and that two-third of our immune system resides here. The gut is the largest immune organ called gut associated lymphoid tissue and produces more antibodies than any other tissue in the body — B&T lymphocytes . If what we eat is wrong for our gut it is wrong for immunity. And that strengthening our gut means strengthening our immunity.

With 25 years of my clinical practice this concept has stood the test of time . The recognition of food sensitivities and gut health has made it possible for me to treat almost all diseases from the root including Diabetes, coronary artery disease, thyroid disorders, arthritis, asthma , psoriasis , depression to name a few.

While the pandemic has thrown up uncertainties, gloom & despair the good news is that it has also brought with it a positive impact by way of being a leveller & a time when immunity & diet have assumed unprecedented importance.

It's the perfect time to begin taking a deeper dive into the gut and heal yourself to build a resilient body.

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We have all heard the saying, 'Sleep is the best medicine' but due to our ever increasing deadlines, especially in the work from home era where work never seems to stop and home has become the 24x7 office, we are increasingly sacrificing our sleep. Getting 6-8 hours of sleep every night can help in restoring physical, mental and emotional health.

Along with good sleep, we also need to have a balanced, healthy diet and lifestyle. Ayurveda places great emphasis on *ahar* (diet) and *vihar* (lifestyle). For example, you must have heard from elders to have *kadha* once a day for protection against Coronavirus and boost immunity. Yoga is also known to be beneficial for all sorts of health problems.

What is important to understand is that the use of alternative medicine can make us live happier and healthier lives. And during the pandemic, if we practice all these things, we can have improved respiratory efficiency, less anxiety and better immunity.

The reason why Ayurveda is so effective is that it treats the actual cause of the disease. It goes to the root of the problem. While mainstream medicine focuses more on treating the symptom of the disease, Ayurveda corrects the root cause of the problem and improves the overall quality of life.

So while you are regularly wearing your masks and maintaining social distancing along with washing your hands, do not forget to inculcate the ageold practices of Ayurveda, which can help in leading a better life.

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