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## How Gut Feeling May Hit Covid Recovery

### Virus Depletes Good Bacteria, Impacts Immunity And Mood

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New Delhi: Why do some people continue to have symptoms, such as fatigue, poor memory and hair loss, long after having recovered from Covid-19? The answer to this may be hidden in the make-up of their gut microbiota, a new study published online in the journal Gut suggests.

In the study, scientists tracked changes in the gut microbiome — the trillions of bacteria, fungi and other microbes that inhabit the digestive tract — of 106 patients with varying degrees of Covid severity by analysing their stool samples and compared them with the composition of the gut microbiome of a group of 68 people who didn't have Covid.

They found that among the bacteria species found in patients with long Covid, 28 were reduced and 14 were enriched both at hospital admission and at three and six months after discharge. At six months, patients with long Covid had significantly fewer 'friendly' *F. prausnitzii*, and *Blautia obeum* and a greater abundance of 'unfriendly' *Ruminococcus gnavus* and *Bacteroides vulgatus* than people who hadn't had Covid. On the other hand, the gut microbiome of those who didn't develop long Covid showed only 25 changes in bacteria species at hospital admission, and this recovered completely after six months, the study led by professor Siew NG of The Chinese University of Hong Kong found.

Dr S K Sarin, noted gastroenterologist and vice-chancellor of the Institute of Liver and Biliary Sciences, told TOI that the study findings had the potential to alter the management protocols for long Covid.

"Our body has trillions of microbes, including bacteria, viruses and fungus. They normally live in symbiosis with the body. This study shows external inserts like the Covid vi

rus, which also multiplies in the cells of the intestine, can cause dysbiosis or imbalance in the gut microbiota, leading to an increased presence of disease-causing or pathogenic bacteria and a relative reduction in the presence of good bacteria, resulting in long-lasting side-effects," he said. Dr Sarin said on the basis of this theory, one could provide good bacteria in the form of probiotics to correct the imbalance.

Dr Randhir Sud, chairman, Institute of Digestive and Hepatobiliary Sciences, Medanta

– The Medicity, said there were close to 38 trillion bacteria, viruses and fungi in human intestines that influenced various metabolic and immune functions of the human body. "We now realise that gut microbe composition is not the same at all and plays an important role in our susceptibility to a disease. For Covid too, this is possible and people with certain gut microbial composition may be susceptible to severe disease or long Covid," he said. Dr Sud said it was possible to alter this composition in the short term with probiotics and certain gut-specific antibacterial drugs, but whether that would help in prevention of long Covid was not known yet.

Dr Ishi Khosla, a clinical nutritionist, said people who were recovering from Covid should be advised to eat healthy, so that the inflammation caused by the infection in the gut could be healed. "It may be good to add probiotics or other supplements with special focus on providing a fertile ground for the growth of the good bacteria," Dr Khosla said.