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Editorial

Is Helminth Therapy a Solution for Autoimmune Disorders?

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Helminth therapy or helminthic therapy is an experimental therapy in which people purposefully infect themselves with live parasites called helminth parasites. As helminths may affect a person's immune response, some people feel that helminthic therapy may one day help health practitioners cure some autoimmune and allergic illnesses.[1] In United States, physicians cannot prescribe helminth therapy at this time. However, researchers on the other hand, can test specific varieties of worms on humans to see whether they can treat certain diseases. Helminths are a diverse group of worm-like parasites which includes flues, tapeworm, hookworm, whipworm and roundworm specifically.[2]

Helminths have developed over millions of years alongside their hosts, according to a 2018 report. As a result, they've mastered the art of suppressing and modifying the immunological response of their hosts. Partial immune suppression is caused by a parasite infection. Some modifications to the immune system, however, can benefit the host by lowering overall inflammation. Some scientists are interested in helminth treatment for this reason.[3] A recent study found that the incidence of helminth infections has declined in high-income nations, where inflammatory and autoimmune disorders are most prevalent. However, helminth infections may assist to inhibit the development of some inflammatory diseases even if the cause-and-effect relationship is not established.[1]

Scientists are increasingly interested in using helminth treatment to treat several types of disorders such as inflammatory diseases, including Crohn's disease and ulcerative colitis, allergies, and parasitic infections.[4] and also for respiratory diseases (asthma), skin diseases (multiple sclerosis, eczema). Some persons may benefit from the immunosuppressive effects of some helminths if they suffer from allergy illnesses or autoimmune diseases.[5]

The benefits of helminth infections on inflammatory diseases appear to be limited to those whose helminth infection preceded their inflammatory illness.[6] Scientists examined animal data on the impact of helminths on inflammatory bowel illness, such as Crohn's disease and ulcerative colitis in a 2018, their outcomes were generally favorable, but it's unclear if they would have the same effect on humans. As a result, individuals who received the greatest dose of parasite eggs were somewhat more likely than those in the placebo group, whereas those who received the lowest amount of parasite eggs had lower chances of going into remission. Aside from that, laboratory testing revealed that the levels of inflammation in all of these groups were the same.[4,5] Despite FDA approval, Helminth therapy is still an experimental treatment. Therefore, physicians in the United States are prohibited from prescribing the helminth treatment. Whether the helminth treatment is safe or not, it hasn't been studied long enough. However, helminth treatment still hasn't been mastered by medical science in a regulated and systematic method.[1] In addition, there are several types of worms that have been awarded the designation “Investigational New Drug” by FDA, such as the pig whipworm and human hookworm. Researchers in the U.S. can now test the worms on people because of this designation.[1,3]

According to researchers, certain types of inflammation and autism spectrum disease have been correlated.[7] As a result, some experts believe that helminth treatment might assist health practitioners to treat autism in the future. For a complete grasp of its potential advantages,

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scientists, on the other hand, advocate for additional research in this field.[2]

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