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ARTHRITIS & THE
GUT

WHITEPAPER



ARTHRITIS AND THE GUT

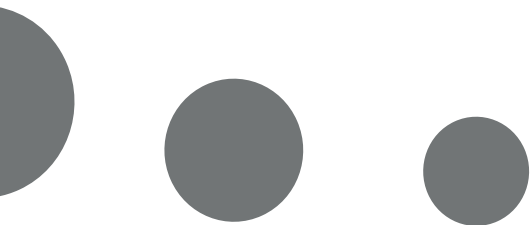
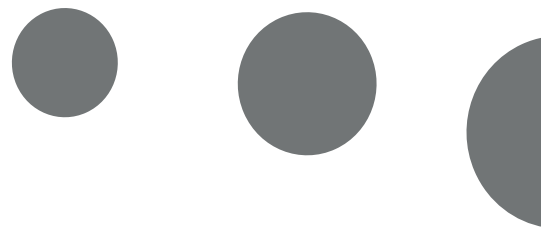
Rheumatoid arthritis (RA) affects joints, causing inflammation and pain. It happens when the immune system does not work properly and by mistake attacks the lining of joints. This disease usually affects the hands, knees, ankles and sometimes other parts of the body such as eyes, heart and lungs. Most often RA is observed in people in their mid-40s or older.

As with many diseases, the combination of both genetic and environmental factors is responsible for the development of RA. The contribution of environmental factors to this condition is considerable and includes: emotional/physical stress, viral/bacterial infections, and smoking. Unfortunately, RA is not a treatable disease, but therapies exist to alleviate the condition⁽¹²⁷⁾.

Among the mentioned environmental factors, the gut microbiota has attracted attention as a new player in the development of RA. Several studies demonstrated that the composition of the gut microbiota is changed in RA patients. Scientific reports indicate that *Prevotella* species, notably *Prevotella copri*, are dominant inhabitants in the gut of early RA patients over other species⁽¹²⁸⁾. The mechanism by which *Prevotella* contribute to the development of RA is yet to be investigated and explained. This is particularly important in the light of previous research linking the abundance of these species with a plant-based diet, which is known for its anti-inflammatory effect and overall health benefits⁽¹²⁹⁾.

Another example demonstrating the influence of bacteria on the development of RA is the recent studies on periodontal (gum) disease. The presence of periodontitis in patients is correlated with the increased occurrence of arthritis in humans and mouse models. Currently, two periodontal bacterial species are suspected as the potential causes triggering inflammation leading to RA - *Porphyromonas gingivalis* and *Aggregatibacter actinomycetemcomitans*^(130, 131). It is also important to note that not everyone with gum disease develops arthritis and vice versa. Further research into this field is currently being conducted in order to clarify the uncertainties of these findings. In the meantime, regularly brushing teeth according to your dentist's instructions remains a good idea.





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