

Rheumatoid Arthritis

Rheumatoid arthritis (RA) is an inflammatory disease of the joints characterized by pain, stiffness, and swelling, as well as an eventual loss of limb function. Rheumatoid arthritis is estimated to affect about one percent of the population, primarily women.

Use of cannabis to treat symptoms of RA is commonly self-reported by patients with the disease. In a 2005 anonymous questionnaire survey of medical cannabis patients in Australia, 25 percent reported using cannabinoids to treat RA.[1] A survey of British medical cannabis patients found that more than 20 percent of respondents reported using cannabis for symptoms of arthritis.[2] Nevertheless, few clinical trials investigating the use of cannabis for RA appear in the scientific literature.

In January 2006, investigators at the British Royal National Hospital for Rheumatic Disease reported successful treatment of arthritis with cannabinoids in the first-ever controlled trial assessing the efficacy of natural cannabis extracts on RA.[3] Investigators reported that administration of cannabis extracts over a five week period produced statistically significant improvements in pain on movement, pain at rest, quality of sleep, inflammation and intensity of pain compared to placebo. No serious adverse effects were observed. Similar results had been reported in smaller Phase II trials investigating the use of orally administered cannabis extracts on symptoms of RA.[4]

Preclinical data also indicates that cannabinoids can moderate the progression of RA. Writing in the August 2000 issue of the *Journal of the Proceedings of the National Academy of Sciences*, investigators at London's Kennedy Institute for Rheumatology reported that cannabidiol (CBD) administration suppressed progression of arthritis *in vitro* and in animals.[5] Administration of CBD after the onset of clinical symptoms protected joints against severe damage and “effectively blocked [the] progression of arthritis,” investigators concluded. Daily administration of the synthetic cannabinoid agonist HU-320 has also been reported to protect joints from damage and to ameliorate arthritis in animals.[6]

Summarizing the available literature in the September 2005 issue of the *Journal of Neuroimmunology*, researchers at Tokyo's National Institute for Neuroscience concluded, “Cannabinoid therapy of RA could provide symptomatic relief of joint pain and swelling as well as suppressing joint destruction and disease progression.”[7]

REFERENCES

- [1] Swift et al. 2005. Survey of Australians using cannabis for medical purposes. *Harm Reduction Journal* 4: 2-18.
- [2] Ware et al. 2005. The medicinal use of cannabis in the UK: results of a nationwide survey. *International Journal of Clinical Practice* 59: 291-295.
- [3] Blake et al. 2006. Preliminary assessment of the efficacy, tolerability and safety of a cannabis medicine (Sativex) in the treatment of pain caused by rheumatoid arthritis. *Rheumatology* 45: 50-52.
- [4] No author. 2003. Cannabis-based medicines. *Drugs in Research and Development* 4: 306-309.
- [5] Malfait et al. 2000. The nonpsychoactive cannabis constituent cannabidiol is an oral anti-arthritic therapeutic in murine. *Journal of the Proceedings of the National Academy of Sciences* 97: 9561-9566.
- [6] Sumariwalla et al. 2004. A novel synthetic, nonpsychoactive cannabinoid acid (HU-320) with anti-inflammatory properties in murine collagen-induced arthritis. *Arthritis & Rheumatism* 50: 985-998.
- [7] Croxford and Yamamura. 2005. Cannabinoids and the immune system: potential for the treatment of inflammatory diseases. *Journal of Neuroimmunology* 166: 3-18.