

ARTHRITIS



Arthritis is a disease of deteriorating joints and comes in two distinct flavors:

Osteoarthritis (OA) has often been referred to as a “wear and tear” disease. It includes the breakdown of cartilage, but OA affects the entire joint. It causes changes in bone structure and deterioration of the connective tissues that hold the joint together and attach muscle to bone. It also causes inflammation of the joint lining.

Rheumatoid arthritis (RA) is an autoimmune disorder characterized by inflammation of the joint with subsequent destruction of cartilage. The body continues to send an immune response as if responding to a problem. Ongoing inflammation leads to systemic changes which are in part responsible for the perpetuation of inflammation. Comorbidities make this an especially destructive disease (clogged arteries, depression, fatigue, insulin resistance, activation of the sympathetic nervous system, and wasting.)

Cannabis can affect rheumatoid arthritis (RA) through its action on the immune system as well as relieving painful symptoms. THC and β -Caryophyllene (BCP) are known CB2 agonists that regulate immune response. CB2 agonists reduce inflammation by telling the immune system to stop. Specifically, CB2 activation reduces production of cytokines and migration of immune cells as well as regulating the cellular cleanup. A good analogy is that of a traffic cop after a car accident. The officer directs traffic and the subsequent cleanup until things are back to “normal.” That is what CB2 does for inflammation.

CB1 activation is known to be effective as a treatment for all types of pain, which THC does well. (See Pain Management synopsis)

TRPV1 signaling has been shown to be important in arthritis pain in pre-clinical species, which heavily implies CBD can play a role in arthritis therapy.

There is evidence of the presence of cannabinoid receptors in the synovial tissue of patients with RA and OA, which makes them ideal targets for affecting arthritis. It has also been found that both THC and CBD are effective at decreasing inflammation in the synovial tissues of RA patients.

TERPENES

BCP and humulene are strong, systemic anti-inflammatories and should be a central focus for any cannabis-based inflammation therapy.

Myrcene, and to a lesser extent terpinolene and p-Cymene, are known analgesics and should be sought after for any cannabis-based pain therapy.

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