

# Cannabis: A Powerful Antioxidant

Antioxidants have received growing public attention in recent years, thanks in part to aggressive marketing of their numerous health benefits. Blueberries, blackberries and raisins have long been touted as health foods rich in antioxidants, but cannabis seems to be a rarity on the grocery list of even the most health-conscious shoppers.

That may change soon enough, as studies now show that cannabinoids – the major compounds found in cannabis – also possess powerful antioxidant properties.

## What are Antioxidants?

As any health expert would tell you, antioxidants are a necessary part of any diet and are essential for maintaining proper health and biological functionality.

The term “anti-oxidant” is in itself an explanation of its biological role – counteracting the damaging effects of a natural phenomenon known as oxidative stress. Oxidative stress results from oxidation reactions that occur during natural biological processes, which produce harmful free radical molecules as a by-product. Free radicals are a type of unstable and highly reactive molecules that can accumulate within the body and cause damage to cells, proteins and DNA structures.

Humans, animals and plants all maintain complex antioxidant systems involving various enzymes and nutrients (such as Vitamin C and E), which combat the accumulation of free radicals and mitigate the damaging effects of oxidative stress. However, these antioxidant systems are far from perfect and damage from oxidative stress has been linked to the natural aging process as well as many familiar disorders, including Alzheimer’s disease, Parkinson’s disease, pathologies related to diabetes, cardiovascular disease and rheumatoid arthritis.

## Cannabis as an Antioxidant: What Studies Say

Numerous studies have found that the cannabinoids in cannabis – specifically tetrahydrocannabinol (THC) and cannabidiol (CBD) – display potent antioxidant properties in a variety of pre-clinical applications.

One of the first studies to document these effects was a [study](#) published in 1998, which found that cannabinoids could protect neurons from exposure to toxic levels of glutamate – a neurotransmitter that plays a role in a number of neurodegenerative disorders. The study compared cannabinoids head-to-head with antioxidant vitamins C and E and found cannabidiol to be 30-50% more effective than either of the vitamins. A [follow-up trial](#) published in 2000 showed similar results using animal models instead of cell cultures.

Subsequent pre-clinical trials have confirmed the therapeutic potential of cannabidiol’s antioxidant properties in a variety of neurodegenerative and inflammatory disease models, including collagen-induced arthritis, infarction, Alzheimer’s disease, diabetes, myocardial ischemia and atherosclerosis. Researchers have focused on cannabidiol because of its affinity towards CB2 receptors and its lack of psychoactive effects, which occur through activation of CB1 receptors instead.

## What This Means For Your Health

Regular intake of antioxidants is a necessity for maintaining good health and antioxidant-rich fruits and vegetables are still the recommended dietary source. An overwhelming number of studies have linked antioxidant-rich diets to a lower risk for diseases such as cancer, cardiovascular disease, stroke, Parkinson’s, Alzheimer’s and arthritis.

Current research also suggests that the antioxidant properties of cannabis may indeed hold therapeutic potential for a number of inflammatory and neurodegenerative disorders. Unfortunately, research has yet to proceed past the pre-clinical stage, making it impossible to say for certain whether the antioxidant agents in cannabis are as effective in humans as preliminary research might suggest. Until then, berries and raisins are likely your best bet.