

Cannabis is a genus of flowering plants in the family Cannabaceae. The number of species within the genus is disputed, but up to three species can be recognised: *Cannabis sativa*, *Cannabis indica*, and *Cannabis ruderalis*. Industrial hemp and marijuana are both cannabis but they are grown for very different uses, and when consumed, have different effects on the body.

### The difference between hemp & marijuana or medical cannabis

All varieties of the cannabis plant produce flowers, where a unique compound called cannabinoids are located. Cannabinoids are present in different concentrations across different kinds of plants, but there are just under 100 found in total in the plant. Tetrahydrocannabinol (THC) is the most well known. It is the compound known to cause the high felt when smoking the marijuana (chamba) variety recreationally. 'Malawi Gold' can produce high levels of THC in its flowers and it is bred for its psychoactive effects. Medical cannabis, which describes the end use of the plant being grown, is often higher in THC where the plant is cultivated for medicinal and pharmaceutical purposes such as in cancer treatment. Industrial hemp is a variety very low in THC (under 2%) and is not bred for smoking, but for hundreds of other uses including a seed and oil used in food and cosmetic products and to create a compound called Cannabidiol (CBD). This is an important cannabinoid that doesn't provide a high but can help with many health ailments. Hemp is also grown and processed for its stalk that can be made into a fibre for clothes, rope and paper textiles and house building materials (hemp crete). Like different varieties of potatoes or chillies, hemp and chamba can look similar but there are major physiological differences that can be learned and bred for consistent cultivation. An analogy for Malawians could be thobwa vs chibuku, where one is alcoholic and the other is not. Because hemp and marijuana are grown for different purposes, they require different growing conditions. Hemp is usually cultivated to produce less flowering buds and is grown tall and thin as a single main stalk with few leaves and branches. Marijuana, on the other hand, is grown short and bushy with many flowering buds and is planted with plenty of space between each plant. Hemp has more sturdy and fibrous stalks, is often grown outdoors and planted very close together for maximum cultivation. Marijuana is more often grown indoors for more control of conditions such as lightening and humidity.

### The health in hemp seeds

Consumed as seeds (called hemp hearts), or pressed into an oil or protein powder, hemp provides many good-for-you nutrients. Much like other seeds, hemp is rich in healthy fats to support a healthy heart and brain and they contain Omega 3s which are anti-inflammatory. With 30% protein, hemp seeds provide more plant based protein than most other seeds and they're also packed with gut-loving fibre at around 10g per 100 grams of seeds. That makes for a healthier digestive system, constipation relief and means you will also feel full for longer and can reduce sugar cravings. Hemp seeds are packed with Vitamins E, D & B too. VitE protects cells from oxidative stress, great for skin and hair. VitD helps absorb calcium and aids the maintenance of bones, muscle and teeth and supports immune system function. VitB energises by helping organ function, breaks down fats and maintains the brain and nervous system. Hemp seeds also contain minerals: iron for oxygen production helping to regulate our circulatory system, potassium for muscle function, magnesium aids bone health and fights off stress and the seeds have zinc too, which regulates metabolism, boosts immune systems and reduces inflammation. 1 tablespoon of hemp oil contains only 125 calories and also has 20 times more essential fatty acids than olive oil.

### Hemp and women's health

Hemp seeds reduce symptoms of PMS and menopause. Up to 80% of women of reproductive age suffer some form of physical or emotional symptoms from premenstrual syndrome often caused by sensitivity to the hormone prolactin. The Gammalinolenic Acid (GLA), found in hemp seeds, produces prostaglandin E1, which reduces the effects of prolactin. In a study in women with PMS, taking 1 gram of essential fatty acids per day resulted in a significant decrease in symptoms. It decreases breast pain and tenderness, depression, irritability and fluid retention.

### Hemp and hair and skin care

Hemp seeds can be pressed into an oil that is hypoallergenic and contains ceramides, the fatty lipids that prevent skin dryness and support the cellular membranes in the hair. Cellular membranes allow substances to move through the hair cell and the ceramides in your hair help prevent excess moisture from leaving the cells. The high omegas and minerals including zinc in hemp oil helps to keep hair strong and the Vitamin A encourages the secretion of sebum, a substance that prevents hair breakage. Research in the US has found after study participants used hemp seed oil as a hair treatment for 6 weeks, 89% of hair samples tested positive for one or more benefits: elevated hair growth, moisturised hair, thickened hair, revival of damaged hair and added shine. Studies also suggest hemp oil can relieve the symptoms of dry skin and itchiness in atopic dermatitis and acne which further promotes scalp health. Consuming hemp food oil or doing a weekly mask could greatly improve the moisture quality of your hair. This means shinier, healthy locks. Hemp oil restores the skin barrier and helps it to retain moisture, which results in skin that looks healthy, hydrated, and supple. It rejuvenates and nourishes tight or dry skin and prevents flakiness and itchiness. Its anti-inflammatory properties can also help to relieve the symptoms of eczema, such as dryness, redness, and itching. Apply hemp seed oil 1-3x a day direct to the skin, add a few drops to your bathtub or use as lotion

### Hemp and THC in Africa

Over 40 countries worldwide cultivate industrial hemp, but Africa lags behind. With our excellent climate, possibility of low-cost open field cultivation, willing and able farmers, and extensive experience in agriculture, industrial hemp could provide income generating opportunities for individuals, farmers, companies and governments alike. African farmers have been growing cannabis for centuries, but, until recent years, its consumption has been banned across the continent. With countries keen to venture into other sources of income, and with the demand for marijuana in Europe and the Americas, Africa has softened its hard stance on the cannabis industry. African Governments that have warmed up to cannabis trade argue that legalising marijuana would generate a great source of revenue through taxation, that could lead to economic growth and help create jobs. Marijuana is slowly being embraced across the African continent, as scientists and researchers explore new medical therapies for emerging illnesses and diseases. Because it has taken Malawi many years to get to our stage of legalisation, all of our neighbours are now also developing hemp and medical cannabis industries so more products will be coming to market soon.

### Who is Malawi's Cannabis Regulatory Authority (CRA):

The CRA is the authority set up by the Malawi Government to oversee the development and ongoing regulation of a high-quality legal industrial hemp and medical cannabis industry based on the provisions set out in the Cannabis Act. The Act, released in February of 2020, outlines more on the CRA in Parts 2 and 3 and also includes information on licenses, inspections and cannabis usage. The Act and more information on the CRA can be found at [ica-malawi.org/resources](http://ica-malawi.org/resources).



## WHAT IS CBD?

CBD, short for Cannabidiol, is one of nearly 100 active cannabinoids identified in the cannabis plant. Cannabinoids are powerful compounds that interact with the Endocannabinoid System (ECS) in our bodies. The ECS is part of our central nervous system that regulates how we respond to pain and inflammation, stress and anxiety, sleep, addictions, focus and fertility. When CBD nourishes our ECS, our cannabinoid receptors are able to encourage cells to communicate more effectively and efficiently, increasing our natural levels of pain relieving endocannabinoids, decreasing our inflammatory responses and desensitising our pain receptors. CBD is therefore known for its anti-anxiety, anti-inflammatory, and analgesic properties. CBD is non-intoxicating so does not cause a 'high'.

## HOW CAN CBD HELP ME?

While it might not fully eliminate anxiety or associated stresses, it can take away the sharp edge of running worries or thought streams and allow you to focus more.

Stress goes hand in hand with sleep deprivation so the powerful anti-anxiety properties of CBD not only promote a greater sense of calm but can help users relax tension in the body and mind, providing a better night's rest.

Its anti inflammation and pain reducing properties can provide relief from chronic pain in the hips, knees, spine and other bones and joints or make CBD an effective treatment option for post-surgical recovery. Research also suggests it has benefits in relieving cramps, headaches and psoriasis (flakey / scaly skin) as well.

If you are curious about alternative treatments to any health issues you face, or like to use essential oil diffusers for headaches or acupuncture for low-back pain, or probiotics for regular stomach trouble, you might want to embrace CBD use as a natural remedy.

## HOW DO I USE CBD?

CBD can come in many forms. An oil you can drop under your tongue, an ointment to apply to skin, a tea to drink and even gummies. Dosage depends on your body weight, personal chemistry, and many other factors. If your doctor suggests its use, ask them for a consumption recommendation, otherwise its best to start off small and increase dosage as needed.

For CBD Oil, pending the strength, you could start off with half of a dropper, wait an hour or so, and see if you get any desired effect. If not, increase the dosage by a maximum other half pipette. A typical recommended dose for people trying CBD oil for the first time is between 20 and 40mg per day. When initially trying it, occasional users can report feeling a little dizziness or more 'spaced out', but trying a smaller dose the next time can counteract this if undesired. The aim is to feel more calm or zen and less frantic, but you won't feel at all 'high'. If you don't receive the desired effect, the next evening, you can increase the dosage.

For CBD Topicals, like Genscore's Amari, which can be an effective treatment to alleviate many muscle or joint pains or skin based symptoms, once rubbed onto desired skin location, it can take anywhere from 1-48 hours to provide relief. It depends on the dose, frequency of use and severity of condition. Most users find that regular application provides an analgesic effect that can significantly reduce localised discomfort.

Naturally caffeine-free, CBD Tea can be consumed at any time of the day but is best enjoyed with milk, cream or even butter (a fat) to aid absorption. Steep tea in hot water, add flavourings such as honey, cinnamon, or lemon and enjoy added relaxation with 1-3 cups daily.

## HOW IS CBD OIL MADE?

Unlike hemp seed oil that is made by pressing the seed, CBD oil is made from cannabis flowers high in CBD (low or 0% THC), through CO2 extraction and is combined with a carrier oil for easier bodily absorption.

CBD products can be made with full spectrum oil, broad spectrum oil, or CBD isolate. The main difference is full spectrum contains the plants cannabinoids, terpenes, and essential oils. This means trace amounts of THC are still present. With broad spectrum, the trace amounts of THC have been removed, and for the CBD isolate, it is pure CBD—everything else has been extracted including all are therapeutic and non-psychoactive cannabinoids. People often gravitate towards full spectrum because it facilitates the entourage effect where all the compounds work synergistically to provide heightened therapeutic effects.

## CBD FOR SENIORS

Our elders are often faced with rising prescription drug costs and increased pain and discomfort. CBD oil can stimulate and regulate appetite, be used to relieve aches and pains helping to treat arthritis, support bone health and even manage to assist with some effects of glaucoma.

The efficacy of CBD in treating arthritis is due to one of its best known and widely reported benefits as an antiinflammatory. By working to restore homeostasis (balance) in the body, CBD helps to modulate and decrease the intensity of joint pain and swelling. Sustained use of CBD over time can also regulate the body's response to pain signals. A 2016 study found that a topical application of CBD could effectively relieve pain and inflammation associated with arthritis after applying CBD gels for just four consecutive days. CBD's ability to relieve chronic pain also contributes to its efficacy in helping older individuals get some solid sleep.

Additionally, recent research in animals and humans suggests that hemp seeds can improve cardiovascular health, blood pressure, decrease risk of blood clots and help with heart attack recovery. And a study led by Canopy Growth published in Cannabis and Cannabinoid Research Journal found that CBD extended the lifespan of worms by 18 percent and increased late-stage life activity 206 percent compared to an untreated control group. Prior to this, no life-long toxicity research had been conducted to determine the potential impact of long-term exposure to CBD.

## HEMP & CBD FOR PETS

If your pet suffers from chronic pain, anxiety, epilepsy, inflammatory conditions, or even dry skin, they could also benefit from hemp oil. Hemp extracts such as oil or CBD can be added to their food, water, or applied topically. When it comes to dosing, start small, and follow the pet weight scale reference. Your cat can benefit in many of the same ways that dogs and humans can, but requires a much, much lower dosage. Be sure to consult your vet for more advice.

