# Choices



# Cannabis



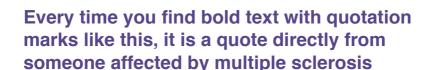
Multiple sclerosis information

# Welcome to this Choices booklet about Cannabis and MS

MS-UK listens to the voices of people affected by multiple sclerosis (MS) to shape the information and support we provide. It is these people that bring us perspectives that no one else can give.

For every Choices booklet we produce, MS-UK consults the wider MS community to gather feedback and uses this to inform our content. All of our Choices booklets are then reviewed by the MS-UK Virtual Insight Panel before they are published.

This Choices booklet has been designed with you in mind. We hope it will answer some of your questions and also provide some first-hand experience from those who have been in your position people who can truly understand and empathise with your current thoughts and feelings.



# Contents

Introduction	4
History of modern medicinal cannabis	4
Cannabis and MS	5
Sativex	6
Access to Medicinal Cannabis in the UK	8
Cannabidiol (CBD) products	10
What is the difference between recreational	
and medicinal cannabis?	13
Driving, work and travelling abroad	14
Smoking and health effects of cannabis	15
Further information	17
About MS-UK	18
Sources	22

## Introduction

Cannabis is a flowering plant that has long been used for its fibrous stalks to create hemp ropes and textiles, and its seeds for food supplements for both animals and humans. Cannabis has a long history of being used for medicinal purposes along with recreational uses across much of the world (1).

In the UK, cannabis is categorised as a class B drug under the Misuse of Drugs Act, and it is illegal to possess, supply or produce, with the exception when used 'for research or other special purposes' (where producers will have a licence from the UK government).

In 2018 the Government announced that medicinal cannabis would be made legal and that patients can be prescribed medicinal cannabis by specialist doctors in the UK. In some areas of the world, laws are being reformed to allow cannabis to be used for both recreational and medical therapeutic use (2).

# History of modern medicinal cannabis

In the late 20th century, Israeli scientists extracted more than 60 different chemicals from cannabis plants (cannabinoids), which were thought to have the potential for medicinal use. Since that discovery, it is now known that there are many more cannabinoids, all with medicinal potential.

The same scientists went on to discover the human endocannabinoid system. A human endocannabinoid system is a group of receptors located in the brain and central nervous system that are involved in mediating the effects of cannabis. The endocannabinoid receptors

affect physiological processes including appetite, pain-sensation, mood and memory. Each different cannabinoid found in cannabis plants can help that system by attaching to the receptors. This is why cannabis has so many potential uses and why research is ongoing into the various medicinal properties of cannabinoids (1).

One notable cannabinoid found in cannabis is tetrahydrocannabinol (THC). This is the compound that produces a psychoactive effect when cannabis is smoked, inhaled via a vaporiser or consumed. This is the part of the plant that can give a sense of relaxation or pleasure, as well as some unwelcome side effects such as drowsiness or anxiety (2).

Along with THC, another major constituent of cannabis is cannabidiol (CBD). CBD is the element of cannabis on which initial research has focused as a potential treatment of spasticity in MS (3).

#### Cannabis and MS

Generally, MS-specific research into cannabis-based medicines has shown mixed results, has been on a small scale and often the outcome suggests further studies are needed (4).

The 'Cannabinoids for treatment of spasticity and other symptoms related to multiple sclerosis' (CAMS) study recruited 667 people with MS. The study results showed beneficial effects on symptoms, including mobility and self-reported improvements in pain versus placebo, but did not find that cannabis had a significant effect on spasticity (4).

As part of the CAMS study, the researchers also looked at the data gathered and did further studies relating to continence and bladder urgency. The study found that there was a clinically significant effect of using cannabis on incontinence episodes in patients with MS (5).

The 'Multiple sclerosis and extract of cannabis' (MUSEC) trial recruited 279 people with MS and found that the relief of body pain after using cannabis extract was consistently higher than in the placebo group (6). A trial with a much smaller cohort found that treatment with a cannabis extract (THC) was effective in reducing pain and sleep disturbance connected to MS-related neuropathic pain and was mostly well tolerated (7).

It is also thought that cannabis has neuroprotective qualities, which means that it may protect nerve cells against damage or degeneration. The way this works and the full potential of CBD/THC as a therapy in neurodegenerative disorders is not completely understood (8).

There is also a further wealth of anecdotal evidence from the MS community that has reported that self-medicating with cannabis alleviates some MS symptoms, particularly bladder issues, spasticity, pain and tremor (3).

There is ongoing research into the field and MS-UK will continue to share outcomes on the news section of our website.

#### Sativex

Sativex is a cannabis-based medication and is licensed in the UK for the treatment of moderate to severe spasticity for people where other medications (baclofen, tizanidine, gabapentin, pregabalin and clonazepam) have been demonstrated as ineffective, or the adverse effects of these medications have been found to be intolerable (9).

Sativex contains both THC and CBD and is delivered orally, as a spray. An individual begins by taking one spray in the evening and over

time gradually increasing the number of doses per day until optimum symptom relief is achieved. Sativex can be taken up to a maximum of 12 times per day. Sativex is generally well-tolerated with common side effects being dizziness in the first few weeks of taking the medication. Mild anxiety has also been reported in some cases. It is felt that people taking Sativex are unlikely to develop a dependency on the medication (9).

In November 2019, the National Institute for Health and Care Excellence (NICE) in the UK, published guidance for cannabis-based medicinal products. The guidance states that a person with MS who experiences spasticity that is considered moderate or severe should be offered a four-week trial of Sativex, provided that existing spasticity medications available on the NHS are not effective.

There are conditions that must be met to be put forward for NHS funding. The drug company must be willing to fund initial treatment through their 'pay for responder' scheme and the person using the Sativex must show at least a twenty per cent improvement in their

I'm very lucky to be receiving Sativex on prescription, having paid for it initially. I was on one of the first trials and found that it helped, but of course, was not able to get it afterwards. I now get it on prescription from the NHS. I take between three and five puffs a day and alongside my other medications it helps to manage my pain

spasticity. This means that the drug company will fund the first four weeks (3 x10ml vials) of medication (if there is agreement for continued funding) for people who gain measurable benefit. The prescribed person will be expected to measure and record their spasticity-related symptoms on a numeric rating scale. Treatment with Sativex should be started and monitored by a health care professional with specialist expertise in treating spasticity due to MS, in line with its marketing authorisation (10).

The other route to Sativex in the UK is paying for the medication through private prescription. Costs can vary per pharmacy and clinic, but it may still be possible to access the pay for responder scheme.

Sativex is a class B drug however, it can lawfully be possessed by someone with a prescription from a qualified and experienced medical professional (11). If travelling abroad, be aware that Sativex's legal status varies between countries, so it is advisable to check with the relevant Embassy before travelling (9).

Sativex is available in England and Wales via the NHS under certain conditions, however, it is not currently available in Scotland or Northern Ireland.

## Access to Medicinal Cannabis in the UK

Although the Government announced in 2018 that medicinal cannabis would be legal to prescribe, gaining access to affordable private prescriptions has been problematic and sporadic.

Cannabis Patient Advocacy & Support Services (CPASS) have introduced their 'Nurses Arm' which was co-founded with Professor Ann Keen, former Health Minister, at The Royal College of Nursing, in November 2019. CPASS provide support, advocacy and education to



patients and healthcare professionals considering medicinal cannabis treatments. CPASS has developed a step-by-step guide for potential patients to help them navigate the private systems for access to cannabis medicines in the United Kingdom. This includes information on gaining a referral, preparing for initial appointments, what to expect from an appointment, dealing with a specialist pharmacy, and more. It says that although prescribed cannabis medicines come in different forms, most prescriptions are for cannabis flowers, which would be taken via a vaporiser, and sublingual oils which are administered under the tongue. Additional options for medicinal cannabis are becoming available regularly and prices are coming down significantly (12).

As many as 20,000 people in the UK are going to be prescribed medicinal cannabis as part of a study aiming to create the largest body of evidence on cannabis' clinical effects. The trial, named Project Twenty21, will look at the impact of medicinal cannabis on certain specific conditions, one of which is MS. Project Twenty21 is

spearheaded by Professor David Nutt who runs Drug Science, an organisation that works to provide an evidence base free from political or commercial influence. This study has been set up in response to the fact that NICE has said that as it stands there is not enough evidence to prescribe cannabis on the NHS. Eligible participants of the study will receive medicinal cannabis prescriptions at a subsidised cost (13).

## Cannabidiol (CBD) products

In the last few years, there has been a growth in the use of CBD products. With many CBD companies selling oils, food and drink, topical creams and vaporising products online and on the high street. These products are probably best described as hemp extracts (14).

A cannabis industry membership campaigning body (The Centre for Medicinal Cannabis) compiled a report looking at CBD use and the wider marketplace titled 'CBD in the UK'. The report used data from 2019 surveys taken by YouGov (a data research and analytics group) and indicates that somewhere between four and six million people in the UK have tried CBD. The report also noted that people who use CBD products come from all age groups and social classes (15).

Data from the YouGov surveys also says the most popular type of CBD products in the UK are pure oil (58%), followed by CBD 'vaporiser juice' or 'e-cigarettes' (21%) and creams (11%). Of the survey respondents, 61% of CBD product users say they use the products for medicinal purposes, with pain relief the primary use (71%) (16).

Until recently the CBD marketplace has been quite open in the UK. The status and availability of some products containing CBD may be changing. CBD is just one of the many cannabinoids found in hemp flowers. CBD is extracted and concentrated from the plant. The CBD

can then be mixed with carrier oils, added to topical creams and used in food and drink. Because the hemp plant contains low levels of THC, these oils and products will likely also contain trace amounts of THC.

Due to the extraction process that the plant undergoes, it means the final product is different from hemp. The Food Standards Agency (FSA) has stated that ingested CBD products are to be classified as a 'novel food'. A novel food is any foodstuff that was not commonly eaten before 1997. The novel food status of CBD extracts was confirmed in January 2019, and the European Commission updated their Novel Foods Catalogue. This means that from April 2021 onwards, only CBD products with a validated novel foods application should remain on the market. The process of applying for novel food validation is costly and time-consuming and may well prove difficult for the CBD industry to respond to (14). At the time of publication of this booklet, there are still a variety of CBD products available to purchase both online and on the high street.

I've used CBD drops under the tongue. They did seem to lessen the pins and needles feelings in my legs and mouth and seemed to work better the longer I took them. CBD is good because you don't get the 'high' so can still function normally. It was only a small dose - I got a peppermint flavour so the taste wasn't too bad To help understand what to look for when it comes to purchasing CBD products, Henry Vicenty, CEO of Endoca, (a CBD producer) gave MS-UK his top five tips for buying CBD (17).

#### Does the company have publicly accessible, easy to understand lab reports?

Companies selling quality products will be proud of their lab reports and will want their customers and the general public to have easy access to information regarding what is in their products. Do a guick search of the company website or reach out to their customer services team.

#### Are the products organic and whole plant?

If the products are certified organic, you will see the logo on the website. Some companies will grow organically but may not have a certification. A guick glance over their lab reports should show the testing for a variety of chemicals or toxins. Research and anecdotal reports support the claim that whole-plant CBD extracts are more therapeutically potent than isolated CBD extracts alone.

# 3 Is the CBD amount of the product clearly labelled and verifiable?

As the industry is yet to be standardised, bottle sizes and CBD levels are all dependant on the company. It can be hard to truly know if the product you are using is good value for money. You can find CBD value calculators online, which helps you work out the monetary amount per milligram of CBD, which can be useful when trying to choose a product.

# Are there clear quality standards in place?

Without clear quality standards there is no quarantee of safety in the product you are purchasing, so make sure you ask the company for

proof of the quality standards they have in place. Ask if the products are Good Manufacturing Practice (GMP) certified (when products are of pharmaceutical quality) and for any other certifications they hold that show their product is safe for consumption.

# 5 Is their website content clear and informative and do they have many online reviews?

As CBD is a new industry for many people, there is an abundance of information online, including information that you can find on many CBD company websites. It is very easy for companies to buy CBD in bulk and rebrand it as their own. If the company you are buying from provides limited information or is not clear in giving you information to help you make an informed decision or purchase, you should be wary. Finding online sources of product reviews is a good way of finding out about the experiences of others using the same products.

# What is the difference between recreational and medicinal cannabis?

In the main, recreational cannabis will be higher in THC and lower in CBD. This is largely different to prescribed medicinal cannabis where the ratio should be higher in CBD and lower in THC, or at a slightly more equal ratio. Medicinal cannabis is legal to be possessed and used in the prescribed manner, by the prescribed person. Recreational cannabis is illegal and carries a maximum sentence for possession of five years and a fine (or both). Recreational cannabis has no guarantees over quality and safety. Medicinal cannabis is grown under strict, clinical conditions with quality checks following 'Good Manufacturing Practice' guidelines. Street-purchased cannabis may

be contaminated, and it may be impossible to know the conditions the cannabis was grown under. One batch of recreational cannabis is likely to be different to the next, whereas prescribed medicinal cannabis will be of a consistent standard (18).



## Driving, work and travelling abroad

The Medical Cannabis Clinicians Society is an independent, not-for-profit organisation and they have written a useful booklet 'Medical Cannabis: Frequently Asked Questions. A guide for patients and clinicians'. They say that when it comes to work, if an employer tests their employees for drugs such as THC, a person being prescribed medicinal cannabis will likely test positive. It is suggested that if a person is prescribed medicinal cannabis, that they talk to their

employer. The Medical Cannabis Clinicians Society has information that may help that conversation. It is important to recognise that there are some jobs that will not allow any detectable levels of THC, such as pilots and railway signallers (18).

When it comes to driving whilst using cannabis-based medicinal products, the rules are clear. No one should drive whilst impaired. The THC in medical cannabis can have an intoxicating effect and can cause impairment for driving or operating machinery, so it is suggested that driving (or other hazardous activities) should be avoided whilst you're affected.

For travelling abroad, it is worth checking information from the destination's embassy and ensure that consideration has been given to the status of medicinal cannabis in any countries that are visited and passed through. Laws relating to medicinal cannabis vary a great deal from country to country.

# Smoking and health effects of cannabis

There are many ways to ingest cannabis, however, when it comes to smoking cannabis, it is felt that there is an additional health risk. Kevin P. Hill MD, Assistant Professor at the Harvard Medical School, has said, 'In theory, smoked cannabis should be as effective a treatment as other forms. But doctors do not recommend smoking because it is so bad for your lungs, and when you use the drug in pill or spray form, it helps your doctor control how much of the active chemical you get (19).'

The physical effects of smoking cannabis can impact the user's

health, possibly leading to respiratory issues and even oral, throat, and lung cancer (2). For more information about 'Smoking and MS' please see our Choices booklet on the subject.

Recreational use of cannabis often has warnings related to negative implications on mental health, particularly in relation to heavy use. Even though the active compound THC can give a sense of relaxation to users, if large amounts are used, it has been known to have negative effects including inducing anxiety.

Some regular or emotionally vulnerable cannabis users may have undesirable experiences. Depending on the user's mood and personal circumstances the effects of heavy use have been known to include confusion, anxiety and paranoia. Some studies have suggested that cannabis use can be a trigger for underlying mental health problems. While under the influence of the effects of cannabis, it can affect short-term memory, concentration, and manual dexterity, including driving (2).

There has also been research into MS, cannabis and cognition. One study that used Magnetic Resonance Imaging (MRI) as a measure, found that cannabis use in MS results in more widespread cognitive difficulties and brain volume loss. This could be a potential cause for concern for the MS community as cognitive impairments and difficulties occur in approximately 40–60 per cent of people with MS (20).

#### Further information

# Cannabis Patient Advocacy & Support Services

www.cannpass.org

#### Good manufacturing practice and good distribution practice

www.gov.uk/guidance/good-manufacturing-practice-and-good-distribution-practice

#### The Medical Cannabis Clinicians Society

www.ukmccs.org

#### **Project21 – Part of Drug Science**

www.drugscience.org.uk/project-twenty21

May 2021

# **About MS-UK**

MS-UK is a national charity formed in 1993 supporting anyone affected by multiple sclerosis. Our hope for the future is a world where people affected by MS live healthier and happier lives.

MS-UK has always been at the forefront of promoting choice, of providing people with all the information and support they need to live life as they wish to with multiple sclerosis. whether that be through drugs, complementary therapies, lifestyle changes, a mixture of these or none at all.

We will always respect people's rights to make informed decisions for themselves.

## The MS-UK Helpline

We believe that nobody should face multiple sclerosis alone and our helpline staff are here to support you every step of the way.

Our service is informed by the lived experience of real people living with MS, so we can discuss any treatments and lifestyle choices that are of benefit, whether they are clinically evidenced or not

















## **New Pathways**

Our bi-monthly magazine, New Pathways, is full of the latest MS news regarding trials, drug development and research as well as competitions, special offers and product reviews. The magazine connects you to thousands of other people living with MS across the country.

Available in print, audio version, large print and digitally.

# **About MS-UK**

#### Peer Support Service

Our Peer Support Service enables people to connect with others in a safe space and share experiences on topics of interest. Our Peer Pods take place regularly and are all volunteer led. Please visit the website to find out more www.ms-uk.org/peer-support-service or email peersupport@ms-uk.org.



























#### Online activities

MS-UK offers a variety of online activities to stay active and connected for those affected by MS and manage their symptoms to live happier and healthier lives. Activities include exercise sessions, mindfulness courses, chair yoga classes, information sessions and workshops. Visit our website to explore and find out more.

# E-learning

Do you work with or support someone living with MS and want to increase your understanding and knowledge of this long-term health condition? Professionals at MS-UK have created accredited Learning courses that can help you do this. Visit https://ms-uk.org/excellence-ms/ to find out more.

#### Sources

- (1) The History of Modern Biomedicine. The Medicalization of Cannabis. S M Crowther. Published 24 Mar 2019. Accessed May 2021. www.histmodbiomed.org/sites/default/files/44870.pdf
- (2)DrugWise. Cannabis. Accessed May 2020. www.drugwise.org.uk/cannabis
- National Center for Biotechnology Information (NCBI). (3)Cannabinoids in the management of spasticity associated with multiple sclerosis. Malfitano et al. Published Oct 2008. Accessed May 2021. www.ncbi.nlm.nih.gov/pmc/articles/PMC2626929
- (4) National Center for Biotechnology Information (NCBI). Cannabinoids for treatment of spasticity and other symptoms related to multiple sclerosis (CAMS study): multicentre randomised placebo-controlled trial. Zajicek et al. Published Nov 2003. Accessed May 2021. https://pubmed.ncbi.nlm.nih.gov/14615106/
- (5)National Center for Biotechnology Information (NCBI). The effect of cannabis on urge incontinence in patients with multiple sclerosis: a multicentre, randomised placebocontrolled trial (CAMS-LUTS). Freeman et al. Published 17 Nov 2006. Accessed May 2021. https://pubmed.ncbi.nlm.nih.gov/16552618/
- (6)National Center for Biotechnology Information (NCBI). Multiple sclerosis and extract of cannabis: results of the MUSEC trial. Zajicek et al. Published Nov 2012. Accessed May 2021 www.ncbi.nlm.nih.gov/pubmed/22791906

Call 0800 783 0518

- (7) American Academy of Neurology. D J. Rog et al. Published 26 Sept 2005. Accessed May 2021. www.neurology.org/content/65/6/812.abstract
- (8) National Center for Biotechnology Information (NCBI). Cannabidiol, neuroprotection and neuropsychiatric disorders. Campos et al. Published Feb 2016. Accessed May 2021. https://pubmed.ncbi.nlm.nih.gov/26845349/
- (9) The electronic Medicines Compendium (eMC). Sativex Oromucosal Spray. Last Updated 25 Aug 2020. Accessed May 2021. www.medicines.org.uk/emc/product/602
- (10) National Institute for Health and Care Excellence (NICE). Cannabis-based medicinal products. [NG144] Last updated: 22 Mar 2021. Accessed May 2021. www.nice.org.uk/guidance/ng144
- (11) Gov.uk. Scheduling of the cannabis-based medicine 'Sativex'. Published 27 Mar 2013. Accessed May 2021. www.gov.uk/government/publications/scheduling-of-the-cannabis-based-medicine-sativex
- (12) Cannabis Patient Advocacy & Support Services. Accessing Private Prescriptions for Cannabis Medicines. Published 19 Apr 2020. Accessed May 2021. http://cannpass.org/accessing-private-prescriptions-for-cannabis-medicines
- (13) MS-UK. New trial will allow 20,000 to try medical cannabis. Published 07 Nov 2019. Accessed May 2021. www.ms-uk.org/new-trial-will-allow-20000-try-medical-cannabis

- (14) Cannabis Patient Advocacy & Support Services. CBD Oil Special: How Novel Foods May Affect You. M Biles. Published 24 Mar 2021. Accessed May 2021. http://cannpass.org/cbdoil-special-how-novel-foods-may-affect-you
- (15) The Centre for Medicinal Cannabis. UK CBD Requires Better Regulation and Reform as Industry Moves Towards Billion Pound Sector Status. Published 26 June 2019. Accessed May 2021. https://thecmcuk.org/news/blog-post-title-one-4emwf-chntn-ax62r-n9sjb-w9rt2-3sllz-gd6ng-e2acy
- (16) YouGov. How many people have tried cannabis-extract products? C Ibbetson. Published 18 Oct 2019. Accessed May 2021. https://yougov.co.uk/topics/health/articlesreports/2019/10/18/quarter-britons-tempted-cannabisextract-products
- (17) MS-UK. Top 5 tips to ensure you're buying quality CBD products. H Vincenty. Published 12 Feb 2019. Accessed May 2021. www.ms-uk.org/blog-guest-blog-top-5-cbd-oilbuying-tips
- (18) Medical Cannabis Clinicians Society. FAQs: Medical Cannabis and CBD. Prof M Barnes et al. Published June 2020. Accessed May 2021. www.ukmccs.org/learning-resources/faqs
- (19) New Pathways. The great cannabis debate. K Johnson. Issue 94 Published Sept 2015. Accessed May 2021.
- (20) National Center for Biotechnology Information (NCBI). Multiple sclerosis, cannabis, and cognition: A structural MRI study, Romero et al. Published 09 Apr 2015. Accessed May 2021. www.ncbi.nlm.nih.gov/pmc/articles/PMC4473732

Call 0800 783 0518

Use me for your notes	

Use me for your notes	

# Check out MS-UK's online activities

Live a happier and healthier life with MS



- ✓ Accessible online exercise classes
- ✓ Chair yoga classes
- ✓ Mindfulness courses

- ✓ Interactive workshops
- ✓ Information sessions
- ✓ Peer Support Service

Don't miss out – sign up for our new online activities today!

Visit www.ms-uk.org or contact us at register@ms-uk.org





# Stay in touch

MS-UK D3 Knowledge Gateway, Nesfield Road, Colchester, Essex, CO4 3ZL

www.ms-uk.org

#### 

www.facebook.com/MultipleSclerosisUK

www.youtube.com/c/ms-ukorg

in www.linkedin.com/company/ms-uk

www.instagram.com/multiplesclerosis\_uk

MS-UK Helpline 0800 783 0518 info@ms-uk.org



Registered Company Name
Multiple Sclerosis-UK Limited, trading as MS-UK
Company Number 2842023
Registered Charity Number 1033731
VAT Number 632 2812 64
Registered Office D3 Knowledge Gateway,
Nesfield Road. Colchester, Essex. CO4 3ZL



