

Dr. Ed

An Introduction to Cannabidiol (CBD)

“Cannabidiol (CBD) is currently taking the western world by storm and with good reason. There is a wealth of *in vitro* and pre-clinical data demonstrating the potential beneficial effects CBD can have in the treatment of a wide range of disorders from anxiety and general inflammation to chronic pain and arthritis. The first ever CBD based medicine has also just been approved for the treatment of severe epilepsy by the FDA. The future is very bright for CBD.

While CBD is certainly a potential boon for health, it is not a miracle cure for everything, so don't believe those who say it is; and in a growing, self-regulated industry there are a lot of people trying to take advantage. I started this company for discerning customers; customers who put their health first and who are interested in WHY things might work for them. We create our products based on the most up-to-date, peer-reviewed science and craft CBD-infused products of unparalleled consistency and purity in our pharmaceutical-grade lab.

I have written a brief starter guide below to introduce you to the world of CBD and how to get started. I hope you find this guide useful and if you need anything else, no matter how small, please feel free to reach out to us”

A handwritten signature in black ink that reads "Edward Jones". The signature is written in a cursive, flowing style with a large, sweeping flourish at the end.

Glossary

The CBD industry tends to use acronyms, descriptors and other words you may not be familiar with. We've highlighted some of the most common below.

CBD – *Cannabidiol, a phytocannabinoid compound with therapeutic value and currently the focus of a growing body of research.*

Hemp – *A strain of the Cannabis sativa plant that is grown specifically for the industrial uses of its derived products.*

Terpene – *A large class of organic compound produced by plants; many hold substantial therapeutic value.*

Tincture – *A medicine made by dissolving a drug in alcohol.*

Full-Spectrum – *A.K.A 'Whole Plant CBD' describes products which contain a larger array of cannabis-derived compounds in addition to CBD including THC and other cannabinoids.*

Isolate – *A highly concentrated cannabinoid. CBD is the most common isolate you will find.*

Opioid – *A class of medical drugs often prescribed for pain management. Highly addictive.*

Psychoactive – *alterations to the function of the brain and nervous system usually as a result of various drugs and compounds.*

THC – *tetrahydrocannabinol, an endocannabinoid compound that is the main active ingredient of cannabis.*

Choosing Your Provider

We hope that by reading this guide, you have chosen Dr Ed as your CBD provider, but even if not, always do your research. This is about your health and lots of people will try and take advantage of that. Based on our investigations, around 70% of the CBD ‘producers’ in the UK are what we refer to as ‘bedroom blenders’.

There are a mixture of small companies and individuals that mix low quality and inconsistent ingredients together to make their products. Not all are doing this to make a quick profit, some sell to friends and family for example. The point is, only a handful of CBD brands have the authority, expertise and facilities to produce high-quality, pharmaceutical grade CBD products.

This is not intended to scare, but rather, highlight that research is important and that you can’t trust everything you read on the internet!

1. Evidence

Evidence-based medicine is at the core of human health and why our average lifespans have doubled over the last few centuries. We use techniques and medicines that have been thoroughly investigated and tested for effect. CBD may be only now growing in popularity but the EVIDENCE that it works is incredibly important. The Dr Ed Knowledge hub, which you can find on our website, is an attempt to educate and collect the most important evidence for the effects of CBD on human health in one place.

Here you will find in vitro, pre-clinical and clinical data focused on CBD therapies and their efficacy in treating specific ailments, written in a digestible way. We create our products based on the findings of top-rated peer-reviewed research not anecdotal stories and fads. CBD blogs and hundreds of websites CHERRY pick the data, often taking very poor-quality research or testimonials and making wild health claims off the back of it. If a brand or company does this be very wary of their intentions. CBD has lots of potentially very powerful health effects, but it is not a miracle cure.

Google Scholar and Pub Med are both good places to find the real evidence about CBD – these are research depositories used by academics across the world. Websites like ‘www.cbdlife.com’ or ‘www.buyhemp.co.uk’ (made up examples) are unlikely to be a good source of unbiased information.

2. Credentials and Expertise

One of the key things to look for are the credentials behind the supplier. Are they scientists, are they doctors, are they CBD experts – do they have a deep understanding of human health

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or topics relevant to CBD-derived products? If suppliers and brands do have this sort of authority and experience, they will make it clear to their customers. If they don't, they'll remain quiet on this front and offer up only sparse science and evidence regarding the effects of their products. This isn't to say that you should blindly trust those with fancy letters before or after their names, but that years of dedicated study and research makes a very big difference when it comes to product development and product recommendations.

Questions to consider:

- Does your supplier discuss, highlight and understand the science behind their product?
- Does their team include people with relevant experience in science or health?
- Does your supplier have clear and concise branding and labelling?
- Does your supplier have a dedicated production facility?
- Does your supplier have good user reviews and recommendations?

3. Lab Reports

In a self-regulated industry like this one, lab reports are fairly rare to come by but incredibly important. Any brand can put a label on the side of a bottle but only a handful have the resources and facilities to analyse their products and create detailed lab reports about the contents.

As a consumer, lab reports should be one of the first things you look for on a supplier's website; they may have links or they may display them directly. Lab reports show they take the industry seriously, but more importantly they take you seriously as a discerning customer. A detailed lab report will break down all the ingredients in a CBD product as well as the exact amount of that product. As the 'oil' in CBD oil can be a variety of oils and solutions, lab reports allow you to get down to the nitty gritty to see if a product is right for you.

Lab reports aren't just great for consumers but for suppliers as well. Creating products with consistent levels of CBD allows brands and suppliers to build a reputation as a reliable brand. As CBD is very personal, finding the right dosing for you can take time – it is therefore critical that if you find a dose and product that works for you, the next bottle you order is exactly the same. Consistency is key and without lab analysis it is hard to do that.

Choosing Your Dosage

Finding out the right dosing for you encompasses more than working out what your body responds to best. It also involves fully understanding the CBD product label. As the CBD industry is fairly new and growing, there is no universally agreed way to label CBD-derived products, so checking the labels is always a must.

1. Understanding the product

When it comes to your health, time spent double checking labelling is time well spent. The first step is to understand exactly what it is in your product. Check the quality of the labelling and the list of ingredients. Take a close look at the CBD content and how this is displayed. Sometimes the amount of CBD stated is the quantity of CBD hemp concentrate used to make the product, not the actual amount in the bottle.

For this reason, it is wise to trust and choose a brand which has clear and consistent labelling and displays the actual amount of CBD in the product.

This is important not just from a cost perspective but from a dosing perspective as you can accurately record and measure how much CBD you are taking.

As poorly labelled products can contain variable levels of CBD depending on their level of refinement, your 5% oil could actually contain very low levels of CBD which equates to less than 1% actual CBD. In other words, not what you paid for!

2. Percentage vs milligrams

As there are no standardised labelling methods, CBD products are often labelled with the quantity of CBD as either percentage (%) or milligrams (mg). Unusually, if a product is labelled with milligrams, this refers to the amount of CBD in the entire product not per millilitre.

For example, a 1000mg CBD oil bottle which is 10ml contains 100mg of CBD per 1 ml ($1000\text{mg}/10\text{ml} = 100\text{mg per ml}$), whereas a 1000mg CBD oil bottle which is 30 ml contains 33.3mg of CBD per 1 ml. In other words, despite practically identical labelling, the larger bottle of CBD is 3 times weaker than the small bottle.

Percentage (%) is a much more accessible way of labelling CBD content as 5% CBD means 5% of your product is CBD regardless of the total size of the bottle or container.

3. Start slowly

Taking CBD is an individual experience, with dosing and frequency varying widely. As such it is not appropriate for us to tell you how much CBD to take. However, we do suggest you start slowly, to find out what works for you.

There are currently no official guidelines around how much CBD to take and there is currently a lack of solid clinical evidence to definitively state the therapeutic range of CBD. Research effort is currently underway to address this.

Using CBD should be approached with a holistic mind. As CBD is a biologically active compound, things like body weight and age should be taken into consideration. Things which are harder to determine but which may also affect dosing efficacy include metabolic rate, genetics and the current health of your endocannabinoid system.

The best way to start is slowly, with a low dose. Keep a close eye on your mood, attention and how your body feels. Gradually increase your dosing and see how your body reacts until you reach a level that you feel is beneficial.

Taking CBD

There are a large number of ways to take CBD, which means the benefits of CBD are within everyone's reach. We've summarised the most common ways below and each have their own particular strengths. Some people stick to one route and others mix and match; it is entirely up to you.

1. Tinctures

A tincture is the classic oil dropper type of application and the most common way to currently purchase CBD. Use the pipette to drop CBD under the tongue and hold under the tongue for around 30 seconds before swallowing.

This is known as 'sublingual' application. Due to the large number of capillaries and good blood flow under the tongue, sublingual application is one of the fastest and most effective ways to take CBD. As CBD has direct access to the blood stream, it bypasses first stage metabolism by the liver which greatly reduces the availability of CBD in your system.

Calculating amount per drop:

Most oils come with a 1 ml dropper. Assuming a 10ml bottle with 1000mg, each 1ml dropper will contain 100mg of CBD.

$1000\text{mg}/10\text{ml} = 100\text{mg per ml.}$

If you have decided to start at 25mg, then simply fill the dropper a quarter full. This method isn't 100% accurate but serves as a solid estimate of your dosing.

2. Sprays

Sprays are starting to gain popularity and are also considered a sublingual route of administration as the CBD is sprayed under the tongue. Sprays are more discrete and easier to use the tinctures hence their growing availability.

Most suppliers will also state the amount of product released per push of the spray so you can quickly work out how much CBD you are taking.

3. Vape

As can probably be guessed, CBD is now available in e-liquid form so can be vaped. The lungs have a massive blood supply, so vaping is an efficient and fast way to consume CBD. As above, note the milligram amount of CBD per ml of your e-liquid. By doing this you can work out how much CBD you place in the tank of your vape device and can keep track of it through the day.

If you want to be taking 100mg per day and you are using a 500mg bottle of e-liquid, 2mls of your e-liquid will provide what you need. So, if you finish that 2ml tank in the day you will have correctly dosed with 100mg.

4. Edibles

Edible CBD usually comes in pill or capsule form which can be hard, soft or liquid (similar to a fish oil pill). The ingested CBD is absorbed primarily in the intestinal tract which has numerous blood vessels. Eating CBD leads to the slowest rate of absorption and a number of other factors can influence this including the type of food you've eaten.

CBD capsules are one of the easiest ways to correctly dose as each capsule has a specific amount of CBD. It doesn't get easier than taking a capsule.

Other ways to eat CBD include things like gummy sweets as well as drinks.

5. Topicals

CBD can be absorbed through the skin so topical CBD products like balms, creams and lotions can all provide benefits and can generally be applied in the same way as any other non-CBD products you have. Topical CBD is typically used for muscle aches, sprains and minor injuries and applied directly to the site.

To work out roughly how much CBD you are taking, simply divide the CBD weight in mg by the volume of the product. While not all of the cream/balm/lotion will be absorbed, this is certainly a better method than not measuring at all.

Note: the advice in the guide is not legally binding and should not be mistaken for medical advice. If in doubt, always consult your doctor.

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Need more help?

CBD is effective in helping relieve a variety of ailments ranging from pain and inflammation to anxiety and insomnia. However, dosing and delivery method vary from person to person so what might work for one person won't necessarily work the same way for you, even for the same health issue. If you have tried CBD before but found it didn't help or if you are starting out and need additional advice or guidance, please reach out to the Dr Ed team below and we'd be happy to help.

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