

# Introduction

Vaping, a frequently misunderstood phenomenon in nicotine delivery, has risen rapidly in recent years, and has now become an accepted part of everyday life since its introduction to the UK in 2007.

Thanks to vaping's many similarities with smoking, especially how it can satisfy both nicotine cravings and oral fixation through hand-to-mouth action (the need to lift something to your mouth and inhale). There are several factors to be considered when choosing the vaping device you use as your alternative to smoking. Detailed in this guide, we provide all the information you need so you can make the right choice for you, and better still, we share everything you need to know so that you can vape properly and most importantly, safely, should you decide vaping is the option for you.

If you want to find out more about other alternatives to smoking, see our Best Practice Guide: Finding The Right Alternative.





# Consider your lifestyle

Your lifestyle is a major factor in determining the best device for your needs. Those with an active routine involving regular travel for example may prefer smaller, more compact pod-style devices over some of the bulkier alternatives. Combining these defining factors will instantly narrow your options and help refine your decision, as well as increase the chance of it being a successful one



# Vaping devices

There are a vast number of devices available for you to choose from and your success in vaping can depend on making the right choice.

# Common vaping devices

There are simply too many individual models out there to break it down concisely by device. However, despite the variety, most vaping devices fall within one of a handful of categories which we will detail below, all of which can be found in many of your local retailers and vape outlets:





## All-in-One (AIO)

- AIO devices, also known as "pen style" devices, they feature a battery and a tank in one complete unit rather than as interchangeable parts.
- While not the smallest available, most AIO devices are compact and pocket-friendly.
- They offer a varied mix of features between kits, but typically won't have variable wattage as a standard.
- Some more advanced kits may offer a variety of coils with different ohm ratings, AlO's typically have one compatible variety only, which appeals to those new to vaping.

#### Pod

- Pod devices are the most discreet and compact option available today and have become very popular in recent years.
- Featuring either disposable or refillable pods rather than tanks, they
  are specifically designed to reduce user interaction and make the
  vaping experience as efficient and streamlined as possible.
- Some devices feature buttonless activation, which means the user can simply inhale using the device which automatically activates the battery and heats the coil.
- Convenience, portability, simplicity, and discretion are at the core of a pod devices intent.
- Highly suitable for new vapers, and those with busy lifestyles and even those looking for a secondary low-maintenance alternative to their other device.



#### Mod

- Mods are larger, high-powered devices that can be combined with different tanks.
- They can feature either internal or externally-charged batteries and often come with the widest range of customisable features like variable wattage.
- Some devices can be connected to a computer, allowing the user to fully customise their settings at a granular level to create the ultimate output for their preferences.
- Mods are commonly favoured by experienced/hobbyist vapers over beginners, owing to the more involved and often complex user interface offered.

#### Pod-Mod

- Risen to great popularity, pod-mods offer a hybridisation of elements offered by pods and mods alike.
- Often larger in size than traditional pod devices, and with increased power output, pod-mods still utilise a refillable pod with multiple coil varieties available.
- To compliment this, they also feature the customisation options expected from a traditional mod device, allowing for a far greater level of user interaction and refinement than is offered by pods, in conjunction with the convenience and simplicity offered by a pod over a tank.





#### Cartomisers

- Cartomisers or "cigalike" devices feature a very small battery and a pre-filled, disposable cartridge of e-liquid with an intrinsic coil.
- Often taking the appearance of an actual cigarette, they commonly feature glowing LED tips that simulate the appearance of a lit cigarette when inhaling.
- Compared to other devices, Cartomisers can be considered basic, but their uber-compact design and discreet appearance have continued to make them a sought-after choice, despite their recent decline in popularity.



# E-Liquid

E-liquid, also called vape liquid or vape juice, is the substance we vapourise in e-cigarettes to deliver the nicotine containing vapour we then inhale to satisfy our cravings. They come in a variety of different formats, with varying properties suited to different vaping styles. Pairing the right liquid with the right device is a key step in ensuring you are starting your journey properly.





# E-Liquid Ingredients

E-liquid typically contains four primary ingredients: PG, VG, nicotine & flavouring:

## Propylene Glycol (PG)

- PG is a clear, tasteless and colourless base material used in many common products including inhalers.
- PG is used in e-liquids as it is a very effective carrier for flavourings and nicotine.
- PG is thinner in consistency than VG and produces far less vapour.
- 50/50 vape liquids are made using a higher volume of PG, allowing them to accommodate higher nicotine strengths.

# Vegetable Glycerol (VG)

- VG is a clear, slightly sweet and colourless base material that is used in a massive range of products, from food to hand sanitiser.
- VG is perfect for e-liquids as it helps to create bigger and bolder flavours.
- VG is very thick in its consistency and can produce massive vape
- Most e-liquids use a balanced combination of VG and PG, as VG is not an effective carrier agent.



#### Freebase Nicotine

- This is the most common type of nicotine used in e-liquids. It is called "freebase" as the nicotine itself is freely suspended in a base material like PG or VG, however PG is far more common due to its superior properties as a carrier.
- Most freebase nicotine is suspended in PG at 7.2%, this allows manufacturers to accurately blend it into e-liquids to create the various strengths offered.

#### Nicotine Salts

- Nic salts are a more recent addition to the vaping industry. They work in the same way as freebase nicotine, however during manufacturing, the nicotine is combined with one of a variety of potential "salt acids". These salt acids neutralise the naturally alkaline pH of the nicotine. The result is an e-liquid that is smooth on the throat and less harsh in taste, even at very high strengths like 18mg & 20mg.
- Nic salts deliver deep, lasting satisfaction far faster and for far longer than is offered by freebase.
- Nic salts come in different forms. Common nic salt varieties include: Nicotine Salicylate, Nicotine Benzoate, Nicotine Ditartrate & Nicotine Levulinate.





# -lavouring

- Flavourings are what truly bring an e-liquid to life, they come in near limitless varieties.
- •They are usually suspended in a base consisting primarily of PG, which allows the flavourings to be properly blended alongside VG to create the finished product.
- They are classed as "food-grade" and are very similar, if not identical to those used in the catering industry. This does not mean you can add vanilla essence for baking to your e-liquid!



# Common types of E-Liquid

#### **Standard** (50/50)

- The most commonly used e-liquids are typically called "50/50". This refers to the fact that in most cases these e-liquids will contain an even ratio of PG to VG, which results in a stable mixture capable of supporting nicotine strengths of up to 20mg (which is the regulatory maximum strength).
- Better suited to smaller vaping devices that are designed to support mouth-to-lung (MTL) style of vaping.
- Most pre-filled pod devices will utilise 50/50 recipes in a variety of flavours and strengths.

#### Nic Salts

- Nicotine Salt e-liquids follow the same principals as 50/50's and are blended in the exact same way. The primary difference is that they utilise salt rather than freebase nicotine. This offers some benefits including a smooth taste and deep satisfaction even when vaped at higher strengths.
- Due to their rising popularity, there are some manufacturers producing vaping devices that are described as specifically designed for Nic Salt e-liquids – this does not however mean that you need specialised hardware. Nic Salts are compatible with most Mouth-To-Lung (MTL) style devices.





#### HVG (AKA - 80/20 or 70/30)

- High Vegetable Glycerol (aka HVG) e-liquids are, along with 50/50s, one of the longest standing liquid varieties available to consumers.
   They utilise a much higher ratio of VG in their recipe. Due to the lower volume of PG, a more effective carrier agent, HVG e-liquids are typically unavailable in strengths beyond 3mg or 6mg.
- Higher strengths of nicotine are less preferable for HVG juices as larger consistencies (12mg and above) are generally considered be an unpleasant experience due to the large amount of vapour that is typically inhaled.
- HVG e-liquids are only compatible with sub-ohm vaping devices, with a coil rating of less than 1.0ohm. These devices are instantly recognisable in most cases due to their large size, often outlandish designs and detailed user interface - typically used by experienced vapers.

#### **Short Fills**

- Short Fills are a very popular kind of High VG e-liquid that allows the user to purchase much larger bottle sizes as opposed to the traditional 10ml.
- Short Fills are always sold as nicotine-free, which allows them to bypass the regulations that limit the size of nicotine containing e-liquids to a maximum of 10ml.
- To meet consumer needs, the larger bottles are often filled just short of their maximum volume, allowing the user to add separate Nic Shots to create a large volume of their favourite flavour with a customised nicotine strength.



#### Nic Shots/Nic Salt Shots

- Exclusively intended to be added to short fill products, these are a rare example of a HVG e-liquid that is also high strength, often found in 18mg, and not for isolated consumption.
- The nicotine content is diluted down when added to the base e-liquid in a short fill.
- It is important to match the PG/VG ratio of a shot to the short fill so as not to dilute the thickness of your e-liquid.
- An example of how to blend a nic shot with a short fill would look like this:
- 50ml of 0mg, 80/20 short fill base + 1x 10ml, 18mg, 80/20 nic shot = 60ml of 3mg, 80/20 e-liquid.
- Nic Salt Shots function in the same way but utilise salt instead of freebase nicotine.





# Coils

Coils are a vital part of any e-cigarette, and are one of the few parts that require regular replacement by the user. Different combinations of coils and e-liquids create different vaping experiences that must be tailored to your own needs & preferences, below we have broken down everything you need to know.

# Understanding your coil

Coils come in many shapes and sizes, however at their core they are a metallic wire, tightly wound around a wicking material like cotton or even bamboo fibre. An electrical current is passed through the coil from the device battery which heats the coil up and turns the e-liquid, which has soaked into the wicking material, into an aerosol or "vapour" which is then inhaled by the user.

Some coils screw into place, others may be push-fit, however, this ultimately will not impact the way they work and is determined by the design of your chosen device.

Different metals are used to make the coil wire depending on their intended use - for example, higher powered devices will often use coils made of metals which perform better at higher temperatures, improving their lifespan.



Some of the most common coil metals include

## Kanthal, Nichrome (Nickel-Chrome alloy)

Typically used in standard coils for devices that work to a pre-set power such as in pod devices.

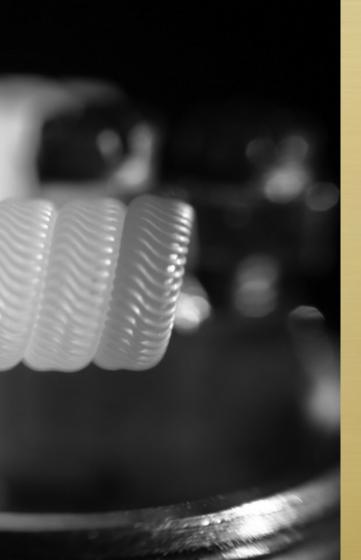
#### Titanium, Nickel

Often used in devices that have variable wattage or temperature controls most common amongst sub-ohm (see what are Ohms?) For more information) devices intended for HVG e-liquid. They require more power to heat but offer the durability needed for fine-tuning your vaping experience even at higher wattage.

#### Stainless Steel (SS)

SS coils are very multi-functional due to the versatility of stainless steel when handling varying temperatures and power outputs. While not the most refined for tailoring your vaping experience, they are dependable all-rounders.





# What are Ohms?

Coils have a rating given in ohms (a unit of electrical resistance). The ohm rating determines how much power is needed to use the device properly to make the most of your chosen e-liquid.

Contrary to logic - the higher the ohm or resistance rating of a coil, the less power is required to heat it.

The coil's resistance is determined by the diameter and gauge of the wire. The gauge represents the number of times the wire is wrapped to produce the coil.

The higher the gauge of the wire, the thinner it is. Higher resistance coils tend to have a higher gauge.

The resistance of your coil will almost always be written on the coil itself or its packaging along with a recommended wattage for you to use as a guide when optimising your experience - straying too far outside these guidelines will impact the lifespan of your coil.

HVG e-liquids are best suited to high powered devices using sub-ohm coils - this means they will have an ohm rating of 0.9 or below.

50/50 e-liquids are best suited to lower powered devices running coils with a resistance rating of 1.0ohm or above.



# Vaping Jargon-Buster

#### **Atomiser**

The heating element in an electronic cigarette that turns the e-liquic into vapour.

# **Burning Coil**

Occurs when the e-liquid inside the tank fails to properly saturate the wicking material.

#### Ceramic Coil

A type of coil that has a longer life span than other coils due to it reducing the risk of burning the coil.

# Cigalike

An electronic cigarette that resembles a traditional tobacco cigarette in appearance.

# Clapton

A type of coil configuration which consists of a core wire tightly wrapped by a thin gauge wire.





#### Clearomiser

A transparent & usually disposable cartridge, which allows users to see how much e-liquid they have left.

#### **Connection Pin**

Is the positive feed from the battery that connects to the atomiser tank and gives it power.

# Direct to lung (DTL)

Vapour is inhaled to the lung and exhaled in one smooth action, without being held in the mouth first. Certain device types are more suited to this approach such as those designed for sub-ohm vaping.

## **Drip Tip**

Term used for an e-cigarette mouthpiece.

## Dry Burn / Hit

Occurs when the wicking material is dry, the coil has insufficient e-liquid or when the coil burns out. When power is applied in these scenarios, dry burn will likely occur creating a very unpleasant vape.



# Flooding

Occurs when e-liquid floods the coil, causing leakage and other performance issues. This can occur if the wrong e-liquid type is paired with an inappropriate coil such as 50/50 with a sub-OHM. Equally if a filled tank is left for extended periods without use, they can over-wick causing flooding.

#### mAh

Milliamp-hours or mAh is a unit for measuring electrical power, used to describe the total amount of energy a battery can store at one time. Generally, the larger the mAh rating, the longer the battery can last and the more power it can produce.

#### **MHRA**

The Medicines & Healthcare products Regulatory Agency (MHRA). This is the UK governing body responsible for ensuring TPD regulations are adhered to by the British vaping industry.

#### MG

Milligram is the unit of measurement used to describe the nicotine strength of a product, usually per ml. For example - 18mg/ml.





## Mouth to lung (MTL)

The vapour is taken into the mouth, before being inhaled into the lungs. This is more typical of 50/50 style, higher strength e-liquid users.

#### Priming

Pre-soaking the new coil with e-liquid to reduce the chances of dry burn.

# Tobacco Products Directive (TPD)

A regulatory body that governs the standards of tobacco based products such as cigarettes and vaping devices.

#### Wick

A small piece of material found packed around the atomiser coil which absorbs the e-liquid, allowing for vapour production when the coil is heated.



# **FAQs**

# How do I swap flavours?

For a simple pod device, changing flavour is as easy as removing one pod, and attaching another. For devices with refillable tanks/pods and interchangeable coils, swapping flavours will typically involve removing the old coil, cleaning the tank and inserting a fresh coil and filling with a different flavour.

# What is variable wattage?

Variable wattage allows you to control the amount of power being provided to your coil, which allows you to use multiple coil variants. Commonly known as "power readout" amongst vapers, many devices now offer customisable wattage as a standard feature. You should note, changing the wattage can alter the battery's effectiveness.

## What is a disposable e-cig?

A disposable e-cig is a throw-away vaping device, with a pre-set amount of liquid in a specific flavour, and often colour coded.

# Why is there occasional variation in e-liquid colour between batches?

There are three main causes of colour change:

- Photosensitivity (light exposure) of both the nicotine and flavouring.
- 2. Extreme temperatures.
- 3. Manufacturing process.

## Are e-liquids suitable for diabetics?

Most e-liquids do not contain free sugar, the type associated with high blood sugar and diabetes. Free sugars are any sugars added to food or drink, or found naturally in fruit juices, honey, and syrups. If in doubt, always consult your healthcare professional before using the product.

## Are e-liquids suitable for vegans?

Variations may occur between brands, however vegetable glycerol used in most e-liquids is primarily derived from rapeseed and the flavourings are predominantly synthetic and not derived from animals. Propylene glycol is also a synthetic compound which is not derived from any animal-related ingredient. If in doubt, you should always carefully check the label.



# How to contact a stop smoking adviser

Your GP can refer you, or you can phone your local stop smoking service to make an appointment with an adviser.

In England: Call the free Smokefree National Helpline on 0300 123 1044

In Scotland: Call the free Smokeline on 0800 84 84 84

In Wales: Call the free Help Me Quit helpline on 0800 085 2219

In Northern Ireland: Call a provider in the town or city where you live (telephone numbers can be found on the Want2Stop website)

