

electronic cigarette beginner's guide

Last Edited: 30/01/12

Below is a summary of the Beginner's Guide based on the tutorial from Electronic Cigarette Forum (ECF)

<http://www.e-cigarette-forum.com/index.php/beginners-ecigarette-tutorial.html>

You're over 18 and you're a cigarette smoker. If both of those don't apply, then don't think about buying an e-cigarette as it's not for you.

Electronic cigarettes are an alternative nicotine supply system, or a replacement form of smoking; they can be viewed as a tobacco harm reduction product or a consumer product like low-alcohol beer, depending on your point of view. Most ecigarette users are smokers who do not intend to quit, they are looking for a better way of doing it. Some people believe they have quit smoking when they use an electronic cigarette, others think it is just a safer alternative, but most simply don't care about any aspect of the terms used.

Some people move along to using zero-nicotine refills eventually, and some quit entirely. Most couldn't care less about any aspect of it as long as they don't smoke cigarettes any more.

What to buy?

If you are over 18, and you are a tobacco smoker, and you've made the decision to try ecigarettes - what now? First you need to buy a **Starter Kit** This normally has everything you need to get you going - an ecigarette, refill liquid, and a battery charger.

There are lots of models available and we supply two of the most popular, the 510 and the Ego. Although both of these can be a little fiddly to begin with they both offer good upgrade options, with many parts interchangeable.

Both the 510 and the Ego are three-piece models with a battery, atomizer and cartridge. All parts can be purchased separately.

End fittings

All ecigs use a battery but there is some variation in the end fittings (heater coil and liquid holder), of which there are several types. Some of these commonly-used words are abbreviated, as there are many long or complex names. The battery provides the power and the heater element and liquid reservoir come in different forms:

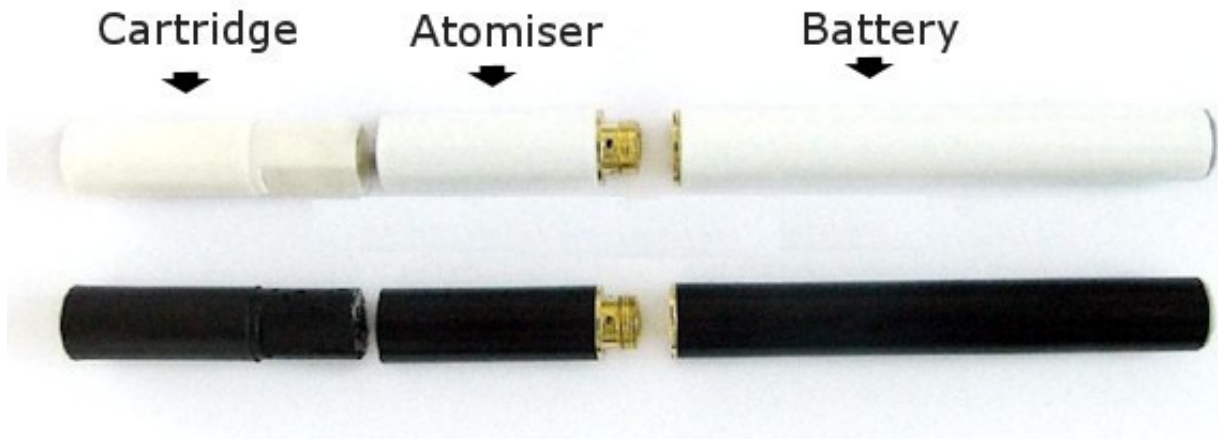
- 3-piece models: atomizer and cartridge ('atty' and 'cart') - a separate heater element holder and liquid reservoir.
- 2-piece models: cartomizer ('carto') - the heater coil and liquid holder are combined in one unit.
- 2-piece variant: tanks or "T" - these are giant cartos and can hold up to 5ml of liquid for heavy users.

Heavy smokers

If you are a heavy smoker there is a good argument for buying a large-format model first, such as the eGo Riva with some cartomizers that hold a lot of liquid e.g. Smokeymizer and/or Dual Coil Clearomizer. The big advantage of the EGO over the 510 is battery life.

The various components of an ecigarette

As we have seen, standard electronic cigarettes can be 2-piece or 3-piece formats. The 2-piece models have a battery ('batt', 'batts') and a cartomizer ('carto'). The 3-piece models have a battery and an atomizer ('atty', 'atties') and a cartridge ('cart', 'carts').



Since they have special Li-ion (lithium ion) rechargeable batteries of 3.7 volts, a dedicated charger is needed. All parts are interchangeable between both your spares box, and other suppliers of the same model number - so in fact what you have is a collection of parts and you can screw any one part on to any other within the same model range, to make up a 'complete unit'.

All parts are disposable. This means that you do not have a 'unit' that will last for ever, the individual parts have an expected service life that is a minimum of one month although they may well last longer. For example:

- Batteries last about 200 recharges on average, but can die earlier than this.
- Atomizers normally last for a minimum of 2 weeks depending on usage, but can last much longer. You need spare atomizers as they can sometimes fail after only a few days.
- Cartridges pretty much last for ever as they are just a plastic liquid holder. However, the filler material needs changing regularly.
- The battery charging unit should last well, although it can't last for ever.
- With a 2-piece model, the cartomizers are disposable although they can be refilled a number of times.

What is the minimum number of spares ?

One 'working unit' comprises a battery, atomizer, and cartridge (or a battery and cartomizer). Add a charger and some refill liquid, and in theory that's all you need - for testing purposes.

As an absolute minimum, for light use only, you will need:

- 2-piece systems: 2 batteries, 5 cartomizers, a bottle of refill liquid, and a charger.
- 3-piece systems: 2 batteries, 2 atomizers, 5 cartridges, a bottle of refill liquid, charger.

As any component could fail at any time (even within a month or less), it's wise to have spares for all of them. Experienced users have many spares because they don't want to be in a situation where a vital part fails and they have no backup.

But first, you need to try the whole thing out and decide if it's for you.

Auto or manual batteries ?

A battery can have a manual on/off switch for operation, or be automatic. The auto version has a pressure switch inside that operates when air is drawn through.

New users tend to prefer the auto type as it's so similar to a tobacco cigarette, but experienced users tend to prefer the manual ones as they give more control. Get one of each if you like, as they are interchangeable - just unscrew one and swap it for the other.

The auto batteries are not sealed since they need air to pass through, which means they are vulnerable to damage from liquid leakage; the manual ones are more durable since they have less electronics and are sealed.

What e-liquid should I get?

Terminology is a little complex at the start! There is a huge range of refill liquids: PG-based (Propylene Glycol), VG-based (Vegetable Glycerin), high to low nicotine strength (or even zero-nicotine), and all the flavours it is possible to imagine.

The truth is - nobody knows what you will like or dislike. Since there are probably over a thousand variations, it's very much like trying cigarettes, beer or brands of coffee. What one person loves, another dislikes intensely. So, all you can do is to try a 'benchmark' e-liquid and take it from there.

A benchmark or basic e-liquid would be one that is mainly PG, of tobacco flavour, and of 18mg medium strength (1.8% nicotine) - and as this specification of refill liquid is very commonly included in starter kits, you won't have to look any further. It's just something that everyone is familiar with and as good a starting point as any. What is indisputable is that after a month or less, you'll want to try something else - and you might even throw bottle #1 away. Nevertheless it's a good starting point, although many would say new users should try a stronger e-liquid at first.

Here is a guide to common nicotine strengths of e-liquid:

Strength: mg/ml	Description
0mg	Zero nicotine, contains flavour only
6mg	Low
12mg	Medium-low
18mg	Medium
24mg	Medium-high
36mg	High
over 36mg	Suitable for expert use only

[the names given to the above strengths vary from supplier to supplier]

[10mg = 10 milligrams per millilitre = 1%]

To make up for the fact that the strongest nicotine strength of e-liquid is only equivalent to a medium cigarette, they are used for around twice as long, to accumulate more nicotine. The problem is that the vapour does not penetrate the lungs as deeply as smoke from a tobacco cigarette, so that less nicotine is absorbed by the lungs, and it may mainly come from buccal and nasal absorption (in the mouth and nose). The particle size of the water vapour from an e-cigarette is much larger than the particle size of smoke from a cigarette, which goes more deeply into the lungs.

In addition the vapour creating ingredients, PG and/or VG, tend to chemically bind the nicotine so that it is harder to extract/metabolize, in comparison to the nicotine in cigarette smoke. For example if you spilled pure nicotine on your skin, you would be in trouble - but if you spill the strongest retail e-liquid on the skin, you have time to wipe it off as the nicotine is partially bound to the carrier material/s.

These factors mean that an e-cigarette 'session' is about twice as long as the time taken to smoke a cigarette, and the vapour is best held in the mouth for a second before being inhaled, and then it is exhaled through the nose. This method gives the maximum potential for extraction of nicotine from the vapour. If an e-cigarette is used in exactly the same way as a cigarette, far less nicotine is available.

How much e-liquid do I need?

The average user might consume about 2ml to 3ml of liquid per day, or 4 to 6 pre-filled cartomizers. This is about the equivalent of 20 to 30 cigarettes, or 1 to 1.5 PAD (packs a day).

One cartomizer of standard size (510 carto) is about equivalent to 6 cigarettes, and a 510 cartridge is about 4 cigarettes. This is because a cigarette is approximately equivalent to 3 or 4 drops of liquid, and the liquid cartridges contain about 12 to 20 drops.

However, it is difficult - perhaps impossible - to provide a nicotine strength or liquid volume equivalency between cigarettes and electronic cigarettes, because the nicotine is absorbed less efficiently from e-cigarette vapour than from cigarette smoke, and because there appears to be a variance between the tolerance to nicotine in cigarette smoke and that in vapour (as there is no correlation between the amount people smoked and the e-liquid strength they end up using).

What nicotine strength do I need?

Beginners who are reasonably heavy smokers probably need the strongest liquid they can get, for two reasons:

- E-cigarettes are far less efficient in delivering nicotine to the user than tobacco cigarettes, so to make up for this you may need to go strong at first.
- Beginners have poor technique so the end result is not optimal - they don't get the full benefit of the nicotine content.

Setting up

OK - having bought and received your starter kit, which should have the minimum number of spares as described above, let's take the next step. (If the starter kit just has one unit and does not have spares, then you should order some additional parts and liquid.)

On opening the box you will see the various parts described above. The first job is to get a battery on charge. They are often shipped fully-charged but let's charge your spare one now.

Now we will proceed differently according to which model you have bought - a 2-piece or 3-piece. Some models can act in both modes.

2-piece cartomizer models

You have a low-hassle system that is very easy to set up and use.

If you have a pre-filled cartomizer take it out of the pack and remove any wrapping. If your cartomizer is unfilled, you will need to fill it by following the instructions. It will probably have a protective transport boot on each end, which should be removed. Check carefully to see if there also might be a tiny plug in one (or both ends), after the boot is removed. These are so small you will need good light to inspect the ends.

Take a fully-charged battery and screw a cartomizer on lightly. Just screw it on gently so that it touches the bottom of the thread, don't force it. You must be sure that you are using a filled one, so check the labelling to ensure this.

With an auto model, insert the carto end into the mouth and lightly puff on it. Puff the vapour out without inhaling. Do this three times.

The device should now be working correctly and producing vapour. Now puff lightly and inhale. Draw very lightly on an e-cig, dragging too hard will pull liquid into the mouth. Start with a gentle inhale only, since the taste and feel of the vapour is different from cigarette smoke and may not be exactly as expected.

If the result is satisfactory, draw for longer and inhale well. As you exhale, a good quantity of vapour should be produced. If you find there is a burnt taste and no vapour, you have used an empty cartomizer or there is a tiny transport leak-prevention plug blocking the centre air hole at the lower end of the carto.

Manual batteries: if your battery has a switch (a tiny button near the top end) then you must press this during inhalation. New users tend not to like this arrangement, but experienced users normally prefer it as it gives more control.

3-piece atomizer and cartridge models

Take an atomizer and remove any attached cartridge (they often ship with a blank cart attached). Clean it by wiping off any transport liquid, which is eliquid placed on/in it to keep it moist and rust-free. Holding the open end up and the threaded end down, shake the atomizer strongly to eject any liquid within (from out the threaded end). Do not bang the atomizer as it is comparatively delicate.

Next, blow through the atomizer onto some paper towel, by blowing into the open end with the thread end down, with paper towel close by. Wipe it well.

Take a fully-charged battery and screw the atomizer on lightly. Just screw the atty on gently so that it touches the bottom of the thread, don't force it.

Take your bottle of spare liquid. Shake the bottle, with the cap screwed on. Open it carefully. Be careful as it will contain liquid with nicotine in it, and this must not be spilled, and especially not spilled onto the skin as it is concentrated and may be toxic in this form.

Drip three drops of liquid directly into the atomizer, which primes it ready for use. Looking down into the atomizer tube, you will see a small arch of microscopically thin wire mesh. This is called the bridge - it is a liquid reservoir device that sits above the heater coil. You drip onto the bridge, if possible. Some atomizers have an exposed bridge that projects from the tube, it's easier to drip onto these.

Take an empty cartridge with no filler or liquid on it. Many atomizers ship with an empty cartridge on for protection, this will be perfect. Place it firmly on the atomizer, and you now have a complete e-cigarette with a 'dripped' atomizer and empty cartridge attached, ready for initial use. You can also use a drip-tip instead of an empty cart - these are just plain tubes.

Pressing on the manual switch (if fitted), or simply inhaling (if an auto model), puff on the e-cig six or seven times and simply blow out the vapour, don't inhale it. This burns off the transport primer liquid. It's not harmful or anything, but of no use, and it normally tastes bad as well - although this is mainly due to the atomizer heating up for the first time and bedding in.

Now remove the empty cartridge and set aside, it won't be used any further. Then blow out the atty again, exactly as before. This should remove any remnants of transport primer and first-run heating.

Now we are ready to start for real. Drip another two drops of e-liquid onto the atomizer bridge.

Take a pre-filled cartridge. If filled and ready to use, it will be in a plastic wrapper and have a label on it that says something like, "Tobacco - medium". This means it is of plain tobacco flavour and of medium nicotine strength.

Remove the transport end cap (the clear plastic 'boot' on one end), and press the cartridge into (or onto) the open end of the atomizer. Make sure it engages fully and is as far in/on as possible. As long as the battery is fully charged, your ecigarette is now ready for use.

Is there a risk of overdoses / poisoning?

Very little - about the same as from cigarettes. It is extremely difficult to overdose on nicotine from tobacco cigarettes, the effects become less pleasant as more is consumed, and use ceases as a result. There are remarkably few instances of tobacco / nicotine poisoning from smoking as it is so unpleasant (far less for example compared with alcohol).

The same applies to e-cigarettes although it is slightly easier to take in too much, as there are less unpleasant effects. Symptoms of nicotine OD gradually increase until the user cannot continue (headache, nausea, racing pulse etc). As this is extremely unpleasant the user stops.

Many people display no symptoms whatsoever of nicotine poisoning, even if using large quantities of the highest strength liquid, apparently due to a high tolerance to it (not unsurprising as it is part of the everyday diet, being a constituent of many vegetables). On the other hand, some display overdose symptoms from use of medium-low strength liquid of 12mg strength. This shows there is a wide variation in tolerance levels, which explains why advice as to what strength to use is very difficult.

Whether or not users display any symptoms of nicotine OD, there has never been any reported death or harm caused - any inconvenience is temporary and the consumer normally reduces their nicotine strength subsequently.

If the refill liquid is spilled onto the skin, it should be wiped off immediately. If drawn into the mouth by inhaling too strongly, it should be rinsed out. Because the nicotine is to a certain extent bound ('locked in') by the carrier materials, it is far less dangerous than pure nicotine. Nevertheless it should be wiped off the skin quickly, and certainly kept away from children and pets, who may be more susceptible.

Everyone finds that vaping tends to dry the throat more than smoking, perhaps due to the fact that an extended usage time is need in comparison. For that reason, many find that having water to drink while vaping is a good idea.

Stronger or weaker eliquid?

When starting out, user technique tends to be poor, so that a stronger liquid may be needed in order to compensate. This may apply more if the person is a heavy smoker. As time progresses, it might be possible to reduce the nicotine strength to what most vapers consider an average or medium strength: 18mg.

Of course, some never reduce it and still use high strength after years; others reduce it gradually and get down to 12mg or even 6mg. It's what suits the individual. Some finally go to zero-nic, and simply vape flavoured liquid with no nicotine in it. For them this is a satisfying process.

It is probably best to use the lowest strength of nicotine that is satisfactory most of the time. Some stronger liquid can be used if there is an intense craving for a cigarette. It is not good policy to use the strongest liquid available and never see if the strength can be reduced, since there may be health consequences to extended use of strong nicotine. The strength of any e-liquid can be

reduced by simply adding VG, glycerine, from a pharmacy.

Just as people might prefer one brand of cigarette to others, or one beer over another, the same is true of e-liquids - you have to try them and see. As with many consumer products, there is a wide choice of offerings and you should try several. An important point to note is that someone else's opinion of an e-liquid vendor's products, or a particular flavour, isn't worth a lot - you may dislike what they like, and vice-versa.

Can I stop smoking?

Most ecig users think the best attitude is simply not to worry about that aspect - just get to know your ecigarette and more importantly the variations of eliquid, and go with the flow. If you eventually find that you are using an ecigarette frequently, and smoking cigarettes less, most would argue that is a good result.

Some ecigarette users don't want to quit smoking, some do. Some end up using the ecigarette alone, and some quit smoking entirely by finishing with both. It's not possible to say whether the ecigarette was a factor because there are no clinical research trials that have examined this. And naturally, some try an ecigarette and just don't like it.

Of course, it's a matter of opinion whether you have 'quit smoking' or not if you are using an ecigarette - many would say you haven't, since an ecigarette is an alternative nicotine supply device and may qualify as smoking. To be more specific you would need to say, "quit cigarettes" or "quit tobacco" or "quit nicotine", depending on your exact meaning.

If you actually want to quit entirely then the best route is to consult your health professional. Ecigarettes are simply an alternative form of nicotine supply. Your doctor is best involved in your lifestyle decisions as these are the foundation of health.

Habit or addiction?

For some people, smoking is simply a habit they can quit easily if they have some form of substitute. For others it is a true addiction and is extremely hard to escape from.

When classed as an addiction, note that it has several components. Nicotine is one, but there are at least two other factors: the other chemicals in cigarettes can be addictive, so that cravings are still experienced even when nicotine is supplied from another source; and the physical process of smoking can be addictive: the hand to mouth action, the holding of the item, the choice and the purchase, and in fact the entire procedure. Addiction can be a complex affair and it is frequently found that nicotine is not the sole component. This is why quitting tobacco can be very hard for some, there are multiple factors involved. Some people (though not all) still experience cravings for a cigarette even while using an ecigarette, showing that there are other addictive components in tobacco smoking apart from nicotine.

Help - I still have cravings

Some still experience cravings when first using an e-cigarette. You could take the point of view that this is not important, and the occasional cigarette can still be smoked, until this phase passes - or you could try to accelerate the process. If so, there are two steps to fixing the problem:

1. Increase the strength of the nicotine in your refills, and/or use a stronger flavouring. If you are on the common medium strength 18mg refills then this is an obvious place to start.
2. Increase the power output of your hardware. A move to a larger battery e-cig with LR low resistance fittings often helps.

Will I save money?

Not initially, as stocking up on equipment can be a bit pricey, but given the price of cigarettes in Ireland the average smoker will saving money after a couple of weeks. However, with the amount of different ecigarettes, equipment, flavours etc available online, it is not uncommon for e-cig users to become real enthusiasts and buy everything available. In this situation the user will not save money. See our Blog post here - <http://www.ezsmoke.ie/blog/2012/01/will-i-save-money/>

Storage

You should store your e-liquid in a cool, dark place as it may be affected by light and warmth. The most common base component, PG, is actually a bactericide and virucide so it doesn't usually suffer from degradation, but other components such as VG and flavouring might. Nicotine is degraded by exposure to light and air. Base liquid should have a shelf life of two years stored like this. Some flavoured liquids may not last this long, however.

All materials **MUST** be kept out of the reach of children and pets. Materials must be stored in such a way that other family members will not mistake them for cooking ingredients or medicines. Concentrated nicotine is a dangerous poison and must be treated as such.

Your in-use / daily supply can be kept in a drawer and brought out as needed. Do not expose e-liquid to daylight and especially direct sunlight for long, try to minimise the time it is out of the dark storage area.

Problems

The single biggest problem new users have is that they don't know anything about the whole affair. It is certainly not comparable to buying cigarettes, sticking one in your mouth, and lighting up.

Therefore, the desired result may not be achieved easily. Especially, newcomers may not get much nicotine due to poor operator technique. You are strongly advised to experiment and view online tutorials. We have links to some of these on our LINKS page.

Finally

That's it for now. Get your starter kit and get vaping. Don't worry too much about all the rest of it, you'll learn more as you go along.

WARNING
KEEP AWAY FROM CHILDREN AND ANIMALS AT ALL TIMES!

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