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In the UK, prescribed cannabis is always **vaporised** — never smoked. This crucial distinction is because vaporisation heats cannabis just enough to release cannabinoids and terpenes as a mist you inhale, without causing combustion. Combustion creates harmful by-products like tar and carbon monoxide, which are avoided when vaporising. But when it comes to vaporisers themselves, the type of heating technology used has a big impact on cost, treatment effectiveness, and user experience.

One common question is: *why are conduction vapes generally cheaper than convection vapes?* The answer boils down to differences in heating design, heat-up speed, and how evenly heat is applied. This post breaks down these factors clearly — backed by regulated pharmacy and medical guidelines — so UK patients, prescribers, and pharmacists can understand how device choice affects both price and treatment quality.

## UK Prescribed Cannabis: Vaping, Not Smoking

Before diving into device specifics, it's important to address a common misconception. In the UK, medical cannabis prescribed for patients is never intended to be *smoked*. The **General Pharmaceutical Council (GPhC)** and NHS guidelines confirm that vaporisation is the only acceptable inhalation method, as it avoids harmful combustion by-products.

Vaporisation heats cannabis to a temperature (typically around 180-220°C) that turns cannabinoids like THC and CBD into a vapor without burning the plant. This protects patients' lungs and delivers a cleaner, more consistent dose. Often, the device itself is considered part of the patient's treatment, meaning it must meet safety and regulatory standards just like the medication it contains.





## The Two Main Vaporiser Heating Methods

Vaporisers used for prescribed cannabis generally use one of two heating methods:

1. **Conduction heating:** The cannabis directly contacts a heated surface (usually a metal chamber).
2. **Convection heating:** Hot air passes through the cannabis but never touches it, heating it indirectly.

Both approaches have pros and cons that affect device complexity, cost, dosing consistency, and ultimately patient experience.

### 1. Conduction Heating: Simpler and Faster

Conduction vape devices heat the cannabis by direct contact with a hot plate or chamber. The chamber is typically electrically heated, and as soon as it reaches the target temperature, cannabinoids start vaporising.

- **Heating design:** Simple and compact, requiring fewer components and less precise air control.
- **Heat-up speed:** Faster, with many conduction vapes reaching operating temperature in seconds.
- **Heating uniformity:** Less even; external parts of the herb get hotter than inner parts, which can cause inconsistent vapor release.

This direct contact and simpler heating method makes conduction vaporizers cheaper to manufacture and buy.

### 2. Convection Heating: More Complex, More Even

Convection vapes use a fan or air heater to send hot air through cannabis packed in a chamber. Because the heat never touches the herb directly, it's distributed more evenly, reducing hotspots and improving the quality of the vapor.

- **Heating design:** More complex with fans, air chambers, and sensors to control airflow and temperature accurately.
- **Heat-up speed:** Slower than conduction, often 30 seconds or more.
- **Heating uniformity:** Much more even, allowing consistent vaporisation of all material and better dosing precision.

This engineering complexity contributes directly to higher production costs and a higher purchase price.

## Cost Breakdown: Why Conduction Vapes Are Cheaper

| Factor                           | Conduction Vape               | Convection Vape                         |
|----------------------------------|-------------------------------|-----------------------------------------|
| Heating Element                  | Simple metal plate or chamber | Air heater and fan system               |
| Airflow Control                  | Minimal, mostly passive       | Active fan and adjustable vents         |
| Temperature Sensors              | Basic or none                 | Multiple precise sensors for control    |
| Battery Capacity                 | Smaller, shorter sessions     | Larger, to power fans and longer cycles |
| Device Complexity                | Low                           | High                                    |
| Average Retail Price (UK market) | £60 - £120                    | £150 - £300+                            |

As the table shows, fewer moving parts and simpler electronics reduce manufacturing and quality control costs for conduction devices, explaining why patients and clinics see them priced notably lower.

## What This Means for Patients and Prescribers

The choice between conduction and convection vaporizers isn't just about cost — especially when the device is part of the medical treatment regulated under the GPhC framework. Both patients and pharmacists must balance price, dosing accuracy, and lung safety.

- **Conduction devices** offer fast heat-up and budget-friendly options. However, less even heating can cause variable dosing and potentially uneven cannabinoid delivery session to session.
- **Convection devices** provide more reliable dosing thanks to uniform vaporisation but at a higher price point and with a longer wait before inhaling.

Because these vaporisers are treated as medical devices when prescribed, pharmacists must ensure devices meet <https://www.thelondoneconomic.com/lifestyle/health/how-medical-cannabis-vaping-works-temperature-devices-and-the-economics-behind-it-409054/> regulatory requirements for safety and efficacy. That includes delivering consistent dosing that aligns with prescribed quantities — not simply being a cheap gadget.

## Regulation and Pharmacy Role

The **General Pharmaceutical Council (GPhC)** requires that pharmacy professionals involved with prescribing or dispensing cannabis vaporisers:

- Ensure devices supplied meet medical device standards.
- Provide patient counseling on correct usage to avoid under- or overdosing.
- Monitor patient outcomes with device choice in mind, reporting any adverse effects.

In practice, this means pharmacies often stock conduction devices for initial access or patients on tight budgets, while reserving convection devices for those needing precise dosing consistency or better vapor quality over longer sessions.

## Summary: Simplified Heating Comes with Lower Price — but Variable Trade-offs

To sum it up:

- Conduction vapes are **cheaper** because they use a *simpler heating design* with fewer components to produce heat fast — they have a *faster heat-up* time but can provide *less even heating*, leading to inconsistent vaporisation.

- Convection vapes cost more due to their complex design that uses hot air flow for even, controlled heating, resulting in better dosing but longer waiting times and higher manufacture prices.
- Both types are regulated medical devices in the UK when prescribed, with the pharmacy's role crucial to ensure safe supply and proper patient use.
- Choosing between conduction and convection requires balancing price, treatment needs, and device performance — always with lung safety as the priority.

In a healthcare system committed to regulated and quality-assured patient care, understanding why conduction vapes are cheaper is essential. It's not just about cost — it's about making informed choices that support prescribed cannabis treatment best.

*Disclaimer: This article is for informational purposes only and does not replace professional medical advice. Patients should consult their prescribing healthcare professionals before changing device or cannabis therapy.*

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