### What is menopause?

Menopause marks the end of a woman's reproductive due to hormonal changes. There are over 34 symptoms associated with this change.

### What are hot flashes?

Hot flashes, affecting 8 out of 10 menopausal women¹, are sudden feelings of intense heat and sweating. They usually originate from the neck and chest region, and lead to insomnia, mood swings, fatigue and affect self confidence and productivity.

### How are hot flashes treated?

Hormone replacement therapy (HRT) is a pharmacological treatment to relieve menopausal symptoms by replacing hormones that are at a lower level. The current technological solutions are neither medically certified nor optimised for relief.

### Impact on UK economy

- Decreased labour force participation.
- Increased healthcare costs.
- Productivity losses.
- Absence from work.
- Increased pension costs.

### Our findings

- Results of our research found that women are waiting for up to **3 years** before receiving a diagnosis of menopause.
- **52%** of GPs indicated that they were not offered enough support to be able to advise and treat women with menopausal symptoms appropriately³.
- HRT uptake is low in the UK, with only **7.5%** of menopausal women using it².
- No certified medical devices are available on the market for relief from hot flashes.

### Coolzen

Coolzen is a **wearable medical device** that provides **instant relief** from the effects of hot flashes for menopausal women.

### Human Centered Design

Coolzen was developed after collecting feedback from 2800 menopausal women, 175 GPs and 40 menopause specialists. The device will be pilot tested at NHS Mid and South Essex Trust, Bedford Hospital NHS Trust, and Guy’s and St Thomas’ NHS Foundation Trust for effectiveness and usability.

### How it works

- **Automatic detection** of a hot flash.
- **Thermal neuromodulation** to bring relief.
- **AI-Powered for personalised relief**

### The Science

The wearable works by using a combination of **temperature monitoring** and **thermal neuromodulation** to reduce the severity and frequency of hot flashes. The technology is designed to be **non-invasive**, **easy to use**, and **discreet**, making it an ideal solution for women who want to manage their hot flashes. The wearable is designed to be worn discreetly and comfortably around the neck, like a necklace. It is designed to blend seamlessly into a woman’s daily routine, making it easy to wear at work, while exercising, or while running errands. Hot-flash experiences vary between people. We have engineered algorithms that keep track of the hot-flash episodes, and the relief from the device. Hence, the device learns to **personalise relief** as the woman uses the device over a period of time.

### Key features

- **Automatic detection** of a menopausal hot flash.
- **Personalised** therapy based on user’s unique hot flash episodes.
- **World’s first medically certified device** for hot flash relief.

### References

2. https://www.nice.org.uk/guidance/ng23/chapter/context