

# **New treatment for feet may offer a breakthrough in pain**

## **Swift offers breakthrough hope in condition affecting millions of people.**

A breakthrough in treating painful corns that blight the lives of millions of people has been credited to an innovative health tech device developed in Scotland.

Promising results have been revealed by a colourful medic known as “the foot doctor of New York”, following exploration at his US clinic, where patients saw impressive levels of pain relief.

Renowned foot and ankle surgeon Dr Raphael Lilker carried out the treatment, using the Swift device from Scots health tech firm Emblation.

The pioneering microwave treatment has already transformed the treatment of verrucae and warts and is used by podiatrists and dermatologists around the world.

Now Dr Lilker has published results in a respected medical journal which suggests the device could also be a gamechanger in alleviating the painful foot condition of corns which leaves many sufferers embarrassed and unable to walk without pain.

Dr Matt Kidd, Director of Research and Development at Stirling-based Emblation, said: “Although the number of patients treated is low, the data suggests it will still be very welcome news to those people who suffer with the debilitating effects of stubborn, treatment-resistant corns.

“Our hope is that this will be adopted among the podiatry community as a new treatment modality. We firmly believe we are still only at the beginning of discovering the true potential of microwave therapies and the many conditions the Swift device will be able to treat.”

The Swift device delivers a precise dose of microwave energy to skin lesions, we believe this is stimulating an immune response. It has been embraced globally for treating persistent warts and verrucae that are resistant to other treatments, delivering amazing results.

It has also been involved in pre-clinical research and medical trials to test its effectiveness in treating pre cancers of the skin, cervical cancer and even toenail fungus. However, Dr Lilker’s research focused on providing pain relief to patients afflicted with a particularly stubborn type of corn, known as Intractable Plantar Keratosis (IPK) or a smoker’s corn.

Dr Lilker said: “Corns have been shown to be a significant cause of embarrassment, pain and disability and are the most common foot problem in both the UK and the US.

“There is still a long way to go in proving categorically that Swift addresses the pain caused by IPKs. However, after the results I have seen with my patients, I am in absolutely no doubt that this microwave treatment provides significant, long-lasting pain relief.”

Currently sufferers face invasive treatments – which require bandaging and carry risk of infections – including cutting with scalpels or treatment by acid, lasers or freezing.

Other sufferers are condemned to wearing bulky insoles, orthotic devices or regularly applying creams and lotions.

The most often used treatment is “debridement” which involves cutting or filing away the corns, but research suggests the pain relief lasts just seven days and the process has to be

repeated regularly.

By contrast, the US data suggests microwave treatment reduces pain for up to 18 months – and even after that time it does not come back as bad as it was pre-treatment.

The findings from Dr Lilker's work have now been published in the prestigious Journal of the [American Podiatric Medical Association](#) (JAPMA). The patients involved were aged 23 to 65 and each received a minimum of two treatments with two seconds of microwave energy applied to their corns.

Pain levels monitored at each visit on a 10-point scale, with a follow-up being conducted one year later to assess the long-term outcomes -with results showing a 90.4% reduction in pain from their first to final visit. By the last treatment, 71.4% of patients reported being completely pain-free.

At the start, the average pain level recorded by patients was 5.9 out of 10. After the second treatment, this dropped to 3.4, then to 1.4 by the third, and finally to just 0.9 by the final visit.

Dr Lilker was inspired to try the microwave device after reading about similar results from UK-based podiatrist Dr Ivan Bristow. His findings with a small number of patients, also suggested the microwave treatment provided effective and long-term pain relief from corns.

The painful yet common condition affects at least 21% of the population, with some estimates suggesting as many as seven in 10 people will be affected by corns. In the worst cases corns, which are caused by thickened skin on the feet, are recurring, difficult to treat and extremely painful.

Dr Lilker, is a highly decorated foot specialist in New York, where he is an appointed Honorary police surgeon with NYPD, New York State troopers and also supports firefighters and emergency medical staff. He is also renowned for his treatment

of elite dancers and athletes including marathon runners, skiers and kickboxers.

Swift was developed in 2016 by scientists Gary Beale and Eamon McErlean who met while studying at Edinburgh's Heriot-Watt University. As well as being small and practical for a clinical setting, Swift devices have been used in more than 400,000 cases across the world.

In 2021, Emblation experienced a significant injection of capital when Apposite Capital, a London-based specialist in healthcare, invested an eight-figure sum. That propelled the firm's rapid global expansion into more than 20 countries.



Dr Raphael Lilker