



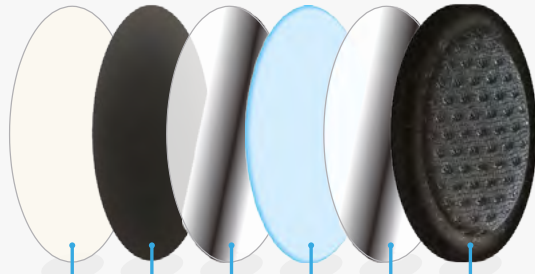
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PelliTec®

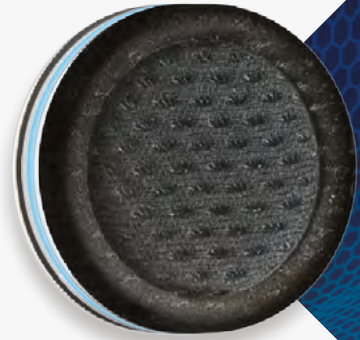
AT LAST, A TESTED PREVENTION FOR BLISTERS

Key Points

- ☑ Developed in the UK
- ☑ Launched into the UK Podiatry market in June 2019
- ☑ Sticks to footwear, not the skin
- ☑ The gel and Mylar layers in the pad reduce friction by moving with the foot
- ☑ Reduces the occurrence of blisters



- ☑ **ADHESIVE LAYER** - sticks to footwear
- ☑ **SCUBA LAYER** - tear resistant and water resistant
- ☑ **MYLAR LAYER** - for strength and durability
- ☑ **GEL LAYER** - reduces friction and improves cushioning
- ☑ **MYLAR LAYER** - for strength and durability
- ☑ **BALTEX LAYER** - promotes breathability



Introduction

Friction blisters are one of the most common injuries encountered in hikers, runners, and endurance athletes (1). Although most are of minor medical significance, they can impair concentration, decrease athletic performance and enjoyment, and be potentially debilitating. However, once the protective function of the intact skin has been breached, cellulitis and sepsis may follow resulting in catastrophic consequences in the "at risk" diabetic population. Rates of incidence in the outdoor community range from 54% of backpackers to 64% of long distance hikers (2,3).

We present a novel approach to blister prevention. PelliTec is a six layer circular pad which sticks to footwear and not the foot. The pad is 45mm in diameter and 3mm thick and tackles the three aetiological factors associated with blister formation. It has a breathable top layer and moving discs surrounding Silipos gel technology to reduce friction and pressure. If a blister already exists the cushioning provided by the pad takes away pain and if the blister bursts the top layer wicks away moisture reducing the risk of infection.

Sensory Test

PelliTec proved significantly better in seven out of nine independent sensory tests and equivalent in two others when compared with Engo - the only other blister product on the market which sticks to the inside of footwear and not the skin.

The most important of these tests regarding blister prevention and treatment was cushioning and PelliTec gave 66% better cushioning than Engo. It was 33% better than Compeed. Six of the tests in which PelliTec outperformed Engo were as follows:



futsal and attended the training sessions which were carried out in the preceding two months. The subjects were allowed to wear their own brand and style of footwear and socks. Each participant was allowed to request PelliTec pads at any time during the game. The pads were fitted by one of the members of the study team and the subjects name, age, gender, area where the pad was placed and time were recorded on a data sheet.

Product Study 2

A further beneficial application of the PelliTec pad is in the reduction of friction in the diabetic foot. In a partnership with the Innovation Agency North West Coast a small cohort of low risk diabetic patients were recruited to participate voluntarily in trialling the pads in their normal footwear. So far 66% of surveys have been returned, with over 80% of respondents stating that they regularly have difficulty finding shoes that fit and do not cause pain to their feet. The same number also stated that they are usually limited in the number of shoes they can wear. One respondent commented that they would want the pads in 'all of their shoes, because they make them more comfortable'. Further comments included 'The pads are great, they're really easy to fit and very comfortable. I'll be getting some more for the rest of my shoes' 'They stay in place really well. I didn't think they would be honest but I've had no problems with them moving or falling off'.

Results

By using the PelliTec pads, all subjects were able to participate fully in the world record attempt. They went on to play continuously for fifty hours breaking the existing record. One subject, an 18 year-old male, wore PelliTec from the start of the game on his 1st metatarsal heads which remained blister free but then went on to develop blisters on the apices of his 3rd toes after the first twenty hour period.

PelliTec pads were placed into his boots at the symptomatic places and he reported that he ceased to feel pain and was able to continue. In addition, a thirty four year old male had found he was blistering during the twelve hour pre record attempt training sessions. He used the pads throughout the fifty hour challenge and suffered no blistering.

Conclusion

The Futsal study of the PelliTec blister prevention pads, although anecdotal in quality, shows there is a great need for a reliable and specific blister prevention/management system. We believe that in studies 1 and 2 and the sensory testing PelliTec proved a successful alternative to the current commercially available choices of blister dressings and preventive hosiery.

Awards



Second monthly winners of the 2019 Merseyside Innovation Awards

References

1. Krabak B J, Waite B, Lipman G. Evaluation and treatment of injury and illness in the ultramarathon athlete. Phys Med Rehab Clin N. Am 2014;25: 845-863
2. Twombly S E, Schussman L C. Gender differences in injury and illness rates on wilderness backpacking trips. Wilderness Environ Med. 1995;4: 363-376
3. Boulware D R, Forgey W W, Martin W J II. Medical risks of wilderness hiking. Am J Med 2003;114:288-293

Product Study 1

Eight subjects, seven male and one female with an age range of eighteen to thirty five, were recruited on a voluntary basis. The study was carried out during the Tranmere Rovers Futsal (similar to 5 a side football but using a heavier ball) world record attempt. All had a history of blistering, had previously played

PelliTec®
Blister Prevention

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