



Injinji expands glovelike sock range

Injinji, developer of the patented performance toesock, recently introduced the EX-Celerator performance toesock, an over-the-calf interface that boosts circulation to promote faster muscle recovery and prevent fatigue during and after exercise.

The initial idea for the toesock came about in 1999, when the Romay brothers set out to redesign the basic structure of the traditional sock in order to improve comfort and performance. They decided that standard socks, like mittens, push the toes together and create an oven-like environment. On the other hand gloves, and consequently the toesocks they came up with, offer less warmth but greater dexterity.

The toesock range uses the company's Anatomical Interface System (AIS) technology to fit each toe individually. The socks are anatomically designed for the right and left foot and are said to offer increased freedom of movement and tactile sensitivity. According to Injinji, wearing its socks is like walking barefoot, only safer.

The toesock was in development until 2004, and has undergone extensive tests involving marathon and other long-distance runners in many different environments. They are said to strengthen the muscles in the wearer's feet and legs while still allowing the foot to perform completely naturally.

Each individual toe sleeve is seamless to eliminate friction between the toes and to

The company claims its toesocks can help prevent common foot problems, such as blisters and neuromas, from developing.

 Injinji

prevent the build-up of moisture around the feet. The flat-knit weave used eliminates bunching and sagging and all of its socks are designed to align the toes properly for better posture, grip and balance.

Technical fibres

According to general manager and vice president of sales at Injinji, Jan Kimbrell, the idea the Romays had was similar to a Japanese technology that was already around. However, the main difference was the way the fabric was put together, and in the use of technical fibres and fabrics that were carefully chosen to suit the various activities for which they were needed.

The new EX-Celerator sock, for example, incorporates Lycra Energy fabric to provide stretch and recovery with Coolmax freshFX fibres for antibacterial and moisture-wicking properties. It is best suited for activities such as running, walking, cycling and cross-training. Other socks in its performance tosock range feature CoolMax and CoolMax EcoMade fibres and have a resistant nylon shell to protect the foot as well as featuring Lycra for better fit. These can be used for a range of activities including track and field events, cycling, and running.

Injinji's outdoor range features socks made with its moisture-wicking fibre combination of 70% wool, 25% nylon and 5% spandex which is particularly well suited for activities such as trail running, hiking, mountain biking and other adventure sports. According to the company, the outdoor line offers "exceptional comfort and performance unlike any other athletic wool sock". Its yoga range is made using NüBamboo, which is naturally anti-microbial. The socks have special slip-resistant soles for better grip, control and balance and each has a contoured heel pocket and arch support stretch to fit the shape of the foot. The yoga socks are available in two styles: tosocks or toeless, which resemble fingerless gloves.

Injinji believes it has identified the key problems associated with sports socks and, in addition to using the AIS design, has been able to find the right fabrics and construction techniques to overcome them. "The biggest culprits are friction and moisture," says Ms Kimbrell. "The seamless casing using a thin membrane around each toe means that the sock takes the friction the skin would have taken." And, because the socks are either made with natural fibres such as wool or bamboo, or with moisture wicking fabrics such as CoolMax, the moisture problem, and the odour problem that goes with it, is also dealt with.

The right fit

The socks come in a range of sizes, from small children's sizes to large adult sizes, and the



The yoga line uses anti-microbial NüBamboo and incorporates slip-resistant soles for better grip, control and balance.

 Injinji

company advises customers to select the size based on their dress shoe size. However, Ms Kimbrell adds that the Lycra content used in many of its socks, ensures a "custom made" fit because of its stretch and recovery properties.

According to Ms Kimbrell, the company spent a whole summer testing the socks specifically to look at the issue of fit. She explains that, while the tosocks allow the toes to move independently, the fine layers between each toe do not spread the toes out, which could cause discomfort and even damage the feet. She adds that the socks have also been tested to ensure that they were able to deal with foot swelling, which often occurs during vigorous exercise.

Each toe must be fitted into the sock before the rest of the sock is pulled on to avoid bunching at the heel or toes, and it can take a couple of wears before the socks feel natural. "The more you wear and perform in your tosocks, the more comfortable you will feel," says Ms Kimbrell. Furthermore, the range of styles available, from quarter and crew styles to over-the-calf styles like the EX-Celerator, means wearers can experiment with what works best for them.

Medical benefits

Not only did the Romay brothers find that the five-toe-sleeve design combated problems around movement and heat, they also found it could prevent common foot problems, such as



Injinji's outdoor line is best suited to activities such as trail running, hiking, mountain biking and other adventure sports.



blisters and neuromas, from developing.

Injinji received the American Podiatric Medical Association (APMA) Seal of Acceptance for its Performance series back in 2008. According to Dr Marc Brenner, a podiatrist with the Institute for Diabetic Foot Research in Glendale, New York, the socks are "uniquely designed, biomechanically correct footwear that strengthen foot musculature". He says that the "individual supportive toe structure also provides great anti-perspirant qualities that dramatically reduce friction and stress."

The EX-Celerator sock offers particularly strong compression benefits for the sportsperson. The California-based firm claims that graduated compression has been proven to prevent blood from pooling in the lower extremities, reducing swelling and the onset of muscle fatigue. The EX-Celerator is said to offer compression and enhanced circulation right from the tips of the toes.

The socks also help to protect the feet from external elements. "With the onset of trail running and similar activities, the sock holds up extremely well to running through streams and coming into contact with dirt," says Ms Kimbrell. "It doesn't hold any of that." She explains there is a group of Injinji athletes who run 100-mile races and enter other endurance competitions, often in brutal conditions. "Those people gravitate to us," she says.

According to one of these athletes, Scott Dunlap, he experienced a lot of blisters while running trail marathons and 50k races. "I run a lot of short course trail runs, and the zigs and zags can be brutal on the feet. When racing 20+ times a year, I found that "foot recovery" was what held me back most often," he says. He describes the toesocks, or "tsoks" as they are often called, as miraculous and says they have allowed him to compete at a higher level without being worried about blisters. He adds that they can also be worn with flip flops for days when he is not racing. 🌐