

⊕ **MILITARY PERFORMANCE**



BETTER, FASTER AND STRONGER

A Study by NORAXON conducted at a SOMA conference in Florida.

Findings from the CDTs and myoMUSCLE Clinical Applications software were analyzed comparing the muscle activation pre and post the use of BFS insoles. myoPRESSURE Analysis software was used to analyze and compare the changes in center of pressure positioning .

Those who have complaints of foot, knee, and back pain who have tried BFS insoles have reported a significant decrease in pain as a result of wearing them.

There are multiple subjective studies showing the significant benefits of using Barefoot Science insoles. Focus on the objective data comparing the difference pre and post the use of BFS was the main goal for this micro study. The most significant result from the EMG recordings was the average increase in muscle activation.

With even just the small amount of proprioceptive stimulation the BFS insoles provide at Level 1 (out of the 7-step program), muscle firing and fiber recruitment increased significantly. The pre/post measurements were made within roughly 5 minutes of each other! The results beyond this are significant.



NORAXON DATA
SHOWED A

44%

INCREASE IN
BALANCE

AFTER JUST 500
STEPS

THE INCREASE IN
MUSCLE FIRING
HOURS WAS
REPORTED AT

31%

PROVEN TO PREVENT INJURY

"I started working with Barefoot Science a few years ago, and it has really turned our practice into a healing clinic.

Helping ameliorate painful Podiatric conditions such as plantar fasciitis, metatarsalgia, claw toes, hammertoes, corns, plantar fasciitis, patellar misalignments, chondromalacia patella, ITB syndrome.

I have been working in this field of Podiatry since the mid 1980's, both with U.S. Navy and Marine Corps personnel, now with Veterans of all armed services as a triple Board Certified Podiatrist and Podiatric clinic manager.

I WISHED WE WOULD HAVE HAD THIS BAREFOOT SCIENCE PRODUCT WHILE I WAS ON ACTIVE DUTY AS A NAVY CORPSMAN, THIS MAY HAVE PREVENTED A LOT OF FUTURE/PAST FOOT RELATED CONDITIONS THAT WE SEE NOW."

-Michael P. Olden, H.t; Ost; C-Ped; Pmac.

Department of Veterans Affairs

American Board for Certifications in Orthotics, Prosthetics and Podiatry.

**FULL ARTICLE
AVAILABLE**



BALANCE, TIMING AND COORDINATION

UNDERSTANDING THE SCIENCE BEHIND THE EFFECTIVENESS OF BAREFOOT SCIENCE

Barefoot Science patents are based on bringing progressive proprioceptive stimulation into all footwear.

Proprioception equals balance.

Asymmetry in the gait parameters equals injury and inhibits performance. As you walk or run through the field your eyes are on your target. You feel the ground through proprioceptive feedback. With the 400,000 proprioceptors in the feet insulated the brain and the body is forced to compensate for this critical deficit.

Dr. Peter Gorman refers to this as being **D.R.U.N.K. (Dramatically Reduced Utilization of Normal Kinematics)**. It is accepted by the medical community that the brain looks for sensory input from the Eyes, Inner Ear (vestibular) and the feet to manage its job of effective balance and movement. Barefoot Science simply provides the third leg of the balance and movement tripod being foot proprioception. Evidenced data consistently concludes that Barefoot Science improves balance, timing and coordination with close to 100% of users. Stretch Reflex, which is built into proprioception is our natural Injury Avoidance System, senses that the injury is about to happen and instantly shortens or contracts the muscles and tendons avoiding a large percentage of the foot, ankle and knee injuries.

Barefoot Science eliminates "Flat Feet" or let's call it what it really is "Weak Feet". There are 40 small intrinsic foot muscles that are responsible for forming the arch. These muscles have been cushioned, supported and braced with Orthotics from birth causing them to atrophy and become dysfunctional. Studies have proven that **100%** of flat-footed Barefoot Science users have an average decrease of plantar surface area or skin on the ground of 36% making it **virtually impossible to have "Flat Feet"** after completing the Barefoot Science foot strengthening program. Clinical data consistently records an increase in symmetrical muscle activation in the posterior muscle chain which is responsible for **balance, movement and power**. The strengthening of the feet or foundation has a natural positive effect on the foot to **shoulder alignment, posture, pain-free movement** and balance.

After one of the UK's top pediatricists recorded dramatically improved outcomes with 1000 patients after prescribing Barefoot Science non-orthotic insoles, The National Healthcare System (NHS) approved Barefoot Science as the **first alternative to Orthotics** in 150 years for the treatment of upper and lower limb problems. The detailed report summarized that Barefoot Science resupinated (strengthened) the feet allowing them to become **self-supportive** again. Due to Barefoot Science addressing the cause, **patient re-visits were virtually eliminated**. A lack of proprioception has been called the "Hidden Deficit". Rather than continuing to training the compensatory system, simply put a set of Barefoot Science into your footwear and eliminate the deficit. **Improved performance, proactive reduction of injury or reduced recovery times and an increase in performance** are "unavoidable".

Noraxon MyoPressure Stance Report


Patient

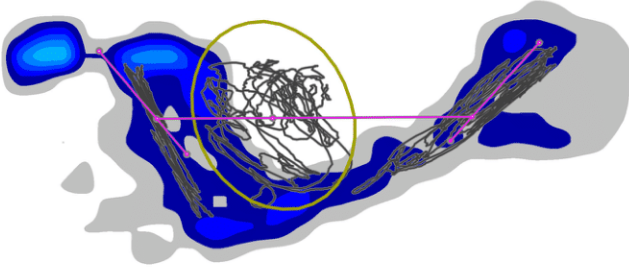
Project	FDMT
First Name	
Last Name	PAR myomotion lab tests
Sex	Male

Record

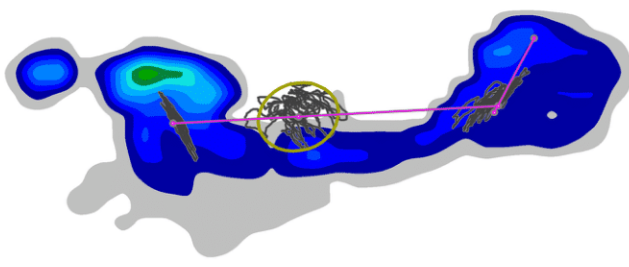
Name	pressure It ft Lowell pre
Date Measured	7/12/2013 2:36 PM
Number of periods	1



pressure It ft Lowell pre



pressure It ft Lowell post 3



Analysis time, sec	pressure It ft Lowell pre	12.3	
	pressure It ft Lowell post 3	11.8	
95% confidence ellipse area, mm²	pressure It ft Lowell pre	3704	
	pressure It ft Lowell post 3	670	
COP path length, mm	pressure It ft Lowell pre	1440	
	pressure It ft Lowell post 3	701	
COP average velocity, mm/sec	pressure It ft Lowell pre	117	
	pressure It ft Lowell post 3	59	
Length of minor axis, mm	pressure It ft Lowell pre	61.8	
	pressure It ft Lowell post 3	26.4	
Length of major axis, mm	pressure It ft Lowell pre	76.3	
	pressure It ft Lowell post 3	32.3	
Angle btw. Y and major axis, deg	pressure It ft Lowell pre	2.0	
	pressure It ft Lowell post 3	0.3	
Deviation X, mm	pressure It ft Lowell pre	112.6	
	pressure It ft Lowell post 3	116.1	
Deviation Y, mm	pressure It ft Lowell pre	65.6	
	pressure It ft Lowell post 3	66.5	

Pre Post BFS single leg balance right side

Use of first met more evident for gripping/balance. 82% decrease in COP movement area and 51% decrease in path of COP sway. Reduced movement in both anterior/posterior movement and lateral movement

 pressure It ft Lowell pre
Report at 0.0 sec

 pressure It ft Lowell post 3
Report at 0.0 sec


The distance around the Center of Path (or **Balance Circle**) decreased from 1440mm to 701mm, eliminating 739mm of wasted/ineffective movement in each step while **increasing balance by 51%**. This means **less injury, less fatigue, more productive and focused performance**.