



GROW WITH EBFA™

June, 2014

Educational newsletter brought to you by the Evidence Based Fitness Academy Inc.

Greetings Health & Fitness Professionals!

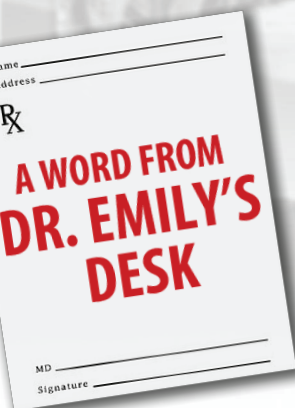
I hope that this issue of GROW with EBFA finds you well.

We have an awesome line-up of workshops coming up in July and hope that you can take advantage of these educational opportunities offered worldwide! From Singapore to Canada and across the United States, fitness professionals will have the opportunity to experience the power of barefoot activation, foot to core sequencing and from the ground up movement.

Not able to attend one of our live workshops? Don't forget EBFA also offers a variety of Home Study courses as well as our free monthly webinars - all of which are archived and found on the EBFA site!

Enjoy!

Dr. Emily



Featured Article



CrossFit goes BARE: Reduce Injury-Risk with Barefoot Science

By Dr Emily Splichal, DPM, MS, CES

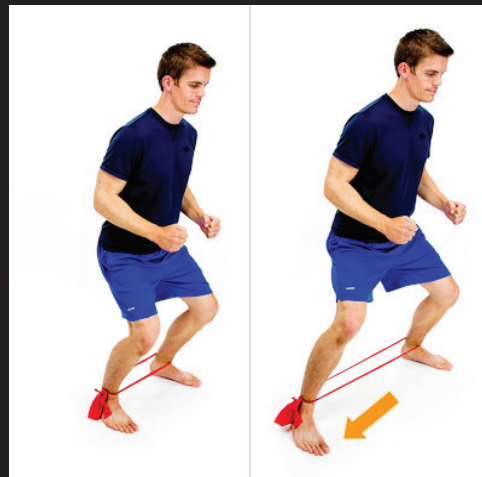
After the recent spike in CrossFit-related injuries walking (or rather hobbling) into my office, I realized that something must be done to reduce the injury risk associated with this popular fitness program.

When trying to reduce the risk in any sport or activity, it is important to ask yourself "why?"

The answer? Fatigue. Not cardiovascular fatigue - but rather neuromuscular (NM) fatigue.

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Featured Evidence-Based Exercise



Lateral Band Walks

As one of the favorite exercises for targeting gluteus medius activation, have you ever wondered how to get more out of this exercise?

What happens if you internally or externally rotate the hips when doing lateral band walks? Will there be a noticeable increase in gluteus medius recruitment?

A 2013 study by Youdas et al. actually found that it was not the internal or external rotation of the hip that mattered, but more so, which leg you were focusing on! EMG analysis showed that the greatest activation for both the gluteus medius and maximus was actually not occurring in the moving limb but rather the standing limb.

Want to get even more out of the lateral band walks? Add short foot to the standing limb!



EBFA Partners with Zeebra Comercial

Spain & Portugal Educational Partner



On June 7th - 8th, EBFA officially launched our barefoot education in Barcelona, Spain. Over 30 Doctors, Physical Therapists, Coaches and Trainers attended EBFA's Barefoot Training Specialist® Certification and were able to experience the power behind barefoot training.

Through the partnership with Zeebra Comercial, EBFA has been able to translate our courses into Spanish, and soon will also be offering them in Portuguese. The ability to be able to offer our education in many languages is pivotal to the growth of EBFA and the delivery of our courses.

We are gracious to all of our International Partners for their assistance with translation!



Coming Soon!

**Barefoot Training Specialist®
Certification**

November 29 - 30, 2014

Lisbon, Portugal

As NM fatigue sets in, an athlete begins to experience delayed or slower muscle firing rates, joint or ligament laxity and altered joint position sense. (Johnston et al. 1998)

The result? Ankle sprains. Foot fractures. Disc herniation. Low back pain. (To name a few!)

How can we offset NM fatigue?

The answer to this question lies within the warm-up! Most CrossFit warm-ups consist of dynamic, bodyweight movements designed to increase flexibility, get the heart rate pumping and to mimic many of the CrossFit exercises in a specific WOD.

Similar to the concepts of many sports conditioning programs and professional athletes, this doesn't seem like a bad warm-up right?

Well...there is one HUGE way we can make this warm-up even more effective. There is a HUGE way that we can tap into the NM system more efficiently thereby offsetting NM fatigue.

Can you guess?

Go BARE!

When I say go bare, I do not mean do your WOD completely barefoot as that would be a little silly (although I would probably do CrossFit barefoot as I do Parkour barefoot!) - rather what I'm saying is integrate barefoot activation into your CrossFit warm-up.

Just 5 minutes of barefoot activation during a warm-up will unleash the body's reflexive stability and pre-activation NM response system!

Barefoot Warm-Up = Reflexive Stability & Pre-Activation Responses

There is a power behind barefoot stimulation which if done correctly will not only offset NM fatigue but will also enhance speed and POWER - two skills desired by the CrossFit athlete.

Want to learn more about the power behind barefoot science and how it can enhance your or your athlete's CrossFit results? Check out EBFA's Barefoot Training Specialist® Program with workshops coming to a CrossFit box near you!!

Barefoot Training Specialist® Certification with Brett Grossman, EBFA MI

Saturday July 26th, 10am - 5pm

**Tiger's Den CrossFit
2025 Irving Blvd, #103
Dallas, TX 75207**

Registration Fee: \$225

**Earn NASM, NSCA, ACE & AFAA cecs
[REGISTER NOW!](#)**

Are you barefoot strong?

Vibrations, Pre-Activation Responses and Barefoot Science

By Dr Emily Splichal, DPM, MS, CES

When we walk, 1 – 1.5 x our body weight in impact forces resonates through our body. Pick up the pace and this number increases to 3 – 4x our body weight in impact forces.

Often to blame for running-related injuries, current research shows that little variance occurs in peak impact forces regardless of footwear, running technique or surface. So this leads us to ask, why are 70% of runners still getting injured?

The answer to this question has to do with how our body perceives impact forces and the rate at which the respective response occurs.

How do we perceive impact forces?

Impact forces are perceived as vibrations - vibrations that are detected through plantar foot mechanoreceptors, namely the Pacinian Corpuscles, as well as through soft tissue (muscle) compartments of the lower leg.

Pacinian Corpuscles make up 70% of the plantar foot mechanoreceptors and have a sensitivity that peaks at age 40 (Visell 2011). Studies have shown that sensitivity of these receptors is greatest when there is direct contact between the skin and the surface, as in the case of barefoot training.

With an average frequency of 10-20 Hz, the degree of vibrations allows our foot to determine surface hardness and texture - thereby allowing stasis in locomotion and balance. Interestingly, a 2011 study by Visell et al. found that it is primarily through vibrations that our foot is able to determine surface compliancy and neuromuscular auto-adjustments are made.

But what about muscle compartments?

Much like the Pacinian Corpuscles, our muscle compartments vibrate at a certain frequency (10-50Hz). If the frequency of the impact forces matches the soft tissue compartment everything is okay, however as impact forces increase (or rather the rate of impact forces) muscle activity is required to keep the soft tissue compartment frequency at the 10 – 50Hz.

This muscle activity to maintain vibration frequency can lead to fatigue, and is often a cause of injury such as medial tibial stress syndrome (MTSS) or shin splints.

In my workshops I often reference research by Nigg et al. which has demonstrated that this muscle response to impact forces actually begins to occur before the foot contacts the ground!

This is referred to as pre-activation responses or feed-forward responses.

Pre-Activation Response to Impact Forces

Pre-activation or feed-forward responses are based on sensory information from past experiences, which in this case is from the first couple steps we take.

Conversely, reactive or feedback responses are continuously regulating the rate of response based on afferent information, such as stretch reflexes.

Nigg et al. has shown that after just 3 – 4 steps our body has pre-programmed the degree of muscle activity to turn on before foot contact (Nigg 2000)

What is the degree of muscle activity based on? Vibrations!

Applications through Barefoot Science

So how can we apply this information in the real world with our athletes, clients and patients?

1. If you are working with runners, always consider footwear.

The more cushion you have in shoes, the greater the damping effect the cushion will create thereby skewing the rate of impact forces. Therefore, consider minimal running or training shoes.

2. If you work with shod athletes, I encourage barefoot before shod.

The reason I promote barefoot before shod is because footwear, surfaces and many orthotics block the plantar mechanoreceptors. Plantar skin responses, like all nerve responses rely on – if you don't use it, you lose it!

Consider activating the plantar mechanoreceptors before shod training to decrease their sensitivity threshold.

3. If you work with athletes or runners who train on varied surfaces, consider the feed-forward mechanism and surface consistency.

The more frequently surface compliancy is changed during one session, game or run - the greater the risk of injury! This is related to an inaccurate response to the feed-forward mechanism.

Closing Example

In Dr Nigg's latest book "Biomechanics of Sport Shoes" he gives an example which summarizes the above blog perfectly.

(continued from page 3)

Dr Nigg was contacted by Cirque du Soleil after many of their performers were getting injured after switching to a new stage. These previously uninjured performers were now complaining of Achilles tendonitis, plantar fasciitis and shin splints.

Dr Nigg visited the stage where these performers were training and noticed that under the stage there were supporting beams spaced out every couple feet. These supporting beams created less compliancy in the stage when the performer landed directly over the beam.

What Dr Nigg proposed was that this variance in surface compliancy (and therefore vibrations) between the areas of the stage with no beams versus beams was creating an inaccuracy in the performers feed-forward mechanism.

The stage was changed so that it was one surface compliancy throughout and guess what? All the injuries resolved!

To learn more about reducing injury risk with pre-activation training and barefoot science please visit www.ebfafitness.com and check out one of our Certifications including the Barefoot Training Specialist® and BarefootRx® Program!

Are you barefoot strong?

EBFA Completes North America MI Training

In May, EBFA proudly launched it's Master Instructor Program in North America. Fourteen health and fitness professionals from across the United States and Canada attended this three-day training in barefoot education.

After attending the MI Training and successful completion of the Barefoot Training Specialist® Certification Exam, the new members of the EBFA Team are ready to spread the power of barefoot science.

The benefit of programs such as the EBFA MI Program is that each Master Instructor brings a unique movement or education background to the workshops. Whether it is a specialty in Pilates, martial arts or performance each Master Instructor is viewed as an important part of the future growth of EBFA's education.

Upcoming EBFA Workshops with MI's!

Sat. July 19, 10am-5pm

**Barefoot Training Specialist® -
Barrie, Ontario- with Stuart Wakefield**
Lifesource Wellness
102 Commerce Park Drive
Barrie, Ontario Canada

Sat. July 26, 10am-5pm

**Barefoot Training Specialist® -
Dallas, TX - with Brett Grossman**
Tiger's Den CrossFit
2025 Irving Blvd #103
Dallas, TX 75207

Sat. July 26, 10am-5pm

**Barefoot Training Specialist® -
Gold River, CA - with John Bauer**
Bryan College
2317 Gold Meadow Way
Gold River, CA 95670



Upcoming Workshops

US & Canada

Sun. June 29, 9:30am-12:15pm

Movement From the Ground Up - Chicago, IL

Perform Better Summit
McCormick Place Convention Center
2301 S. Martin Luther King Dr.
Chicago, Illinois 60616

Fri. July 11, 3pm-3:50pm

Barefoot Training for Speed & Agility- Las Vegas, NV

NSCA National Conference
Paris Hotel
3655 S Las Vegas Blvd
Las Vegas, NV 89109

Sun. July 13, 9am-3pm

Barefoot Training Specialist® - Mountain View, CA

Evolution Trainers
2044 Old Middlefield Way
Mountain View, CA 94043

Sat. July 26, 10am-5pm

Barefoot Training Specialist® - Dallas, TX

Tiger's Den CrossFit
2025 Irving Blvd #103
Dallas, TX 75207

Sat. July 26, 10am-5pm

Barefoot Training Specialist® - Gold River, CA

Bryan College
2317 Gold Meadow Way
Gold River, CA 95670

Sat. July 26, 11am-6pm

BarefootRx® Rehab Specialist - New York, NY

H&D Physical Therapy
12 E. 46th St.
New York, NY 10016

International

Sat. June 28, 10am - 5pm

Barefoot Training Specialist® - Singapore

Location TBA
Singapore

Sat. July 5, 9am - 5pm

Barefoot Training Specialist® - Manila, Philippines

FIT Manila
Manila, Philippines

Sun. July 6, 9am - 5pm

Barefoot Training Specialist® - Manila, Philippines

FIT Manila
Manila, Philippines

Sat. July 19, 9am - 6pm

Barefoot Training Specialist® - New Delhi, India

Fluid Gym
New Delhi, India

Sat. July 19, 10am - 5pm

Barefoot Training Specialist® - Ontario, Canada

Lifesource Wellness
102 Commerce Park Drive
Barrie, Ontario Canada

Sat. July 26, 10am - 5pm

BARE® Workout Instructor Training - Kuala Lumpur, Malaysia

FIT Malaysia
No. 2-8, 2nd Floor,
D19 Business Centre, Jalan PJU 8/3
Bandar Damansara Perdana,
47820 Petaling Jaya, Selangor,
Malaysia 47820

Sat. July 26, 9am - 5pm

Barefoot Training Specialist® - Shanghai, China

3hFit Shanghai
Gate 7, No. 2
Big Stairs of Shanghai Stadium,
666 Tian Yao Qiao Lu,
Located beneath Top Sport 2
Shanghai, China
Malaysia 47820

Sat. Aug 8, 9am-5pm

Barefoot Training Specialist® - Buenos Aires, Argentina

Valpo Center
Mitre 110
(6450) Pehuajo
Buenos Aires, Argentina

Sun. Aug. 9, 9am-5pm

Barefoot Training Specialist® - Buenos Aires, Argentina

Valpo Center
Mitre 110
(6450) Pehuajo
Buenos Aires, Argentina

Sat. Aug. 25, 9am-5pm

Barefoot Training Specialist® - Bangkok Thailand

Fitness Innovations (Thailand) Limited
884, 886 Ploenchit Road, Lumpini,
Pathumwan
Bangkok 10330, Thailand

Sat. Oct 4, 9am-5pm

Movement from the Ground Up - Sydney, Australia

Location TBA

Sun. Oct 5, 9am-5pm

Movement from the Ground Up - Sydney, Australia

Location TBA

Recently Certified

BarefootRx® Specialist

Melissa Stieber - Boulder, CO
Amira Lamb - Brooklyn, NY
Jess Woo - Daly City, CA
Peter Viola - Hicksville, NY
Eric Matuszewski - Hoboken, NJ
Ilaria Cavagna - New York, NY
Brooke Essapen - New York, NY
Lynn Plotnick - New York, NY
Ariana Rabinovitch - New York, NY
Michael Salvatore - New York, NY
Jennifer Watts - New York, NY
John Blenio - San Mateo, CA
Andrea Klekman - Yorktown Heights, NY

Barefoot Training Specialist®

Subhashini Ramaswamy - Bangalore, India
Sompat Chamrasromrun - Bangkok, Thailand
Stuart Wakefield - Barrie, Ontario
Amber Brien - Brooklyn, NY
Brett Grossman - Dallas, TX
Abhinav Malhotra - Kerala, India
Aarti Prasad - New Delhi, India
Doug Joachim - New York, NY
Lee Fong Chen - Petaling Jaya, Malaysia
Hooi Shan Loo - Petaling Jaya, Malaysia
Nara Yoon - Roslyn, NY

Upcoming Webinar

Run Injury Free!

Activate the Innate Loading Response

Thursday, June 12, 2014 8pm-9pm EDT

Reserve your Webinar seat now!

Register Here:

<https://www3.gotomeeting.com/register/139999286>

From cardiovascular benefits to weight loss, running is one of the most common forms of exercise. But did you know that over 70% of runners will experience an overuse-related injury?

The cause for these injuries? A delay in the loading response!

Join Dr Emily as she explores the innate loading response and how to decrease risk of running-related injuries by tapping into this neuromuscular response system.

Learn simple techniques you can apply on your runners or yourself right away!

Past Archives

Make sure to view all of our past webinars on our Archive

www.youtube.com/ebfafitness

Global Leaders in Barefoot Education



EBFA Master Instructor Muhammed Javed teaches professionals in Delhi, India the power of barefoot training and from the ground up programming.

EBFA is partnered with MOVEfit for all India-based education.



EBFA Master Instructor Youngchul Park teaches professionals how to build reflexive stability and foot to core sequencing in a June 8th Barefoot Training Specialist® workshop in Seoul, Korea.

EBFA is partnered with KFTA for all Korea-based education.



EBFA Master Instructor Simran Latiff demonstrated to fitness professionals how to activate short foot for improved stability and movement efficiency in a recent EBFA workshop in Kuala Lumpur, Malaysia.

EBFA is partnered with FIT Malaysia for all Malaysia-based education.

Not a subscriber? Sign up now to get free monthly education from EBFA!



Leaders in Barefoot Fitness