



Toning shoes



The latest women's sportshoe trend in the US, toning shoes, have experienced dramatic growth over the last two years – annual sales grew from \$17m in 2008 to \$245m in 2009 – and is still growing massively. According to analysts this is the fastest growing trend ever. You can therefore expect more and more consumer interest in this shoe category – and you will have to be prepared to answer the questions they are likely to ask.

What are toning shoes

Toning shoes are sportshoes with an unstable platform (a curved outsole) that forces the wearer to use certain muscle groups in the legs, buttocks and abdomen in order to stabilise his or her gait.

The shoes therefore provide a *workout* or *muscle toning session* during daily activities like standing or walking around, doing daily household chores, visiting the mall, doing un-strenuous exercises at the gym, etc.

The target customer

- From the totally unfit to the person looking to add intensity to their already taxing walking routine, these shoes are for anyone looking to increase their fitness level day by day.
- If the customer is one of the millions out there who claim that they never have time to exercise, are looking to exercise harder while doing normal daily activities, or are simply looking to improve the way they walk and move during day-to-day activities, these shoes could be the one thing they need.

How they work

- Shoes with a curved, or rocker-bottomed sole, force the wearer to activate core muscles (around the abdomen and waist) in order

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Words: Nelle du Toit. Compiled with the help of Shannon Bouwer of Reebok, John Andrews of New Balance and Werner Pieters of Sketchers.

to balance. The natural reaction is to tighten the abdomen muscles as well as tuck in the tail bone (thus activating buttocks and tummy muscles) and in order to maintain that balance while walking or standing, the upper thighs (or glutes) would be activated as well.

- The effect that balancing has on muscles can be demonstrated by asking your customer to stand on one foot and feel how much harder his or her body needs to work in order to stay upright or balanced. This is the principle behind muscle toning shoes: they force the wearer to keep balanced while walking on an unstable platform, making the wearer more aware of their posture and strengthening certain muscle groups. When walking, the foot's natural walking gait is altered as the shoes force a heel-to-toe footstep, with the result that it feels as if the wearer is walking in soft sand.

Benefits

Toning shoes have a number of benefits for people looking to increase their fitness levels:

- Fitness experts agree that the more your muscles work during activity or even non-activity (such as standing) the more calories you burn, the more muscles are toned and the less strain is placed on bones and joints. Toning shoes activate muscles not used when walking with flat soled shoes, providing greater toning to the calves, quadriceps, hamstrings, glutes, hips and abs.

- It makes the wearer work their muscles harder. Some manufacturers go as far as to say that walking a mile in regular running shoes equals to walking three miles in toning shoes.
- They can help to improve posture. Posture enthusiasts claim that the correct posture can instantly make you look 5kg lighter and many swear that having a good posture is the only way to achieve a flatter and stronger stomach. A good posture is also said to relieve upper and lower back problems and optimizes muscle and organ function which increases energy, endurance and vigour.
- The curved or rocker-bottomed soles help to reduce pain in the legs if you spend a long time on your feet by cushioning the joints – the rocking motion of the sole is said to relieve pressure in the ankle, knees and forefoot.
- The shoes generate a smooth heel-to-toe motion for the foot, which creates a more efficient stride. Once the wearer becomes used to the shoes, he or she would want to wear them for longer periods.
- The shoes absorb more shock with the thick cushioning in the sole.
- For many years rocker bottoms have been used extensively in rehabilitation and pedorthics. These shoes help relieve painful or disabling conditions in the feet by taking strain off the ankle and forefoot as you *rock* from heel to toe. Pedorthists agree that toning shoes that incorporate a rocker or curved sole are beneficial for these conditions.
- According to the Foot & Ankle Centre of Washington a rocker placed just behind the forefoot is very effective at reducing pressure under the ball of the foot and reducing motion in the toe joints. Pedorthists use it to treat big-foot arthritis and ball-of-foot pain. A heel to toe rocker sole has a rocker on the forefoot and a rocker on the heel. According to the centre it can **To p27**



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more of the impact,” says Tucker. “Your knees bend, so less impact is absorbed there, and you take shorter strides. Because you take shorter strides the steps are less jarring, and you achieve more bounce. This, in itself, is a completely different way to train.”

- Some scientists believe that running in minimalist shoes can help runners who suffer from previous running injuries, “Minimalist running can be therapeutic as some runners who have an injury and gradually introduce themselves to minimalist running allow their feet to foot-strike naturally. So, theoretically, one can perhaps remedy a non-chronic injury with barefoot/minimalist running,” remarks Professor Noakes.
- It strengthens the muscles in the foot, especially in the arch. Running minimally promotes a stronger foot that pronates less and is less liable to develop a collapsed arch.
- Studies show that you use up to 4% less energy when running with minimalist shoes, because you use the natural springs in your foot and calf muscles more to store and release energy. As less energy is used, oxygen consumption drops – which can be a

major benefit during an ultra-marathon. Alternatively, shoes with thicker inserts increase oxygen consumption as the materials used for cushioning in shoes absorb energy.

The case for cushioned shoes

Many runners, however, run long distances with cushioned running shoes without suffering any injuries – but some runners suffer from repetitive stress injuries.

- This does not mean that all runners should contemplate discarding their cushioned shoes. “A western runner used to running with cushioned, supportive shoes, will not adapt easily to barefoot running and they would have to teach themselves all over again how to run barefoot,” explains Noakes.
- “It’s not necessarily the shoe that causes injuries, but the training,” says Tucker. “And the shoe is the mediator of that training.” You might not train as hard when running barefoot as you would train while wearing cushioned soles. “Because you are not training your body as hard when running barefoot, it could be less likely for you to pick up an injury.”
- Some shod runners have problems running

in minimalistic shoes. If the runner has been a heel striker, it will take some time and much work to train his body to forefoot or midfoot strike, especially because he’ll need to develop stronger feet and calf muscles.

- Runners may be at greater risk of developing Achilles tendonitis when they switch from heel striking to forefoot or midfoot striking. Heel striking is painful when running barefoot or in minimal shoes as the collision force is greater each time the foot hits the ground. Once natural foot structures are weakened by long-term footwear use, people have to rely on the external support of the footwear.
- People who have been heel strikers most of their life will have to do lots of work to switch to forefoot striking.
- Novice forefoot and midfoot strikers typically experience tired feet, and very stiff and sore calf muscles. In addition, the Achilles tendon often gets very stiff. This is normal and eventually goes away, but a person can make the transition more successfully if you only run about 400m-1.5km during the first week of minimal running and then increase the distance by no more than 10% per week.

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be effective for limiting ankle and midfoot motion and thus it helps when a patient has ankle arthritis.

Research

In order for manufacturers of toning shoes to claim any of the above benefits they had to conduct research studies. The reports on some of these can be found at www.toningshoestudies.com.

- Reebok had their Easytone shoes tested by the University of Delaware using Electromyography (EMG) technology. These tests were conducted over a period of several months and included a cross-section of women who were each monitored wearing regular foam based walking shoes, Easytones and walked barefoot (unshod). These tests showed an 11% increase in calf and hamstring muscle activation from regular shoes to Easytones and a slight increase from unshod feet to Easytones. Their butt muscles were activated an alarming 28% more with Easytones than compared to regular shoes.
- New Balance International has done various lab and field tests with their Rock and Tone toning shoes and have had only positive results and feedback. “We are confident that increased muscle activation occurs when wearing our toning footwear. Internal and external lab tests were performed to measure muscle activation and calorie burn. While individual results may vary, increases were noted in certain muscle groups as compared to traditional walking shoes,” reports NB International.
- Skechers say that the Shape-ups studies are consistent with the findings of other studies

of rocker-bottom shoes published in peer-reviewed clinical journals over a period of several years, and four clinical studies conducted on Shape-ups by experts. The most recent is the November 2009 study by sport physician Dr. Steven Gautreau, D.C., et al, involving 80 participants (including a control group) who were studied for eight weeks. The study found both Shape-ups wearers and the control group gained strength, but only Shape-ups wearers experienced significant weight loss and reduced body fat. Earlier research include a study by a leading Southern California hospital and university; a prior trial study by Dr. Gautreau; and a study by Juntendo University in Japan.

- The American Council on Exercise (ACE) recently announced that they had conducted the first independent research study, in which they found no difference in the muscle activation of the subjects wearing toning shoes. Toning shoe manufacturers, however, slammed this study because they used only 12 volunteers who walked on a treadmill for five minutes. Manufacturers also questioned the independence of the ACE as it sells fitness training courses and materials, which would be threatened by the growing popularity of toning shoes.

Advice to customers

As toning shoes changes the walking gait of the wearer, certain guidelines should be followed to ensure that the wearer learns to walk properly in these shoes:

- The customer should practice walking in a different manner. The shoes should force

the wearer to walk heel-to-toe and eventually make the wearer feel like they are walking in the sand on the beach. Some manufacturers have created online training video clips to show consumers who have bought the shoes how to walk correctly in the shoes. Emphasis is placed on the wearers’ posture to help stabilize them while wearing the shoes. The correct posture will feel as if their muscles are working harder.

- Some manufacturers warn to not wear the walking shoes while training at the gym or during any high-impact exercise – these shoes were made for walking or daily activities (walking the dog and taking a stroll or doing household chores). Some manufacturers are, however, launching toning shoes designed to be worn during gym training or for running.
- Manufacturers warn that people with balance problems or tight Achilles tendons should take a cautious approach. The American Podiatric Medical Association (APMA) warns that toning shoes can put an increased strain on these body parts. People with pre-existing balance or stability problems may want to avoid wearing toning footwear altogether.
- Certain manufacturers warn that you should not wear the shoes for longer than 10 minutes for the first time and incrementally increase wearing time – just as any other fitness activity would be gradually increased. After the initial 10-minute walk increase to 30 minutes on the first day. Fatigue in the calves, thighs, hamstrings and core will be felt after the 30-minute walk. Thereafter, gradually increase the amount of time spent walking in the shoes.