Rosedale
NATURAL HEALTH CLINIC

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Things every walker and runner should know: Getting the most of your running shoes

If you are one of those who think running barefoot is better than wearing running shoes, this article is not for you. However for most people who engage in running or walking for exercise, recreation or sports they will need a good pair of running shoes to provide support, cushioning and help prevent repetitive strain injuries. Compared to the equipment of other sports this is not as big an investment; however running shoes typically cost $100-200. What many people do not realize though is that their shoes will wear out sooner than they think. Many experts agree that running shoes generally last 600-800 kilometers, which for many is about 6-months to a year of use. In light of this I have written the article below to give suggestions to help you get the most from your running shoes.

Figure 1: Basic Parts of a Stability Running Shoe

Running Shoe – parts of the shoe

It is important to understand some basics about running shoe anatomy to understand how to get the most from your shoes. As almost all runners and walkers need a stability running shoe, as opposed to a cushioning shoe, I will focus on those (see picture). The very bottom of the shoes, the outsole, is a tough rubber material that provides traction and resists wear. There are also strategically placed groves in this tough rubber to allow flexibility and promote normal foot motion. Just above the outsole is a softer material (which is often white) called the midsole. The midsole is the part of the running shoe that will absorb the impact as well as provide much of the support for the foot. These two opposing functions (cushioning and support) are usually accomplished with a dual-density system. For example, the medial side of a stability shoe, where the instep side of the midsole is, will have a darker region (usually grey). This is a firm material which prevents the arch of your feet from collapsing too quickly during walking and running. It is slightly harder material than the white area of the midsole which is softer to absorb impact in high-pressure areas. The upper part of the shoe will have solid pieces but also has areas of mesh to let the foot “breathe” and let out perspiration. It also keeps the weight of the shoes lighter. If you firmly compress the back of the shoe, known as the heel counter, you will notice the “heel cup” which is a firm piece that hugs the heel of your foot. This helps to stabilize the heel when the foot first hits the ground with each step as most runners and walkers

contact the ground with the heel first before the rest of the foot. The front part of the shoe is called the toe box. There is a lot more design and technology that goes into running shoes and their materials, but these are the basics for what you need to know for this article.

Getting the most from the materials

The midsole is the arguably the most important part of the running shoe, and if you compare brands you will see that different shoe companies have tried to develop proprietary patented materials to improve the performance of the midsoles in their shoes. Realize that the outsole is quite tough and it may still look as though it's in good shape long before the midsole is permanently compressed from use. This compression of the midsole is why running shoes usually need to be replaced. Furthermore, the midsole breaks down not only with wear, but also with time. So even though a pair of shoes you bought a year ago that has been in the closet for a year may look brand new, it will not support your foot as well as when you first bought it. Furthermore, when you see shoes on sale, you may want to ask when that model came out. It may seem like a bargain, but if it is from a few years ago, and you know you are prone to injuries, it will not support your foot as well as a more this year's model of the shoe.

One thing I find runners are not aware of is that wet shoes do not support as well. While water is not damaging to the shoe, your feet will not have the same support in your running shoes as on a dry day. That being said, one of the worst things you can do for your shoes is put them in the dryer. The heat and banging around in the dryer is not good for them. If it is wet out try to avoid puddles if you can, and later if your shoes are wet, let them air dry.

Getting the most from the design

As I alluded to earlier, the design of running shoes is for not only cushioning, but for support of the arch of the foot which helps prevent injury in the feet, legs, knees and hips. Many people falsely assume that if they are developing an injury from walking or running it is because they need more cushioning (softer shoes) to absorb impact, when they would probably be better off with a more supportive (firmer) shoe. In fact, the majority of people need a stability shoe, not a cushioning shoe. That being said, another way to help support your feet is to make sure you untie and tie the laces properly with each use. Sliding your feet in and out without ever untying the laces will stretch and/or compress the heel cup. This unneeded wear-and-tear on the heel cup will reduce its stiffness over time and therefore its ability to support the heel. Furthermore, if you ensure you tie the laces up properly (not too tight, not too loose) then the laces will pull up on the solid part of the upper on the instep which is there to maintain support of the arch of your foot.

Getting the most from the fit

A new pair of running shoes should be comfortable, should fit well, and not feel as though they need to be "broken in". In fact, most people who are replacing an old pair of shoes will find an amazing difference in how good a new pair of shoes feels. If the shoes are uncomfortable when you first try them on – try comparing different models, sizes (length or width or both) or different brands. Do not be surprised if buying a new pair of running shoes first takes 30 minutes or longer before you find one that suits you. If you are trying stability shoes for the first time, they will feel different than cushioning shoes because they are trying to affect the way your feet move, but they should not be uncomfortable. This is where having someone (trained staff at a running shoes store or a health care professional experienced with runners/walkers) who can watch your feet while walk or run in the shoes can help. He or she can tell you if you are getting enough support for your foot type and your activity level; you can decide if the shoes fit comfortably on your feet.

So how should a pair of proper running shoes feel? It should feel secure around your heel and the top of your foot (under the laces). That will hold the shoe on your foot without sliding,

which might cause blisters. If it is just a little loose in the heel you can try tying a “butterfly know” as in figure 2 which helps if the heel counter is slightly wider than the heel of your foot. Additionally there should be enough width in the toe box to be able to wiggle your toes freely when you are standing up. This space is needed for your feet to function properly. Additionally if you are going to be running in these shoes there should be about a centimeter from your longest toe to the front of the shoes when you are standing in them, or half a centimeter if the shoes are for walking. Do not be surprised if this is a full size larger than your casual or dress shoes. This length is needed as your toes may contact the front of the shoe at the end of the step just before the toes leave the ground. If a toe is contacting the front of the shoe over and over again during your exercise, it can lead to the bruised, blackened toenail (and sometimes temporary loss of a toenail!) that is often seen with long distance runners/walkers.

Figure 2: “”Butterfly” Knot to Improve Fit Around the Heel

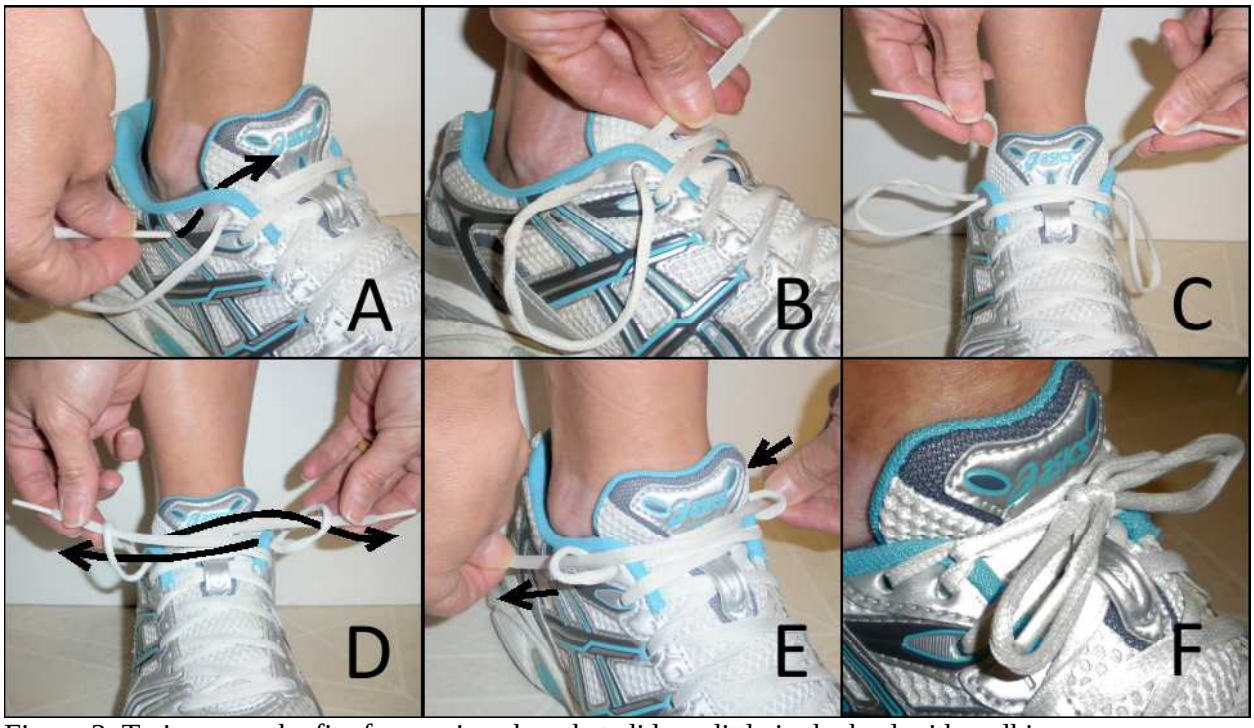

Figure 2: To improve the fit of a running shoe that slides a little in the heel with walking or running: Feed the shoelace back through the top hole on the same side (A and B). Do the same to the other side to make a loop on each side (C). Feed each lace across through the loop on the other side (D). To tighten the loops pull both ends back and down towards the heels (E). Tighten the laces snugly as you normally would from the bottom to the top and tie as normal (F). Try walking/running in the shoes, the fit in the heel should be improved and you should not feel any more slipping in the heel. If this slipping continues, try tying again a little tighter (but not too tight) or find a shoe with a narrower heel.

Getting the most from how you use them

My suggestion is to use your running shoes for just your running or walking. They are designed primarily for the forward/backward motion of these activities. If you are doing activities that involve cutting side-to-side, as in tennis or basketball, the sides of the shoes are not really designed for that kind of wear and tear. And if you only use it for your running or walking then the midsole has time (between exercise sessions) to “rebound” from the compression that has occurred from your exercise. Conversely if you spend a lot of time during the day standing around in your running shoes that adds to the compression and breakdown of the midsole over time even though you are not putting on mileage per se.

I hope you have found the above facts and suggestions helpful. The content is based on some research (there is not much research published), but most of it is from my own personal experience as a runner and experience in treating athletic injuries. I did not include a discussion of foot types and shoes types in detail as that is a whole separate topic. I will say though, that if you do not know what type of shoe is best for you, try asking for suggestions from the staff at a running shoe store (or a health care professional who works with runners and walkers) to have a look at your feet, gait and current running shoes. Finally, if you have tried new shoes and are still dealing with a walking or running injury, it is best to have a proper evaluation and treatment. Happy trails!