

The Old Shoe
Off The Road Column
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My father was a golf professional. Throughout my childhood month in and month out there was a continual stream of catalogues and magazines of that trade. All the new balls or clubs had some gimmick – further, more accurate always avoiding the reality that *you* still had to hit the ball. I remember suggesting to my father that someone should invent a club that would hit the ball right at the hole. We both got a laugh out of that.

In the last 30 years the running shoe has evolved from a glorified sneaker to the technological marvel that we have today. Today's shoes can be feather light while at the same time offering significant support and protection. I doubt you will see shoes that can run for you but I don't doubt that there is someone out there thinking about it.

One of the major costs of running is the running shoe. Regardless of the season running shoes, for the vast majority of runners are part of the required equipment. The choices can seem endless and all the new innovations further confusing the choice of which shoe is right for you.

One question that seems to come up often is how long does a shoe last? Usually followed up by – how does one know when to get new shoes? In truth there are no exact numbers to either question but certainly there are some clues one can use to safely get the most from one's shoe investment.

The quick answer is that a good running shoe should have a life span of three to four months or maybe 500 miles. The care of the shoe and a number of personal factors can either prolong or shorten the shoe's life.

Several of the factors to be discussed that affect the life of a running shoe include one's weight, the daily or weekly training load and the surfaces one trains on.

Why these three factors play a critical role in the life of a training shoe is that they all impact the midsole of the shoe which is arguably the most important part of the training shoe.

All the name shoe companies spend thousands if not tens of thousands of dollars on shoe research and development. And while all the pumps, air and gel sacks may represent the latest "bell and whistle" the real research money has been spent on developing a more resilient, more long lasting midsole.

Why the midsole? The midsole is the part of the shoe that lies between the outer surface outsole and the part of the shoe your foot rests on – the insole. The reason the midsole is critically important is that the midsole is where the majority of shock absorption takes place.

Running has long been characterized as a ground contact sport. With each foot strike the body receives a jolt of between four to seven times body weight depending on one's speed. The fact that most American runners, recreational or competitive, do most of their running on hard, concrete surfaces creates a tremendous ground contact shock for the shoe, the foot and the legs.

A second factor affecting the midsole is that of stride frequency. With sprinting one can approach five strides per second. Even with conversational jogging one has a stride frequency of three strides per second. The significance of this is that the shoe's midsole must rebound from being squished with four to seven times body weight at ground contact, rebound back to the normal only to be squished down again milliseconds later. The true test of a midsole is its ability to repeatedly rebound to "normal" thereby providing protection and padding to the foot.

The test to the midsole is that this process is repeated 1000's of times per run and repeated day after day for weeks or months on end. Factor in higher body weights, hard training surfaces and wet or muddy conditions which can all contribute to accelerated degeneration of the materials making up the midsole.

So how does one know when the midsole is worn out or using the technical term – exhausted? The first telltale sign that a shoe may be wearing out is the development of a nuisance injury at the foot, knee or hip. The development of a slight tendinitis-type pain at the Achilles or patella tendon area may signal that the shoes are no longer providing the necessary shock absorption and the weak link in the body's closed kinetic chain is breaking down.

A second, admittedly less scientific method is when a shoelace breaks. This may sound a bit odd but I challenge you to do your own study and I think you'll see a close correlation between shoe wear and broken shoe laces.

It is important to note that the life of a shoe can be extended with minimal effort. One way is to train using two pairs of training shoes and to alternate their use each day. What this does is gives the shoes a chance to recover from the pounding allowing the midsole a chance to decompress. Admittedly this option might not be in everyone's budget but when compared with the cost of a non-deductible medical visit it may prove to be a worthwhile investment.

Shoes that get wet should be carefully dried with newspaper stuffed in the toe boxes. Prolonged or continual soakings to the shoes only serve to accelerate the demise of the shoe.

Another important thought that will improve the life of one's running shoes is that they should be used for just that – running training. To wear running shoes as casual shoes to work or for other recreational activities compromises the shoes. I have no problem using an old, worn-out pair of trainers for casual activities but one's current trainers should be used for current training only.

Before we close a word on racing flats. Racing flats have a significantly shorter life span than training shoes. This should make sense. The construction of a racing flat is minimal. Ten good races may signal the end of a racing flat. This time will be shortened if one wears the racing flats for speed work or training runs.

Training shoes are an investment. Any brand name shoe is most likely backed by significant research dollars. Most running shoe stores have one or several trained individuals (a.k.a. shoe geeks) who can fit you with a model shoe that fits you foot properly and services your training and performance aspirations. While shoes can't make you fly they will allow you to train more safely which hopefully evolves into faster competitive performances.



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