



EXPERIENCE, RESEARCH AND INNOVATION CALL TRADITIONAL PRODUCT SEGMENTS INTO QUESTION By Paul Langer, DPM

When you look back at the birth of the modern running shoes in the late 1960's, there was no mention of cushioning, stability or motion control. Early road running shoes looked much like today's track spikes do. There were no cushioning devices, no motion control devices and no comfort features. With shoes like that, it makes you wonder how the first running boom happened at all. That boom did spur the development of new technologies such as nylon uppers, waffle soles and cushioned midsoles that began to be incorporated into footwear design by the late 1970's. Brooks introduced the first stability device in running shoes with the varus wedge, a forerunner of today's medial post. What is interesting to note is that stability features were not necessary in early running shoes until well after midsole cushioning was introduced. In fact, as midsoles became progressively softer during the next few decades, the stability devices became more prominent and more sophisticated in order to compensate for the destabilizing effects of the cushioning.

When I first started working in a running shoe store in 1996, it was all about cushioning. The running shoe manufacturers were falling all over themselves to make the softest shoes possible. Motion control and stability shoes were still too firm and uncomfortable to win over most runners. But gradually, the manufacturers determined a way to combine the comfort of cushioning with the protective benefits of stability devices such as medial posts and straighter lasts. The terms "cushioned," "stability" and "motion control" were commonly used at this point and most shoes were easily categorized into one of the three segments.

But as running footwear continued to evolve, some of the newer innovations made it harder to pigeonhole shoes. Just as we know that there are more than the three foot types of low arch, normal (or neutral) arch and high arch, we know that three shoe categories are no longer adequate. The change from over-simplified terminology to today's newer terms such as "structured cushioning" and "ultimate stability" is a reflection in the growth of knowledge in biomechanics, the demands of a more educated consumer and a natural evolution of running footwear. The older terms have become dated and less relevant. The newer terms make sense and are more meaningful – both for people who work in the industry and for runners.

In the last 13 years, I have seen most cushioned shoes – which previously had no stabilizing features to speak of – incorporate some form of stabilizing devices while stability shoes are now more cushioned and comfortable than they were a decade ago. Motion control shoes are also more cushioned than they used to be but still remain the orphan child of running footwear. They are a godsend for a small subset of runners but freak out most other runners. The stability category is the hybrid that capitalizes on the strengths of certain structural features from both the motion control and cushion categories while minimizing their weaknesses. Cushioning feels good to almost all runners, but it makes the shoe (and the foot inside) unstable. A soft midsole increases stress on bones and joints because of the uneven way it compresses and flexes. On the other end of the footwear spectrum, motion control shoes are extremely stable and minimize the

uneven flexion and compression of the midsole but are significantly heavier, and research has never shown that they are superior to stability shoes in controlling abnormal pronation. So, while the cushioned or neutral category has improved significantly, it is the stability category that combines the best of both worlds in terms of cushioning and motion control.

As someone who treats injured runners every day in a clinic, I steer 80-90 percent of my patients toward shoes that incorporate some form of stability. I don't care if it is called a "stability" shoe, a "structured cushioned" shoe or a "light stability" shoe, I can select the appropriate level of stability features for the individual runner's biomechanical needs. On the other hand, since today's cushioned/neutral shoes now tend to offer more structural features that lend stability, I am less likely to switch an injured patient out of a cushioned shoe today than I would have a few years ago. Motion control or maximum stability shoes are still reserved for a very small segment of my running patients.

As we continue to learn more about human movement and as footwear continues to evolve, we will see footwear categories change again. In fact, in the not too distant future, we will likely look back on today's running shoes in much the same way we currently look upon those from the 1960s.

ABOUT THE AUTHOR

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