



## **Athletic footwear choices...**

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A multitude of choices exist for color, size, amount of control, lacing styles, surfaces to be used on--something for every need. The selection at any store carrying sporting goods, or specifically running equipment can baffle the well-prepared shopper. Purchasing a pair of athletic shoes can be a very confusing and time-consuming endeavor. Changes are constantly being made to meet these demands and the stresses each sport has on its athletes.

An article in *Biomechanics* in October 2002 addressed the issue of *Shoe Science: Stepping Up to the Market Challenges*. Stephen Pribut, a Podiatrist in Washington, D.C. was recently quoted as stating that the changes in the athletic shoe industry are mostly "in marketing...in general the shoes are better."

In response to these changes companies such as Reebok "make technologies for the sake of technologies, but to meet the functional needs of the consumers. Reebok engineers also utilize consumers to make their changes, "we try to spend time with athletes and users and to immerse ourselves in their lives and identify their needs." Companies seem to understand their need to listen to what the users of their equipment have to say for areas of success and areas needing improvement.

One such future change is the need for lighter materials used for athletes such as soccer players. Nike of Beaverton, OR, has set out to develop a lighter shoe without losing the purpose of protection for these competitors. The demand for speed in the game of soccer was increasing, so the need for lighter shoes allowing greater foot speed was needed. Listening to demands to meet purchasers needs, biomechanists (specialists in movement analysis) also found ways to improve a shoe to fit soccer player by re-analyzing the needs of lateral mobility in the sport. The creation of an ultrathin microfiber material called NikeSkin<sup>TM</sup> occurred.

Biomechanists also look at basic questions such as "how shoe sole stiffness might affect running performance." Preliminary results seem so indicate that greater sole stiffness of a shoe is indicated with reduced energy loss due to bending of the foot. Adidas listened and made changes to their footwear designs.

Ann Ringlein of the Lincoln Running Company, mentioned several changes that she has seen in newly designed footwear. More widths are being designed incorporating the entire shoe, not just the toe cover. She notes more companies are using wider base and mid-sole to accommodate all sizes of feet. Shoes are getting more technical, there seem to be more specialties to each shoe, and these are getting more intricate. As for cushioning, the mid-soles are being designed now to stay flexible yet supportive longer. Ann comments that she is even finding that walkers can greatly benefit from the changes made to the running shoes.

The next time you need a pair of shoes, for whatever purpose, be aware there are many choices available. Should you need some assistance, seek the advice of the qualified personnel at your local running and sporting goods stores.

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