

The Science Behind Your Socks

American Running Association

Few articles of clothing offer a runner such potential for injury prevention and comfort at so little expense or fuss as socks, simple though they may be. Among the most important attributes of an athletic sock are moisture management, cushioning and dissipation of friction. Remember that the primary role of socks is to protect the foot from the running shoe itself, without contributing to compromises in fit or thermal management. Sock thickness can also be used to fine tune shoe fit. An overview of the fiber choices available may help the next time you're shopping for stockings.

Cotton socks are strong, but not very elastic and terrible at wicking moisture. They will fail to hold their shape and offer poor friction control. Though they are the easiest and least expensive socks to find, cotton socks are best avoided.

Wool is all about absorption, in contrast to synthetics with an ability to repel moisture. It manages moisture better than cotton, but shrinks. The foot perspires heavily; at rest, the average foot produces 10 to 15 gallons of sweat per year. To adequately keep you dry while retaining shape, any synthetic fiber serves you better.

Acrylic provides good cushioning and excellent friction and moisture management. It is also among the softer synthetics. Your feet may feel damp or bulky at times, but acrylic makes an excellent all-around choice for runners.

Olefin, which is made from polypropylene, is one of the strongest fibers you can purchase, and certainly is the best for wicking. It isn't very elastic, however. For this reason a better choice would be polyester. As with olefin, however, be wary of odor build-up in polyester.

It's tempting to neglect the importance of good socks when so much of a runner's attention—not to mention budget—remains on a proper shoe purchase. But where are the savings in a drawer full of misshapen, blister-inducing cotton socks one wear away from dust rags? Choosing a quality synthetic and shelling out a few extra bills for several pairs will almost certainly benefit you in the long run. And remember when you do head out to buy your new hosiery, while activities like baseball, soccer and hiking require over-the-calf socks, for runners, crew and mini crew socks are the way to go.

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