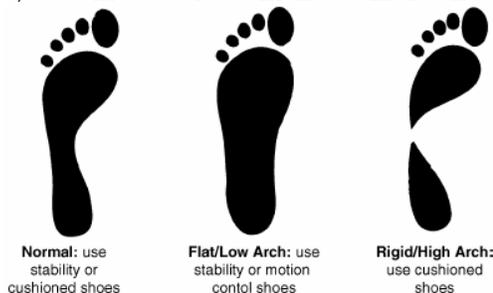


Running Shoes

The U.S. Army does not endorse or recommend any specific brand of running shoe, or any specific running publication. The following information is provided to assist the soldier in selecting the most appropriate running shoe for his/her needs. Some of the following information was taken from *Runner's World Magazine*.

All runners (recreational or competitive) should have a basic knowledge of shoe and personal foot anatomy to assist in selecting their running shoes. While the most frequent cause of running injuries is improper training, many problems can be traced to the use of inappropriate shoes, or shoes that are simply worn out.

The first thing you need to know is the best shoe is not always the most expensive shoe. However, keep in mind you need a good pair of shoes to avoid injury, so don't always hunt for the bargain either. All running shoes are different and you need a shoe specifically made for your foot. There are many new models every year with different features, new technology and new marketing strategies. With the information provided here, we hope you will be able to make a smart and well informed selection.



Three Basic Foot Types

1. Neutral: Normal Foot

Normal feet, during running, will hit the ground (heel strike) in supination and then roll into pronation (roll to the inside) as the foot continues to come in contact with the ground (stance phase). Then the foot will supinate (roll to the outside) just prior to the foot leaving the ground (toe off). Eighty percent of runners are heel strikers, the other 20% are mid/forefoot strikers. Look for a stability or cushioned shoe.

2. Hyperpronation: Flat Foot

Excessive inward tilting. Some may only hyperpronate when running due to the increased force. Hyperpronation is the most common problem and the majority of running shoes are made to fit this type of foot. Look for motion control or stability shoes with firm midsoles. Stay away from cushioned shoes.

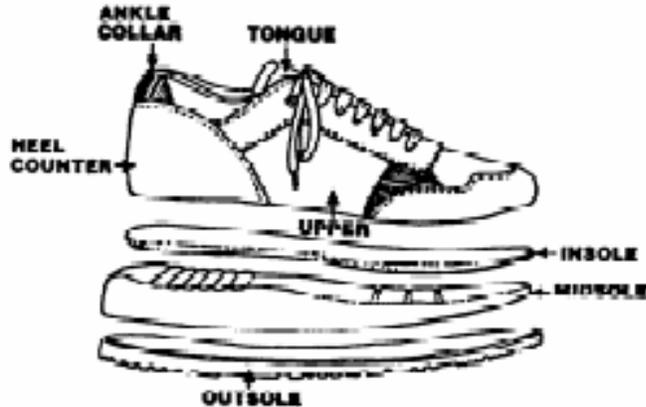
3. Hypersupination: High-Arched Foot

Excessive outward tilting. This foot type is less mobile, so more stress/force is translated through the bones, joints, muscles, and tendons. This foot does not adapt to the ground well and will need extra cushioning and flexibility built into the running shoe. Stay away from motion control or stability shoes.

Know Your Foot Type

Check your foot print (step in water then step on a piece of cardboard or any surface that will leave an imprint of your foot). If you are able to see most of your foot then you have a low arch. If you see less of your foot then you have a high arch.

Shoe Anatomy



Midsole: The life of the shoe. It is the padded area between the insole and outsole, now considered the crucial element for protecting runners from relentless pounding. It provides cushioning, comfort, and control during running. Midsoles can be made of EVA (ethylene vinyl acetate) which provides more cushioning, or PU (polyurethane) which is more dense and durable, or both. Alternative materials include air, silicone gels, gases, foams, liquids, or various combinations.

Heel Counter: The material that cups and encircles the heel. It is usually made of a durable, resilient, thermoplastic material. The heel counter's function is to hold the heel in place when the rearfoot makes contact with the ground.

Outsole: The rubber that meets the road. Its primary functions are traction and stability, and, to a lesser extent, cushioning (depending on the material used). Outsoles come in a variety of colors, but the important difference is the composition. A hard carbon rubber is used in the high wear areas of the heel (usually called heel plugs) and blown rubber is used in the midfoot and forefoot where durability is not as critical.

Upper: The leather or nylon that holds the foot in place on the midsole. From a purely technical standpoint, it is not as important in foot function as the midsole. The upper's function is largely one of comfort and cosmetics. This is where all the fancy designs and colors are used.

Ankle Collar: Usually notched and padded for comfort and to reduce rubbing and stress on the Achilles tendon.

Last: The foot-shaped form around which a shoe is constructed. There are three types and three shapes. You can determine which type you have by removing the insole and inspecting the stitching inside the shoe.

The types are:

Board Lasted – full length piece of fiberboard or cardboard and is the most stable and stiffest. The stitching will be along the outside.

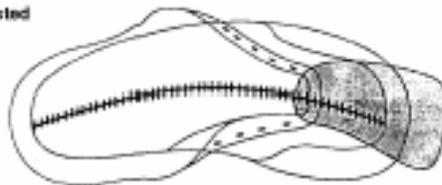
Slip Lasted – stitched together and is the most flexible. The stitching will be down the center.

Combination Lasted – board-lasted in the rearfoot for stability and slip-lasted in the forefoot for flexibility.

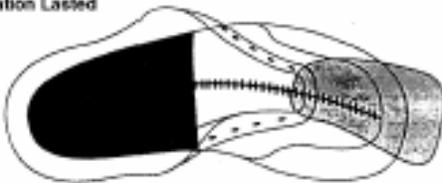
Board Lasted



Slip Lasted



Combination Lasted



The shapes are:

Straight-best for flat feet

Curved-best for high-arched feet

Semi-curved-best for flat or normal feet.

Shoe Shapes: Look at the sole



Straight: Best for Flat Feet



Curved: Best for high-arched feet



Semi-curved: Best for flat or normal feet

How to Choose a Running Shoe

Fit: Try on shoes with athletic socks and preferably at the end of the day. The front (toe box) of the shoe should not be tight; you should have the width of a thumbnail between the longest toe and the end of the shoe. The shoe's heel should be snug with no excessive movement. Some shoe companies offer different widths. The shoes should feel comfortable right out of the box - you should not need to break them in.

Cushioning: All shoes should have some form of cushioning, some shoes offer more than others. Those with high-arched feet need more cushioning.

Flexibility: All shoes, no matter what foot type you have must have a flexible forefoot, i.e., flexible at the ball of your foot.

Activity: Running shoes can be used for walking, but walking shoes **should not** be used for running. Court shoes are constructed for a different type of movement and **should not** be substituted for running shoes. They lack the needed shock absorption, are too heavy, and rob the ankle of the freedom of motion it needs. Cross-trainers work well as court shoes, but not running shoes.

Price: Shoes come in all price ranges from \$10 to over \$100. You should plan on spending at least \$65-\$85.00. Remember the most expensive shoe is not always the best, but also remember that your body is worth more than a cheap shoe. We recommend going to the local athletic shoe stores to try on a variety of shoes that fit your foot type before deciding on one you like. To save money, you can then check if the PX carries the shoe, or order through a catalog. Running magazines have catalog offers in the back. Stay away from cheap discount store brands or from fake copies while stationed in Korea.

Body Weight: The more you weigh, the more force you will generate. Heavier runners need a shoe that offers more shock absorption and added durability. You may need a motion control shoe.

Shoe Life: On average, running shoes will last 6-9 months before you need to replace them (if used ONLY for running). Shoes last longer if you run on dirt, trails, or grass. The heavier you are, the sooner you'll need to replace them. If the midsole starts to show through or begins to form horizontal lines . . . you need new shoes. If you notice new aches and pains in your body . . . you may need new shoes. To prolong the life of your shoes, don't wash them in a washing machine, don't dry them in a dryer, don't let them stay wet (air dry them), don't wear them for any activity except running, and don't kick them off by pulling on the heel while they are still tied (this will destroy the heel counter and other stability devices). Clean your shoes with a soft bristle brush (toothbrush) and mild soap and water, then allow them to air dry.

In Summary:

Flat Foot: look for motion control, board last, straight last and PU midsole

High Arch: look for cushioning, slip last, curved last, and EVA midsole

Normal arch: look for stability or cushioning, combination or slip last, semi-curved last and a midsole to fit your running needs

Heavy runner: look for motion control or stability and increased midsole density

One useful reference to find a variety of running shoes for a variety of needs is the *Runner's World Shoe Buyer's Guide* that comes out twice a year.

Manufacturer's Phone Numbers and Web Sites:

ADIDAS 1-800-677-6638 www.adidas.com

AVIA 1-800-848-8698 www.aviashoes.com

ETONIC 1-800-334-0008 www.etonic.com

MIZUNO 1-800-925-4292 www.mizunousa.com

NIKE 1-800-344-6453 www.nike.com

PUMA 1-800-662-7862 www.puma.com

RYKA 1-800-352-3331 www.ryka.com

ASICS 1-800-678-9435 www.asicstiger.com

BROOKS 1-800-227-6657 www.brookssports.com

FILA 1-800-717-5757 www.fila.com

NEW BALANCE 1-800-253-7463 www.newbalance.com

REEBOK 1-800-843-4444 www.reebok.com

SAUCONY 1-800-365-4933 www.saucony.com

Shoes on the web: www.runnersworld.com click on "shoes" link, then click on the name of the company that most interests you. You can save some money by ordering from a shoe warehouse such as www.holabirdsports.com or www.roadrunnersports.com