THOUGH LEARNING HOW TO RUN WITH A PROSTHESIS CAN BE VERY CHALLENGING, WHEN IT IS SIMPLIFIED INTO A SERIES OF RELATIVELY BASIC ELEMENTS, IT CAN BE MUCH EASIER TO LEARN.

Following are five easy steps that have made it possible for me to help hundreds of people to relearn the skill of running and to benefit from the ability to move quickly when necessary. Initially, for safety reasons, I strongly suggest that skilled clinicians work with their clients and use a gait belt.

**Step 1: Prosthetic Trust**

This step requires instilling in prosthesis users trust in their prosthesis and confidence that it is going to be there and not collapse when it strikes the ground. This is accomplished by reaching out with the prosthetic limb and landing squarely on the foot. Runners should ignore everything else and know that their prosthetic limb will be there.
**Step 2: Backward Extension**

In this step, runners reach out with their prosthetic foot during swing. Just before striking the ground, the prosthetic leg pulls back forcefully creating a backward force. As a result, the ground will produce a forward force accelerating their body forward. This movement has two effects. First, it will accelerate the body forward causing an increase in speed. Second, it will give runners the power to shift their body weight over their prosthesis and fully load their prosthetic foot, resulting in maximum prosthetic foot performance as they load the forefoot.

**Step 3: Sound Limb Stride**

During this step, the focus shifts to the sound limb. Runners should concentrate on taking a longer stride with their sound limb. This can be easily accomplished by continuing to pull down and back through the prosthetic limb. Pulling back during the prosthetic foot’s initial contact with the ground initiates the movement pattern. Runners should continue to extend the hip by pulling down and back into the socket. This will generate more power and a stronger push off with their prosthetic limb, which will, in turn, enable their sound limb to reach out to complete a full stride.

**Step 4: Stride Symmetry**

This step is designed to decrease the enormous effort that these runners exert and to help them simply relax and jog a little. Therefore, runners should choose a comfortable jogging pace that produces an equal stride length for both limbs. They should not worry about their arms; they should instead concentrate on maintaining stability over their prosthetic limb using the muscles of the hips to produce equal and relaxed strides.

**Step 5: Arm Carriage**

This step is focused on arm swing. The arms and legs move in opposition to each other, so, as the right leg moves forward, so will the left arm. The elbows should flex to about 90 degrees and the hands should be loosely closed and rise to just below chin level when brought forward. Just as in walking, arm swing is the result of trunk rotation as the trunk and pelvis rotate in opposition to each other for balance, momentum and economy of effort.

**Putting It All Together**

Finally, runners should be ready to put all of the individual elements of running together. They should relax and think about only a couple of elements of running with each pass.

Many long-distance runners augment their endurance training program with low-impact activities, such as swimming, stationary biking or stair-climbing machines. In time, each runner will develop his or her own comfortable running style, depending on the sports or recreational activities he or she chooses to participate in.

Learning to run can take place on just about any type of prosthesis, and initially the prosthetic foot is not critical. However, if amputees decide that running is going to be a part of their active lifestyle, they should discuss the various available prosthetic options with their prosthetist. Though the same principles of running apply, regardless of the prosthetic foot, prosthetic feet designed for running can reduce the effort and improve performance.

**About the Author**

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