



## Cross Country Ski Guide

Please also review instructional videos at [www.millinocketmemoriallibrary.org/KGLwinter](http://www.millinocketmemoriallibrary.org/KGLwinter)

### Overview of Classic Skiing

Classic skiing is the older and more traditional style of cross-country skiing. In the past it was also called ski running, and sometimes that's what it resembles.

In classic skiing, the skis are mostly worked in the parallel position, with both feet pointing straight ahead.

Classic skiing is done in classic ski tracks, which are parallel grooves laid in the snow. They can either be skier-set, meaning people make the tracks by skiing in the snow, or machine groomed and track-set.

On the bottom of a classic ski there's a special zone approximately under the foot, called the grip zone, wax pocket or kick zone. The grip zone can stick to the snow.

A special, temperature-rated kick wax is applied to the grip zone on traditional classic skis. On waxless skis the grip is achieved by a special mohair-like material or an imprint. There are a number of options for waxless skis.

If the skier stands lightly on both skis with her weight evenly balanced, the grip zone only lightly touches the snow because the skis have bow-like shape. For the most part, it's only the tips and tails that touch the snow.

By moving her weight over one ski and pressing down firmly, the skier can compress the grip zone and stick the ski to the snow. That's when the magic happens. The skier now has enough traction to work against. She pushes down and back against the ski and that helps her move forward.

In both classic and skate skiing, any time the skier pushes against the ski it's called a "kick". A "kick" is typically followed by a glide phase. In uphill techniques, the glide phase is very short or even absent because of the need to continually work against gravity. On flats and downhills, the glide is longer and more important.

Poles are at least as important as skis for creating forward movement. Different ski techniques use different combinations of timing between the skis and poles.

Diagonal stride is the most easily identifiable classic ski technique and what most people learn first. The arms and legs move in opposition, the same as in running and walking. Even though Diagonal Stride is an easy entry point to Classic skiing, many experts consider it the most interesting and challenging technique to master.



Double pole is the second major classic ski technique. Only the poles are used in double pole technique. There's no leg push (kick) at all. Double pole technique has a huge scope for modification, which means it can be adapted to a wide range of terrain and snow conditions.

Double poling has been gaining ascendancy over Diagonal Stride in recent years because it can be so fast in races. If a skier can double pole an entire race course she can forego grip wax (the sticky wax under the foot). She'll be a little slower on the uphill, but it means her skis will glide much faster on the flats and downhill.

Kick Double Pole (One Step Double Pole) and Herringbone are less used techniques, but still important to learn.

Kick Double Pole is a blend of Double Pole and Diagonal Stride. The arms push at the same time, as in Double Pole, but the legs alternate, like in Diagonal Stride. Kick Double pole is good for moderate terrain and for transitioning between Diagonal Stride and Double Pole.

Herringbone technique is a climbing technique. In Herringbone, the skis are positioned in a V-shape, like skate skiing, but there is no glide. The inside edges of the skis dig into the snow to help the skier work against gravity. The skier climbs with a walking or running pace.

### **Classic techniques at-a-glance**

The 4 primary classic ski techniques, arranged on a power-speed continuum, like gears on a bike or car:

1. Herringbone
2. Diagonal Stride
3. Kick Double Pole (or One Step Double Pole)
4. Double Pole

### **Top Tips**

- **Beginners:**
  - It's natural to start with Diagonal Stride technique, but don't wait long to learn double pole. Double Pole technique teaches foundational skills that transfer to almost every skate and classic ski technique.
  - You'll develop better technique if you avoid large, expansive movements with your arms and legs. Keep your body low and compact. Avoid the temptation to reach forward with your poles. There should always be some flexion at your ankles, knees, elbows and hips.
- **Challenge Ideas for Experienced Skiers:**
  - Practice smooth and strong lane changes, using a powerful skate push. That's a fun skill that helps develop agility.
  - Learning to transition smoothly between techniques is important, especially in a race setting.
  - Learn to adjust your range of movement and tempo to optimize each of 4 classic techniques to a wide range of conditions and terrain.
  - Regularly challenge yourself with uphill double pole.