

## How to Choose the Right Cross-Country Ski

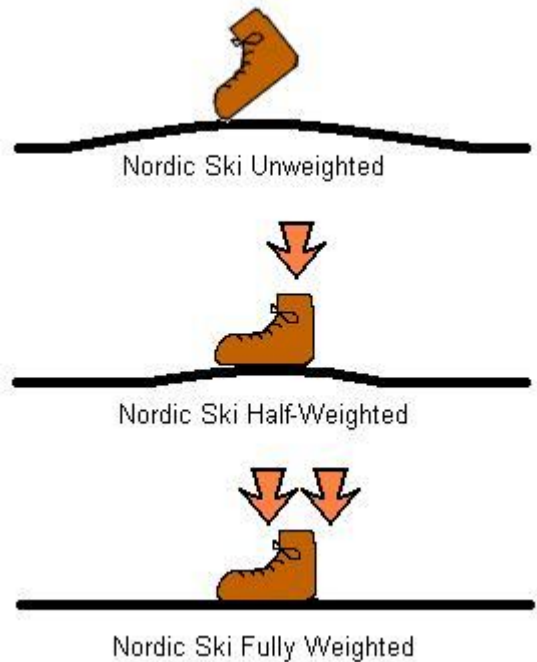
In order to choose the right Cross-country ski equipment you need to consider these questions:

- 1) Where do you plan to ski most? Are you going to ski locally or further north at a cottage?
- 2) Do you plan to ski primarily in a track set area or do you plan to break your own trail?
- 3) Do you like to ski hard and go fast or are you are a more casual skier with 'stability' closer to the top of your list?
- 4) Do you want the convenience of a no-wax base or do you prefer the superior performance of a waxable ski?
- 5) How much do you want to spend?

At Tumblehome we'll help you to find answers and then suggest the best possible solution but here is some background information that will be helpful.

**Ski Camber:** Sometimes referred to as "stiffness", the camber is created by the arch in the ski. It is the camber of the ski that creates that magical (and sometimes elusive) combination of grip and glide that is crucial to the diagonal stride method of skiing. Camber creates three zones in the ski. The front third and the back third of the ski are the "glide zones" and are in contact with the snow at all times. The middle section, called the "kick zone", only contacts the snow when the full weight of the skier is placed on one ski during the kicking motion. During this brief moment of contact, the binding action between the ski and the snow enables the forward propulsion of the skier.

"Back-slipping" occurs when the camber of the ski is too stiff for the weight of the skier, preventing the grip zone from grabbing the snow. Back-slipping can turn even the most idyllic day of skiing into an exercise of extreme frustration. A ski that has a camber that is too 'soft' for the weight of the skier results in very reliable grip. This may seem desirable until you discover that in this scenario, you also don't get much glide which defeats the purpose of wearing skis in the first place.



You can see that getting a ski with the right camber is the critical part of the cross-country ski equation. It is why we take the task of matching the skier to the ski seriously, using paper tests, charts and scales to help get it right. Again, the best skis you can buy are skis that offer you the best combination of grip and glide.

**Ski Width:** The thinner and lighter the ski, the faster you will go and the less stability you will have. Likewise, a wide ski is slower but more stable. In deep snow a wider ski also offers better flotation than a skinny ski. It follows suit that skiers who ski primarily on groomed tracks will prefer a narrower ski than someone who skis on a variety of natural terrain.

Ski widths are often recorded using three numbers; one for the tip, one for the area under the foot, and one for the tail. The greater the difference is between these numbers, the greater the "side cut" of a ski. A ski with a lot of side cut turns more easily than a ski with little side cut. If you ski "off track" where you carve your own turns, then you should look for a ski with lots of side cut; i.e. a ski that measure 59 - 51 - 55 mm. If you ski primarily in groomed tracks then you can get away with minimal side cut, using a ski with measurements such as 49- 47 - 48 mm.



In summary, off-track skis should be wider for better stability and better flotation in deep snow and they should have more side cut for turning.



In-track skis should be narrower for greater speed and because the snow is hard packed, flotation is not required. Less side cut is needed as the tracks aid with turning.

**Ski Base:** Skiers have the option of choosing a waxable or a no-wax ski base. A no-wax ski has 'scales' cut into the middle third of the base of the ski. These scales allow the ski to grip into the snow thereby eliminating the need for grip wax. In its early days, a no-wax ski was often chosen by beginners as it was just plain easier than waxing. Now that no-wax technology has improved, even expert skiers have been known to choose a no-wax ski in certain conditions. A no-wax base is particularly effective in near freezing temperatures or in areas where temperatures vary greatly due to freezing and thawing (read, 'Southern Ontario'). In areas that are consistently cold and winters more reliable, a waxable ski may still be the best choice.

**Waxing:** The bottom line is a waxable ski will glide significantly faster than a no-wax ski if it is waxed properly for the conditions. Waxing "properly" is where the tricky part comes in and it is why hard core skiers have been known to cart around a plethora of grip waxes, irons, cleaners, scrapers, corks and thermometers. Good waxing is both an art and a science and it is easy to see that some personalities lend themselves to mastering waxing technique while other personalities are better to avoid the challenge and just focus on getting outside. Know yourself!



One important development is that no-wax skis, once the domain of inexperienced skiers, now share some upgraded technologies, making them more comparable (but never as fast) to higher performance waxable skis.

**Ski Length:** Many skiers remember the old measuring technique of raising their arm and choosing a ski that reaches the wrist (called the "reach test"). If you have read the section above on Ski Camber then you'll realize that it is not the height of the skier that matters most but rather the weight of the skier. Therefore the 'reach test' alone, is not an adequate measurement in choosing a ski. This is where it gets a little tricky for sales people, working around that delicate question of "what do you weigh"?

Someone who weighs more than average for their height will have to go to a longer ski to get a stiff enough camber. A longer ski is not a disaster but it does make some manoeuvres such as doing the herring bone up a hill or turning tight corners, a little more awkward. Our preference is to put skiers on a shorter ski if possible but not to sacrifice glide in doing so. Many ski manufacturers are applying a technology that allows skis to come in a 'short cut' length. 'Short cuts' have been gaining in popularity because they offer the same glide as a traditionally longer ski. Another relatively new genre of ski is the 'cruising ski' which is wide and has a stiff camber allowing the ski to be short in relation to the skier's height. While it is very stable, a cruising ski is generally not the fastest ski on the track, but for some skiers this is desirable. Again... Know Yourself!

**Ability:** The one factor we cannot easily measure in the store is the skill level and attitude of the skier. If the skier does not have a complete weight shift when kicking then they are what we call a 'shuffler'. In this case, then the grip action of the ski is compromised and this skier is better with a softer camber ski. If a skier likes speed and aggression and is happiest when their heart rate is highly elevated, then they will be happier on a stiffer, performance oriented ski.

Now that you know a bit about the camber, width, length, and base of a ski, you can come in and ask some good questions. If you can't remember it all, don't worry, it's our job to help you make the right choice when you decide to buy new skis.

**In the meantime, have fun and keep your skis on the snow!**