

Basics of Cross-country Skiing

Equipment

Classic Skis

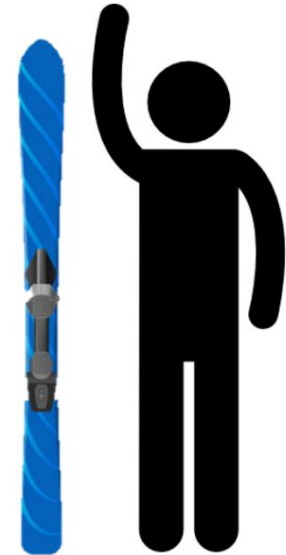
Classic skis can be waxable, requiring wax for the kick zone, or waxless, with fish scales along the kick zone.

The kick zone, waxless or with kick wax, grips the snow and enables the skier to “kick” off the snow and glide.

Waxless skis provide a low-maintenance introduction to skiing. As a skier’s skills develop, waxable skis will be a fun option, and will provide better kick and glide while classic skiing. A classic ski can be waxed to enhance glide and to create kick.

The length of the ski should reach the wrist of the athlete’s upward extended arm. However, shorter skis are easier for beginners, so it is okay if the skis seem too short on a novice athlete.

Refer to a qualified ski technician or coach for accurate ski length based on height, weight and ability.



Classic Boots

Classic boots have a short ankle cuff and allow for significant flex in the ball of the foot. Fitting boots is important and requires assistance from a ski technician or coach. They should be comfortable and fit similar to a pair of sneakers.

The boot is too big if the foot can slip and the heel can lift.

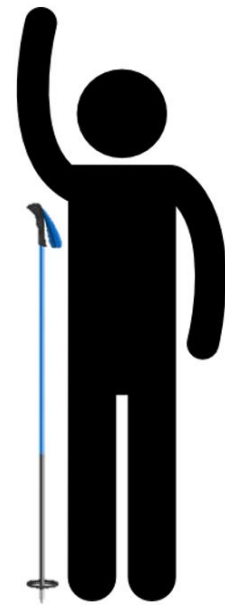
The boot is too small if the toes are scrunched.

Combi boots can also be used for beginner classic skiers because the higher ankle cuff will provide more support and stability.

Classic Poles

Classic poles should reach from the floor to between the armpit and shoulder. When beginning, it is also okay to start with slightly shorter poles, so that the athlete can develop upper body strength in order to pole effectively.

Pole grips and straps are universal. When fitting, the athlete should make sure they know how to insert their hand and adjust accordingly for a snug fit and firm grip.



Skate Skis

Skate skis do not have a kick zone like classic skis and are waxed only for glide. The length of the ski should be relative to the height of the athlete, however ski length can differ depending on height, weight and ability.

Skate skis are shorter than classic skis and should be fitted by a ski technician or coach. An athlete can skate ski on waxless or combi skis.

Skate Boots

Skate boots are have a higher ankle cuff than classic boots. These boots are more supportive of the ankle and enable the skate technique. Fitting boots is important and requires assistance from a ski technician or coach.

They should be comfortable and fit similar to a pair of sneakers.

The boot is too big if the foot can slip inside the boot and the heel can lift.



The boot is too small if the toes are scrunched.

Combi boots can also be used for beginner skate skiers and the athlete can transition as skill and interest progress.

Skate Poles

Skate poles are longer than classic poles because skating is a more upright technique and benefits from longer poles. Skate poles should reach from the floor to between the chin and the mouth. Pole grips and straps are universal. When fitting, the athlete

should make sure they know how to insert their hand and adjust accordingly for a snug fit and firm grip.

Combi skis, bindings and boots

Combi boots and skis are good for a new skier or one who is in transition from classic to skate technique. Combi boots are both flexible and stiff, so to be comfortable in both skate and classic techniques. Combi skis are typically sized in between skate and classic lengths.

There only two types of bindings, NNN and SNS, so this makes finding the right equipment rather easy. To ensure proper fit, safety and importantly optimal enjoyment, all equipment should be fit by a knowledgeable ski technician or coach.



Attire

Athletic ski clothing and accessories need to be combined to provide warmth and protection from moisture, wind and sun. Several layers of clothing are recommended because layers can be easily taken off or added on, depending on temperature. This concept of venting is particularly important in Cross-country skiing. By removing an article of clothing or opening, unzipping a jacket, you can vent or regulate the body's temperature and perspiration rate. Remember, proper fit means clothing that does not restrict motion or circulation. The main goal with ski clothing is to stay warm and to stay dry.



Three-Layer System

Inside Layer	Wicking layer	Upper Body + Lower Body	Long underwear
Middle Layer	Insulating layer	Upper Body	Cotton shirt Turtleneck Fleece
Outer Layer	Weatherproof layer	Upper Body Lower Body	Windbreaker Warm-up jacket Heavyweight lycra tights Wind pants

Other recommended pieces of attire:

- Socks
- Vests
- Gloves/Mittens
- Hat
- Sunglasses
- Sunscreen

Falling Down & Getting Up

Falling in skiing is natural and happens to everyone; it's all a part of the learning process. Therefore, it is important to prepare your athletes to be able to fall and get up effectively. If an athlete is weary of falling, have them practice falling down and getting back. Be aware that ski poles can break if caught under body weight.

Falling Down

- Lower the body and fall to the side, not backwards or forwards onto the poles.
- Keep skis parallel.
- Keep arms close to the body.
- Stay relaxed.