



Cross-Country Ski Technique Tip Sheet

Diagonal Stride (Classic)

- * In diagonal stride, you glide with your weight fully balanced on one ski, compress your weight down, push off and glide fully balanced on the other ski.
- * You are never on two skis at once - completely move body weight from a balanced position on one ski to a balanced position over the other ski.
- * After you push, the push leg extends behind you and comes off the snow. As you compress your weight onto the glide ski to prepare for a new kick, the extended leg returns to the body. The foot should land and become weighted next to your other foot, not behind it.
- * Maintain the good forward lean of the body throughout the entire stride cycle. Think about athletic position.
- * During the cycle, you will extend and flex with the body. You will extend up and forward in the glide position and flex down and forward to load the ski in order to push off. When flexing down, think "knee to ski" – drive the knee forward and down; don't sit back in a chair.
- * Arms and legs move in opposition; you pole with the arm of the opposite side from the leg you are gliding on (like walking!).
- * When planting the pole, your arms should be at a 90-degree angle, not too close and not too extended. This will allow you to load your weight onto the poles (if your weight is forward enough).
- * Work the arms with a relatively straight front-to-back motion; try not to let the poles flare about.
- * Follow through completely with the arms from shoulder extension at the front to pole release at the back.
- * Make precise and coordinated body movements – given the terrain and tempo – to ensure maximum efficiency.

Double Poling (Classic/Skating)

- * Double poling is when our feet remain parallel, and we pole with both poles at once.
- * Think about your body as a lever. At the pole plant position, our body is in a plank position, and we are leaning forward from the ankles. Our arms are 90-degrees, with elbows slightly flared out.
- * Fall onto the poles, and flex through all your joints. In particular think about driving the knees forward and down (knees to skis).
- * Follow through with the arms until just past the hips and release the poles.





- ❄ The body and arms should return to the start position at the same time, or the body should rise slightly before the arms (for more advanced skiers).

One-Step Double Poling (Classic)

- ❄ This technique combines diagonal stride with double poling.
- ❄ Start with a standard double pole.
- ❄ As you start to return, shift your weight completely onto one ski and flex down again to put weight on the ski to prepare for the push.
- ❄ Push off the push ski and drive forward onto the new glide ski (the "step").
- ❄ As the push phase occurs, both arms move forward in preparation for the double-poling phase.
- ❄ The recovery leg returns to the parallel position to complete another double pole.

Herringboning up a Hill (Classic)

- ❄ The skis are placed in a V and set on their inside edge.
- ❄ Walk up the hill with opposite arm and leg movements. Arm position is the same as diagonal stride.
- ❄ Increase both the angle between the skis and the edging on the insides of the skis as the hill steepens.

Uphill Diagonal Stride (Classic)

- ❄ Remember the fundamentals of regular diagonal stride – forward body position, full balance on each glide ski, and effective compression to push off the glide ski.
- ❄ Full balance on the glide ski is critical – if you can't get all your weight onto the glide ski, you will have problems getting an effective push.
- ❄ Your stride (both arms and legs) will shorten as the hill steepens. Try to get glide rather than running up the hill as much as possible.

Free Skate (Skate)

- ❄ In skating, skiers push laterally to glide down the trail outside of the track.
- ❄ Like in classic, full balance on each glide ski is critical.
- ❄ Like in classic, you will flex and extend – in the glide position, you will be extended (but don't lock your joints) and then you will flex to push off the ski and transfer to the new glide ski and extend.
- ❄ Start the push at the heel and extend it to the mid-section of the foot.
- ❄ Fully extend the push leg.
- ❄ Before the push phase begins, return the recovery foot to the heel-to-toe position.





- ❄ Keep the arm action rhythmic, opposite arm and legs as in the diagonal stride.

One Skate (Skate)

- ❄ This adds poling to the free skate motion.
- ❄ Double pole on each leg push.
- ❄ Leg push is equal on both sides.
- ❄ Direction in the first half of the manoeuvre is toward that of the push ski, while in the second half it is toward the new direction of travel (we call this pole assisted glide – you load your poles and compress down on the glide ski until the hands pass the hips and then you push onto the new glide ski. This means the poling assists your glide).

Two Skate (Skate)

- ❄ Double-pole on every second leg push.
- ❄ Leg push is equal on both sides.
- ❄ Recover the arms smoothly.
- ❄ Direction in the first half of the manoeuvre is toward that of the push ski, while in the second half it is toward the new direction of travel (pole assisted glide – see above).
- ❄ Use the same leg action as in the free skate.

Offset (Skate)

- ❄ This is a technique we mainly use to get up hills.
- ❄ The unique characteristic of this technique is the three point touch – the glide ski and both poles contact the snow at the same time.
- ❄ The feet move like in other skate maneuvers, and both should push and glide evenly.
- ❄ Keep a strong arm position like in the other techniques – not too extended, not too close to the body. 90-degree bend in the elbow.
- ❄ Be sure to fully balance on each ski.
- ❄ Bring your legs back under you – if you let the skis get too wide and keep your weight in the middle, you will stall out and not be able to glide.
- ❄ Engage the lower ab muscles to keep the pelvis forward.
- ❄ Keep the upper body quiet – we don't want to see much rotation anymore.
- ❄ Increase the tempo on steeper hills.





- ❄ Think about light feet!

Wedge Turns (Downhill Technique)

- ❄ Knowing how to turn in a wedge allows you to turn downhill corners and to control your speed on long descents.
- ❄ Rise to unweight the skis and get into your wedge. Compress down to control your speed. Get into a wider wedge and onto more of an edge the more you need to slow down.
- ❄ When you want to turn, shift your weight onto the downhill ski (the ski on the outside of the turn).
- ❄ Turn your lower body in the desired direction (your lower body should initiate the turn).
- ❄ Rise up as the turn is finished and come into a narrow wedge again.

Transitional Wedge Turns (Downhill Technique)

- ❄ Same basic foundations as the wedge turn, but at the end you bring your skis to parallel (your inside ski moves in to match the outside ski).
- ❄ Rise to get into a wedge and initiate the turn.
- ❄ Move all your weight onto the downhill ski (this is critical – you can't move your inside ski if there is still weight on it).
- ❄ Smoothly move the inside ski to parallel. Try putting the ski on its outside edge to help slide it in.
- ❄ Compress (flex) at the end of the turn.
- ❄ Try to link turns with noticeable flexion and extension.
- ❄ You need terrain with enough speed to complete this maneuver.

