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Diagonal Stride

The basic diagonal stride is the heart and soul of classic XC ski technique. In fact, when most non-skiers are asked to picture XC skiing in their mind, the diagonal stride is the first image that typically pops up.

Utilizing an opposite driving leg and forward poling arm, at it's most basic level the diagonal stride looks like a sliding walk. Once perfected, the diagonal stride is one of the beautiful motions we can do on this planet. It is, quite literally, dancing on snow.

Basics:

Start without poles and on a flat area with firm tracks. This will help develop your balance and keep things easy. Now, imagine you are a child wearing socks on a newly waxed kitchen floor. You would scoot-slide across the floor using a driving motion with one leg as your opposite arm swings forward for momentum and balance. This scoot slide is the essence of the diagonal stride.

Start out with short experimental scoot slides (baby slides are just fine at first). As you get comfortable with being on the skis, progress to longer and more integrated motions. Don't worry too much about what your arms are doing at first except to make sure that you are not waving them all around. During the scoot slide, your upper body should stay relaxed, leaning slightly forward, and your shoulders should have a rounded, gorilla look just as if you were getting a good shoulder rub (not a bad idea for after your first day out on skis!).

After even as little as a few minutes gliding you should notice that if you get your weight up and over the forward ski (as opposed to sitting back just a wee bit), the ski will glide forward with quite a bit of freedom and power. Most beginners get a taste of a real gliding ski even in the first five minutes on snow. Note that this can be somewhat unsettling at first and your first instinct is going to be to sit back when you feel the ski really glide. What a professional instructor will encourage you to do is to instead "chase" that free glide out front. Although you will wobble a little more, your body will adjust with practice. Trust that the path to the beauty and power of XC ski classic technique lies in finding

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ski while drawing the other ski back behind you as straight as possible. With the leg you are standing on, flex your ankle and knee very slightly and go as far forward with your weighted hip as you can. Keep your hip and butt high (not sitting) as you go forward! That position - called a "high hip forward" position - is the ideal position for getting maximum drive out of the classic motion. Although it generally takes awhile before skiers can confidently execute this ideal position, knowing what you are after feels like when you start out can be very useful. When practicing your slide and glide always try to "lead" the motion with this high hip position.

Once you feel like you have a feeling for the motion with your legs you will want to add your poles to the mix. The key here is--do what comes natural! You know how to walk and run opposite leg-opposite arm and that is exactly what you do in skiing. If you think about the motion too much you'll screw it up...so don't think! When planting your poles try to keep your arms at shoulder-width spacing and with the pole angled down towards your feet. Your arm should have a slight bend to it when planting, then should go down smoothly past your hips and extend fully out the back. Try not to cross in front of your body with your poles (wasted effort). What you are ultimately after is a pendulum motion with a relaxed follow-through and recovery.

Double Pole

When the terrain or snow conditions make the diagonal stride too slow to be efficient you can switch to the double pole motion. Typically used on slightly downhill sections and fast flat sections, the double pole simply involves reaching ahead with both arms, planting both poles simultaneously, and poling through with both arms while keeping your legs in a relaxed, but fairly straight position. The poles should plant in the snow angled back towards your toes and with shoulder-width spacing.

When reaching forward and planting the poles, your arms should have the same position as a single forward arm in diagonal stride...that is, a slight bend to them when planting a comfortable "reach" in front of you, then pushing down smoothly past your hips and extend fully out the back. Try to make sure that you help your arms by compressing at your stomach (ever so slightly) and leaning forward at the waist. This adds power and saves arm energy.

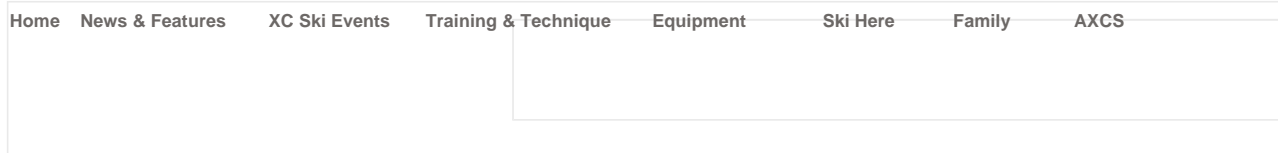
The legs will remain fairly uninvolved in a basic double pole but as you become more comfortable with the motion, you will find yourself adding power with a subtle forward push with your hips each time you reach forward with the poles. Be sure to avoid "sitting down" when you push thru with the poles (very common error).

Since the double pole is done on faster snow or terrain, the motion will be repeated many times at varying rates of speed and with varying amounts of glide. When you feel your momentum slow and the double pole feels more difficult to complete, switch back to the diagonal stride or incorporate the more challenging double pole with a kick.

Double Pole with a Kick

This is an intermediate skill some beginners can use on flat sections or gradual uphill. The best way to think of this motion is as a gear (much like a bicycle) that lies between the diagonal stride and double pole. You begin with the same reach forward with both arms as in the double pole. However...instead of remaining quiet with your legs...when you reach forward in this technique, you add a small drive forward onto one leg. This forward drive onto one leg should look precisely the same as the position your leg is in when you drive forward onto one leg in the diagonal stride. The "back" leg should be fully extended (yet relaxed) out the back.

Once you are fully extended forward (both arms and one driving leg), you pull thru with



does take a fair amount of strength, balance, and agility to do correctly. Having a professional instructor work with you on this skill is essential.

Diagonal Climbing

Just like on flatter terrain, the diagonal stride will work just fine on most uphill that you will encounter on beginner trails and many hills on intermediate trails.

The keys to successful diagonal climbing are:

- a. Keep using a good rhythm, but shorten your strides slightly as the grade increases. The steeper the hill, the shorter your stride should be.
- b. Adjust your upper body position relative to the hill by ever-so-slightly raising your head and chest. It is common to bend over too much on uphill so it'll be hard to stand "too" straight.
- c. Remember the high hip forward position from the flats! That is exactly the same position you want to be in on uphill as well. The hard part about diagonal stride climbing is that beginners (and many advanced skiers!) tend to "sit" too much with the mid-section when they try to straighten up.

Beginners can struggle a bit with the nuances of diagonal climbing so even if you have had plenty of success with other techniques, it is well worth taking a professional lesson or attending a camp/clinic that can perfect your climbing skills.

Herringbone

Eventually the terrain will be too steep for the diagonal stride and you will want to switch to the herringbone. Derived from the Scandinavian love of fish (true story), the herringbone is primarily a walking uphill technique for beginners with the skis spread in an open "V" position.

To do this motion, simply widen your skis into an open V and walk. If you came into the uphill in tracks, you are best off stepping out of the tracks just before you need to open up into the herringbone.

As the pitch increases or the snow becomes firmer, you will want to use the entire inside edge of your ski as a claw to add grip. On firm snow this will mean really planting the inside edge pretty hard each time you take a step. A useful image is a angled "karate chop" with your skis that allows them to bite into the snow. Skilled skiers are able to do this motion very quickly and with a light hopping motion to clear steep sections. Lesser skilled skiers may just use the motion to "hike" uphill but can usually climb just about anything on a trail system with the herringbone technique.

Note that since you are generally on very steep hills, herringbone can take a lot of energy if you do it too fast. Pace yourself!



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