Modern Double Pole Technique Simplified Transcript

00:03

I’m Chris Jeffries. I’m one of the coaches at the Alberta World Cup Academy. Today we’ve been doing some basic double pole work with two of the girls on our team, Emily Nishikawa and Dahria Beatty.

We’re trying to really simplify the concept of what double poling is. I think there’s a lot of confusion out there and people try to complicate it way too much. I think it can be simplified into a couple of basic principles.

It’s probably the technique that has changed the most over the last ten years. Upper body strength and double poling efficiency have have really changed how the sport is skied and raced now.

You have classic races where people just double pole and it’s just because of how strong they are. The average athlete is taller and bigger and is carrying far more muscle mass in their shoulders than they ever did before. All these things have really changed where double poling has gone in the sport.

As you’ll see in some of the drills and what the girls will talk about as being important to skiing and double poling.

01:13

The number one thing is your starting position, always repeating the same starting position. That’s a high hand position. Hand, face, hand is a good visual for it. And being in the right body position. That’s weight on the balls of the feet and shoulders forward.

People always get really caught up in how far their hips are forward, but if you’re on the balls of your feet, shoulders are forward and your poles are here, your hips are naturally going to be just ahead of your heels. You don’t even have to think about it.

That’s one of the big principles - always getting back to that start position, whether your doing a sprint-style, or a long distance, or climbing. Being able to be here (min 1:56). The depth of which you go in your double poling motion is affected (determined) by your ability to come back up and start here without losing your speed.

2:11

If you’re in a sprint mode, where you want to have high impulse rate (high frequency), then you have to finish a little bit shorter in order to be bale to come back here.

If you’re on a long, gradual downhill section where you have lots of speed and you’re able to relax, everything can finish a lot further behind you, because you have the time for the shoulders to come up first, as the hands come up and build that energy to get back to your start position.
03:05
When you come up, you come high, with your weight on the balls of your feet, and your shoulders are forward, you’re automatically in the perfect position. From there, it’s just a super solid, quick, snappy impulse, then allow everything to fall forward.

Still be kind of weighted on the balls of your feet. You’re not forward like this (minute 3:26). The heels are going to be kind of on the binding plate a little bit, but it’s weightless. You could almost slide a business card under your heels.

3:36
Watch when Emily comes up. She’s really good at getting everything up here. Then, because she has that height, she’s going to have that body weight to work through the pole without necessarily go deeper with the legs. Because all you really do is take the pressure off the poles when you go deeper.

If you stay strong in your glutes, you’ll be able to maintain a bit more of that structure and the strength and power will be going to the poles more than absorbing into the legs.

4:12
A really good way of playing around with tis is to just keeping a really high tempo. Here I’m able to use my body weight really well. Then you can start to get a little bit longer.

I’m not really doing anything more than just getting my body weight into a high, forward position and bracing myself structurally.

4:46
The double poling motion is something that lends itself to being very mechanical. Mechanical means very rigid. It has to be rigid, (but also loose and fluid) - this is true for all ski technique. All ski technique has to be stiff and rigid, but at the same time having the ability to (Chris lands his poles, showing that you also have to be relaxed). It's like a golf swing - it has to be loose and fluid.

5:11
[Kim] I think you have to create ways for people to discover it. You can't really teach it. You just kind of give them some exercise that might help them discover the feelings.

5:20
[Chris] That's why I've moved away a lot from key words like “hips forward”. From “elbows out”. Because if the elbows are out, they tend to keep the elbows out all the way through. Again, that's a very mechanical position.

But, if you watch them. The elbows start out, but they kind of come in again. Their elbows don't stay out as much as you might like to think.
And, as they go faster on flatter terrain, where they’re going to be finishing their stroke further down, the elbows will come in even more.

So that’s the second thing. And the third one is the abdominal crunch. Because then it’s very mechanical. You get very stiff and locked out in the legs.

[Kim] This is why you don’t say the abdominal crunch now.

[Chris] Yeah.

So, one of the best pieces of advice I got was from Devon Kershaw [Canadian World Cup Team member] about classic technique. And it was super simple. It was “Skiers have bad posture.”

So, in diagonal stride, you have to be rounded through the shoulders. In double pole, you have to be rounded from the shoulders.

If you try to pull everything back, all of a sudden your back is hyperextended, your ass sticks out and you loose that effective chain.

You have to hinge the hips underneath you a little bit. In order to be able to do that, you want to have the shoulders rounded.

[Emily] If you’re doing an acceleration technique, like off a startline of a race, on in the final hundred metres, it’s a more powerful technique. It’s a more powerful technique, but the principles are still the same as if you were doing a longer race like a loppet or relaxing behind someone in the draft.

All the principles are the same: you want a good starting position, a good forward body position, but if you’re sprinting you’re applying more power, basically. It’s just a little more aggressive and more dynamic.

So you’re up here and you’re really putting a lot of power down because you’re sprinting. But if you’re in a loppet or a distance race you’re a little more relaxed, but you still you a good initial impulse, but you can relax a bit more through here. And then start again.

So in sprinting the turnover’s higher and it’s a little more dynamic. And in distance it’s just a little more relaxed.
Because all the power is coming from up here, in sprinting you want to keep your poling up in the front. You don’t want to go back here.

That being said, sometimes in a distance race it is OK to go back. Because this phase of the poling motion is relaxing. You’re muscles are relaxed. You want to allow a little bit more of that if you’re doing, say 50 km. (Emily gestures with her poles swinging behind her to show more follow through.)

8:59
[Chris] …the arms. So you always want to be able to extend the arm when you finish. In a sprint that extension’s going to come here. (Chris gestures with hands extended down near his knees.) But my arm is still extended but I’m going to be able to get that release which is going to me a relaxation. Because you don’t want to always be tense.

And by not finishing past the hips, it allows them time to get the hands, hips and shoulders up really well. So the recovery of the shoulders hips and hands isn’t going to be timed the same.

9:44
And when you have lots of speed, you don’t ned to have everything times. You have the time to let the shoulders come up first, and then the hands will slowly follow back up and build that energy back up to the top again.

9:56
[Kim] So if you’re extending your hands straight down then that old thing about having a straight line with your poles and your arms doesn't hold true.

[Chris] No. (He agrees.)

10:11
[Emily] …you are flexing from the knees and ankles. You keep this body position, but then you drop. Everything is going straight down because you want your poles to go straight down into he snow.

It’s not a knee bend. It’s not a sit. It’s everything together. You’re maintaining good soli body position. Your core is solid. It’s not collapsing. Your arms aren’t collapsing in. Everthing’s solid and you just drop everything into he snow.

And that’s the initiation. That’s all it is.

10:50
[Kim] It seems like it would be easy to drop your weight down, but not translate that into forward movement.

[Emily] Yes. You need to be strong and maintain that integrity s nothing’s collapsing. Like your hips aren’t collapsing. If you’re not squeezing through your gluten and your core you will get that kind of floppy feeling. That’s not translating into forward motion.
[Kim] Or not even floppy, but you’re super stiff and you just hit the ground and all the energy just kind of jolts through you.

11:40
[Chris] It’s about that balance between being stiff and loose. As a skier you need the ability to do both.

If you’re too stiff you’re not going to be able to translate that power well, and if you’re too loose it’s the same thing. You need to have a fine balance.

12:00
It comes from the glutes, the abdominals and the back and shoulders. Those are the key areas. When you see skiers dropping down here, they’re taking a lot of the weight through their quads, hip flexors, and even through their lower leg. You want to take as much of the load through these big core muscles groups as possible.

12:25
This is something you can actually practice on the ground really well. If you’re forward you need to be able to catch yourself. Just catching yourself with your poles isn’t necessarily good if you’re trying to have that really strong snappy impulse. So it’s almost like the feet are coming back underneath you a little bit here. [Chris demonstrates “scootching” movement with feet.]

12:54
There’s a lot of room for personality within ski technique. If you watch the best skiers in the world, they’ll look very different at fast speed, but as soon as you break it down and slow it down, they do the key things well.

13:09
If you improve your double poling it will have a direct impact on your skating, on your diagonal stride, because it’s the core position of all your techniques. The more you can improve that, the more you will improve all your techniques.

The most important thing you can do to improve is to push the envelope as to where you use double pole. Push your boundaries. Put yourself into positions and situations where you’re a little uncomfortable.

Chose a grade, chose a difficult grade of hill and make yourself double pole up that a few times, always keying in on being front and forward.

Try to make it as easy as possible. The first time you do it, it’s going to be really hard, but the goal is that over the course of a year or two is to make that hill even easier.

If you can do that, and always remember to get back to your good start position whenever you’re double poling, you’ll just continually build that technique and build that efficiency. And building efficiency in skiing is what we’re all after because we want to make skiing, which is a really hard sport, easier.