

## An injury-free ski season starts in the gym

Alyssa Ages

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Ski season means long-winding runs, the adrenalin rush of a steep pitch and (hopefully) carving first tracks across an open trail. But embracing the sport can often come with some unwanted burdens, too, such as muscle soreness, falls and injury.

A preseason training plan that includes strength, agility and mobility work can increase a skier's chances of making it through the season injury-free.

"A big part of the sport is just learning to use your body the best you can," says Britt Richardson, a giant slalom racer on the Canadian alpine ski team.

The Canmore, Alta., native and her teammates train "twice a day, every day" starting in the summer but most skiers can get ready in four-to-eight weeks with two strength sessions a week, performing some of same exercises the pros do.

In both pro and amateur downhill skiers, knee trauma, specifically injuries to the ligaments of the knee, are by far the most prevalent, says physiotherapist Lynne Richardson (who also happens to be Britt's mom). Snowboarders tend to come in with upper-body injuries, such as dislocated shoulders, broken wrists, broken clavicles and spinal injuries.

One way to avoid fall-related issues? Stay upright. To do that, you need to have a strong core, which translates to greater control and stability. "If you have a weak core, you'll be thrown all over the place," Lynne Richardson says. Having a strong core helps you stay centred so you can better manage obstacles such as moguls, bumps and ice.

Making time for mobility work for your hips, knees and shoulders can go a long way toward injury prevention as well, says Elias Jonsson, the Canadian alpine ski team's women's assistant coach who works on strength and conditioning with the team. Spending time on ankle mobility can also help with balance and improve your ability to control your speed and carve your turns with greater precision.

### **Build strength but don't neglect dynamic exercises**

To withstand the demands of skiing you need good muscular strength and endurance, particularly in the lower body. The quads, hamstrings, lower back and glutes are some of the primary muscles worked when skiing, but Jonsson says the outer and inner thigh stabilizer muscles (abductors and adductors respectively) need some attention, too. The abductors help you steer into turns, while the adductors keep your skis from sliding too far apart. He recommends moves such as [the Copenhagen plank](#) with lower leg lifts and banded planks with upper leg lifts.

Britt Richardson suggests focusing on single-leg and lateral movements such as step-ups and side lunges, which prepare the quads and glutes of each leg to take the bulk of the body's weight with each turn. Her team also focuses on eccentric resistance training or the lowering phase of an exercise, such as the descent into the bottom of a squat or returning the weight to the floor in a deadlift.

But the ability to use that strength while in motion is crucial, which is why they also do plyometric (jumping) work, both with and without weights.

“Skiing is very unpredictable and very, very dynamic,” says Lynne Richardson. “So if your training is always controlled, it doesn’t really set you up for success for someone skiing in front of you or a fallen tree or a mogul or a patch of ice.”

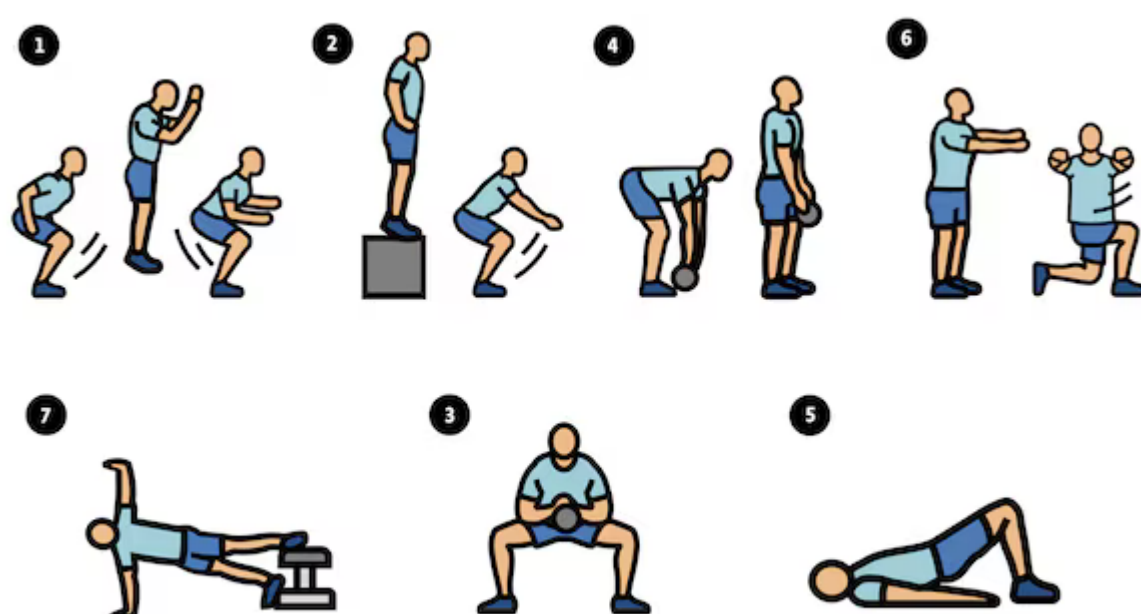
## How often should you train?

All of our experts suggested beginning your training between four and eight weeks before your first time on the slopes. Logging a minimum of two days of strength training is great, and adding in a day or two of cardio is even better.

When ski season arrives, Jonsson recommends planning your lifting days around your ski days. To maximize recovery time, avoid scheduling strength sessions the day before you ski.

Most importantly, be consistent with your training. “If you’re all of a sudden hitting the gym a month before skiing, trying to cram in all that work, that’s where you can get injured,” Britt Richardson says.

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## A full-body workout for skiers and snowboarders

Jonsson recommends planning one day with heavier weights, doing six to eight reps of each exercise for three or four sets. The second day can focus on muscular endurance, using lighter weights and shooting for 12-15 reps. Aim for three sets of each exercise.

### 1. Lateral ski jumps

Stand with feet hip-width apart and a slight bend in your knees and hips. Engage your core and jump to your left, landing on both feet with knees and hips bent, in a skier position. Immediately jump to the right. Repeat for 30 seconds.

### 2. Box jump downs

Stand with feet hip-width apart on top of a box or bench. Bend the knees slightly to create tension, then jump down from the top of the box to the floor, landing in a high squat position. Turn around, step back up onto the box and repeat.

### 3. Goblet squats

With both hands, hold a dumbbell by one head or a kettlebell by the handle, at chest height. Stand with feet shoulder-width apart. Keeping your chest high, slowly lower into a squat for a three-second count. Pause at the bottom for two seconds, then rise to standing.

### 4. Kettlebell deadlift

Stand with your feet shoulder-width apart and a kettlebell on the floor between your feet, in line with your ankle bones. Hinge at the hips, maintaining a flat back, and grip the kettlebell handle with both hands. Engage your core, press your feet into the floor and rise to standing. Pause, then lower the kettlebell back to the ground (count to three as you lower).

### 5. Glute bridges

Do this with or without a weight. Lie flat on your back, knees bent, feet directly under your knees and flat on the floor. If you're using a weight, hold it against your hips. Squeeze your glutes and lift your hips high. Pause for two seconds at the top, squeezing your glutes, then lower slowly back to the floor.

## 6. Forward lunge with rotation

Do this with or without a weight. If you're using a weight, hold a dumbbell or a kettlebell to your chest. Stand with feet hip-width apart. Engage your core for balance and take a big step forward with your right leg, lowering into a lunge, your legs bent at two 90-degree angles. As you land in the lunge, rotate your torso toward to the right and then to the left and then back to centre. Come back to your starting position and repeat on the other leg.

## 7. Copenhagen plank with leg raises

Begin in a side-plank position with your top foot on a bench (or a chair) and bottom foot on the floor. Engage your core and lift your hips off the ground, bringing your bottom leg off the ground with you, so your body forms a straight line from head to toe. Holding that position, lower your bottom leg to the floor, then lift it back up. Repeat all reps on this side before switching sides.

*[Alyssa Ages](#) is a journalist and the author of *Secrets of Giants: A Journey to Uncover the True Meaning of Strength*. She is also a strongman competitor and endurance athlete, as well as a former personal trainer and group fitness instructor.*

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