



Ski Conditioning

Get ready for the slopes by starting your pre-season conditioning program 8-12 weeks before the first snow of the season. If that first snow is only a few weeks away, **GET STARTED NOW!** A well-trained individual will be able to perform better, ski more safely and enjoy themselves during a day of long runs and lift lines.

STAMINA/ENDURANCE

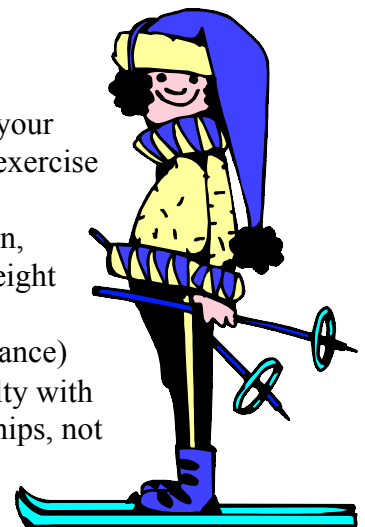
Great choices for cardiovascular conditioning include: bicycling, stair climbing, elliptical trainer, step/low-impact aerobics, slide board training, running a hilly course, rollerblading and rowing. Basketball, squash and racquetball are good off-season sports because their lateral/cutting action will train your muscles for the side-to-side agility involved in skiing. Cardiovascular exercise should be done 3-4 times per week for at least 30 minutes at a vigorous pace. If you're just getting started, begin with a moderate pace for 10-15 minutes and add 1 or 2 minutes each week. After you've built up to a 30-minute workout, gradually increase the intensity of your exercise. Target heart rate is one way of monitoring your exercise intensity. Try to stay within 70-85% of your maximum heart rate (220 – age). Don't forget to warm-up and cool down at an easy pace for about 5-10 minutes at the beginning and end of your workout.

STRENGTH

Your strength training program should include exercises that improve knee stability and strengthen the muscles used in skiing. These muscles include your quads (front thigh), hamstrings (back thigh), glutei (buttocks), hip abductors and adductors (outer & inner hip), abdominals, back extensors (low back) and muscles on the inside and outside of your foot and ankle. Strengthening exercises should be done 2-3 non-consecutive days per week, 1-3 sets, 8-12 repetitions or to muscle fatigue. Exercises for the abs and back should have an endurance focus and be performed for 30 seconds to 2 minutes.

Consider integrating the following exercises into your training regimen:

- Squats with free weights, leg press machine or own body weight
- One-legged squats: 45 - 90 degrees knee flexion
- Standing Lunges (both forward & diagonal). Proper form is critical: Keep your front knee over your foot. If lunges cause you knee pain, discontinue this exercise or have a physical therapist review your technique.
- Balance on one leg with knee slightly bent and move the other leg out and in, back and forth. Or stand in ski position with knees flexed and shift your weight from side to side, balancing for a while on each leg.
- Side to side steps, hops or jumps (elastic band and waist belt increase resistance)
- Standing or lying leg lifts (out to the side and backwards). Increase difficulty with elastic band or leg weights. Keep your stomach tight and move from your hips, not your waist. Also hip abductor/adductor machine
- Calf raises on a step
- Core exercises: transversus, upper and lower abdominals
- Back extensions (many variations including: lie on stomach, lift shoulders, hold for count of 3)



FLEXIBILITY

Good flexibility will allow you to assume a better, lower ski position and may help prevent muscle injury. Important muscle groups for skiers include the quads and hip flexors (front thigh), hamstrings (back thigh), hip adductors (inside thigh), gluteals (buttocks), calves (particularly the soleus since the knee is usually bent), back extensors (low back), back rotators, foot and ankle stabilizers (inside and outside shin).

A knowledgeable exercise professional can teach you how to perform stretches for each of these areas. Assume the stretch position (feel tension, not pain) and hold for about 30 seconds. Repeat 1-3 times. Stretch daily or as part of your workout. Stretch at the end of a day of skiing or in the hot tub!

IMPORTANT SAFETY TIPS

1. Pay attention to the skiers and boarders on the mountain around you. Avoid wild or “out of control” skiers just like you would avoid an erratic or speeding driver on the highway.
2. Work with a knowledgeable ski professional to select skis and set bindings that are appropriate for your size, weight and skill level. Have your skis, boots and bindings checked each year at the start of the season and half way through the season. *Check your bindings in the lift line to make sure they release using your own body weight.*
3. Make sure you eat a good dinner the night before and a hearty breakfast before you go skiing. If your muscles haven’t been fueled properly, you’re more likely to get fatigued and injure yourself late in the day. Stay well hydrated by drinking plenty of non-caffeinated, non-alcoholic beverages. All that coffee and beer isn’t as helpful as juice, water, soup or herbal tea.
4. Consider taking lessons to increase your skill level or to make the crossover between skiing and snowboarding. Ski lots of days to improve your control and balance. Remember to keep your hips above your knees, your feet together, and arms forward.
5. Know your own limitations and ability. Start the day by skiing on trails with which you are comfortable. This will allow you to warm up safely and avoid injury related to loss of control. Test your ability on new runs slowly and gradually as your skills improve. Don’t feel pushed to ski on a run that is beyond your ability just because your friends are. Be aware of the ski conditions. The ability to ski a particular run is not only based on your ability, but the condition of the trail...ice, powder, slush...
6. If you fall, keep your knees FLEXED. Don’t try to get up until you’ve stopped sliding. When you’re down – STAY DOWN!
7. Take rest breaks and, if you’re feeling tired, head for the ski lodge. “Just one more run” may be the run you regret. Injuries are more likely to occur when you are cold, tired and your reaction time is slowed. Don’t drink alcohol and ski as this will also slow your reaction time.
8. Skiing is a vigorous activity that typically takes place at a high altitude. This means that your body and muscles will fatigue more quickly because the air is “thinner” and drier. Drink plenty of fluids, fuel your muscles with lots of carbohydrates, and pace yourself.
9. Consider the use of protective gear! We all wear helmets (or should wear helmets) when we road bike, mountain bike or roller blade. Why should skiing or snowboarding be the exception to the rule? While knee and shoulder injuries can be painful and debilitating, head injuries can be fatal. Consider the use of wrist guards designed for snowboarding, especially if you are learning that sport at an older age!



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