Fifty Minutes to Winter Fitness

By Dr. Paul Attalla

In today's busy corporate world it is becoming more and more difficult to find the time for personal fitness. Often however, it is not a lack of time that prevents us from becoming physically fit, rather it's a misunderstanding of the definition of personal fitness. Many people have the misconception that personal fitness is associated with weight lifting and jogging. This is incorrect. Beyond the basic level of fitness needed to reduce the risk of disease processes, personal fitness can be determined as an individualized measurement of ones physical ability to enjoy life, it is not a measure of ones ability to lift heavy weight or run long distances. If you plan on heading to the slopes this winter you should begin a personal fitness program to help you get the most enjoyment out of the winter months. With the ski and snowboarding season quickly approaching there is no better time than now to begin a fitness program in the comfort of your own home. Whether you are a skier or a snowboarder, this simple 50 minute fitness program has been designed to increase strength, stamina, flexibility and balance. These exercises and stretches have been specifically selected and modified to help you meet the intense fitness demands of skiing and riding.

Additionally these exercises are intended to help prevent season ending injuries that are far too common to both sports. By moving through 10 circuit exercises in a short period of time, you will maintain an elevated heart rate while performing a sequence of aerobic, anaerobic and balance drills. The stretching exercises are intended to increase flexibility, improve balance and decrease the incidence of on hill injury. The overall goal of this fitness program is to help riders and skiers get the most enjoyment out of the winter by improving upon their present fitness level. Here is how to make the most of it.

The entire routine can be broken down into five segments:

1) 5 minute warm-up
2) 12 minute circuit training (first cycle)
3) 10 minute group A stretching
4) 12 minute repeat circuit training (second cycle)
5) 11 minute group B stretching/cool down

After a five minute warm-up jog or bicycle, immediately begin the exercises in order. Preset the timer on your watch to beep every minute (With the Timex Iron Man and Triathlon style watches set the timer initialed CR for 1 minute). Follow the exact order and instruction of the circuit exercises. After the first 12 minute circuit training cycle is performed, immediately move into Group A stretching. This sequence of stretching will take you 10 minutes. After Group A stretching is complete move back into the circuit training, repeating the same circuit training drills as before. Begin Group B stretches when the second cycle of circuit training is complete.

If you have not exercised steadily for the last 6 months, start your program with one circuit training cycle followed by all of the stretches. As your fitness level improves, work up to two circuit training cycles. When you can finish the two circuits easily, add time to circuit drills in 30 second intervals. **Do not skip the stretches!** They are even more important than the circuit training with regards to injury prevention.

Dr. P. Attalla operates Fernie Chiropractic in Fernie, B.C. Besides being a Doctor of Chiropractic Dr. Attalla has a degree in Exercise Science and has an extensive background in skiing.

1) FIVE MINUTE WARM-UP

2) CIRCUIT TRAINING

#1 SQUATS

1 minute

Start Position: Look straight ahead standing with feet shoulder width apart. Keep your weight distributed evenly over both feet with heels flat and your back straight.

Skiers: Arms out in front at an angle just less than 90 degrees with a slight bend in the elbows.

Riders: Arms out from your sides at a 90 degree angle.

Action: Inhale as you **slowly** sink into the squat until your knees bend to a 90 degree angle (do not go past 90-degrees). Exhale and slowly push back up from your heels.

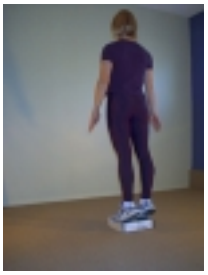
Easier: Squat until knees bend only to 45 degrees.

Harder: Upon exhaling push back up with enough force to leave the ground 20-30 cm (power should only come from the legs with no bending at the waist or swinging of the arms). Land on balls of the feet with knees bent. Do not rush into the next squat upon landing, take a few seconds to regain the start position.

#2 CALF RAISES

1 minute

Start Position: Stand with your feet shoulder-width apart on the edge of a step. Keep your hands out to the sides and balance on the balls of your feet. Throughout the exercise stay focused on a spot 3 meters in front of you; this will help in maintaining your balance.



Action: Exhale while you slowly push your heels up until the calf muscles are fully contracted. Then inhale as you gradually lower your heels over the edge until a gentle stretch is felt along both calves. Keep in mind that balance is a key component of this exercise.

Easier: Do the calf raises on level ground.

Harder: Keep your hands behind your head and point your elbows straight out to the sides.

#3 LUNGES

2 minutes

Start Position: Keep your head up, back straight and feet shoulder width apart.

Skiers: Arms out in front at an angle just less than 90 degrees with a slight bend in the elbows.

Riders: Arms out from the sides at a 90 degree angle.

Action: Inhale as you step forward a comfortable distance with your right leg until your upper right thigh is almost parallel with the floor. Keep the left leg as straight as possible. Exhale as you step back to the starting position.

Easier: Step forward a shorter distance.

Harder: Step forward as far as possible.

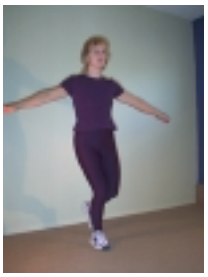
#4 RIGHT LEG STAND

1 minute

Start Position: Stand erect with feet shoulder width apart. Throughout the exercise stay focused on a spot 3 meters in front of you; this will help in maintaining your balance.

Skiers: Arms out in front at an angle slightly less than 90 degrees with a slight bend in the elbows.

Riders: Arms out from the sides at a 90 degree angle.



Action: Place all of your weight on the right leg by lifting your left foot off the ground and slightly back. The right knee should be bent 45 degrees. The most important aspect of this exercise is to maintain your balance and achieve a modest rest.

Easier: Bend right knee less than 45 degrees.

Harder: Close eyes.

#5 PUSH-UPS

1 minute

Start Position #1: Place your hands slightly more than shoulder width apart. Elbows should be slightly bent. Back should be straight with head slightly raised looking 3 meters ahead.
Start Position #2: Place fists in a thumb forward direction below shoulders. Elbows should be slightly bent. Back should be straight with head slightly raised looking 3 meters ahead.
Start Position #3 Place hands directly below your chest with index fingers and thumbs touching. Elbows should be slightly bent. Back should be straight with head slightly raised looking 3 meters ahead.

Start Position #1

Start Position #2

Start Position #3

Action: Inhale while bending evenly at the elbows, slowly lower your chest 2-4 cm from the ground. Exhale as you return to the start position. Do not lock your elbows at the top of the push-up. Repeat this action five times for each of the three start positions. Keep rotating through the 3 different push-ups until the minute has past.

Easier: Do push-ups with knees on ground. Another even easier alternative is to do vertical push-ups with feet a yard from the wall.
Harder: Place feet on an object that is 30-40 cm above level of the hands.

#6 DIPS

1 minute

Start Position: Rest your hands shoulder width apart on a couch or bench behind you and walk your feet out until your legs are extended straight out in front of your body.

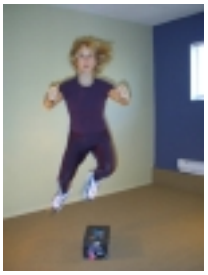
Action: Keeping your back close to the bench inhale as you lower your body until your elbows just pass 90 degrees. Concentrate on keeping the elbows pointed straight back. Push back up to the start position as you exhale. Do not lock your elbows at the top of the move.

Easier: Move feet in so knees are at 90 degrees and feet rest flat on the ground.

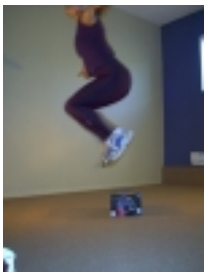
#7 JUMPS

2 minute

Start Position: Keep your head up, back straight and feet shoulder width apart.
Skiers: Arms out in front at an angle just less than 90 degrees with a slight bend in the elbows.
Riders: Arms out from your sides at a 90 degree angle.


The Skier

Action for skiers: Using both legs equally for power, jump sideways 50 cm, with enough height to clear a shoe box. Without hesitating jump back to the original location. Continue this side to side sequence for the entire 2 min.


The Rider

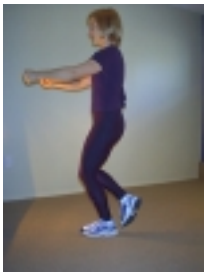
Action for snowboarders: Using both legs equally for power, jump forward 50 cm, with enough height to clear a shoe box. Without hesitating jump back to the original location. Continue this front to back sequence for the entire 2 min.

Easier: Jump a lesser height and distance.
Harder: Jump over an object that is no taller than your knees. Make sure that this object will **not** cause you to fall if you catch your toes on it; we suggest stacking shoe boxes or loosely suspending a string.

#8 LEFT LEG STAND

1 minute

Start Position: Stand erect with feet shoulder width apart. Focusing on a spot 3 meters in front of you throughout the exercise. This will help in maintaining your balance.
Skiers: Arms out in front at an angle slightly less than 90 degrees with a slight bend in the elbows.
Riders: Arms out from your sides at 90 degrees.



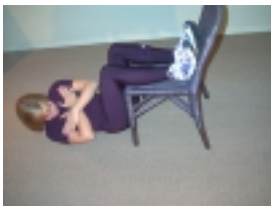
Action: Place all of your weight on the left leg by lifting your right foot off the ground and slightly back. The left knee should be bent 45 degrees.

Easier: Bend left knee less than 45 degrees.
Harder: Close eyes.

#9 SIT-UPS

1 minute

Start Position: Place your legs over a chair (knees at 90 degrees) and fold arms across your chest. Your chin should be slightly flexed forward and trunk should be tensed so that shoulders are elevated 3 cm off the floor. This is the starting position!



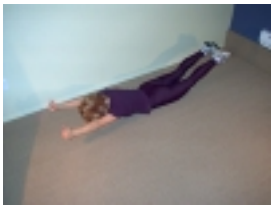
Action: Flex your trunk up and to the right side so that your left shoulder approaches your right knee. When the right shoulder is 6 cm off the ground and your left shoulder is 12 cm off the ground stop and hold this position for a brief moment. Return slowly to the start position immediately repeating the exercise to the left.

Easier: Flex trunk so that both shoulders approach both knees equally (no twist). Raise shoulders 6 cm off the floor and then return to the start position.
Harder: Keep knees in the 90 degree position without using the support of a chair. During the exercise attempt to suck your stomach in.

#10 Extensions

1 minute

Start Position: Lie face down on the floor with your legs extended. Keep your arms extended out in front with thumbs pointed up. With a straight neck contract your abdominal muscles to keep your spine in a neutral position.



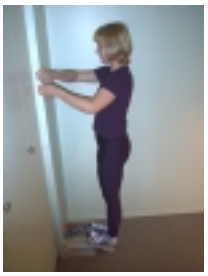
Action: Exhale as you slowly lift your legs and shoulders off the surface. Concentrate on contracting your butt muscles first and then the low back muscle second. Inhale as you relax to the start position. Make sure you release the contraction completely before starting the next one.

Easier: Lift the right arm and left leg (opposite arm and leg) at the same time, then alternate sides.
Harder: Alternate between pointing and flexing feet.

3) STRETCHING PROGRAM A

#1A CALF STRETCH

Hold 1 minute

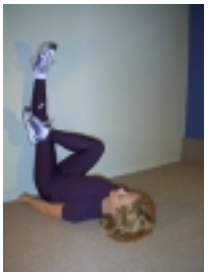


Start Position: Stand with the balls of both feet resting on a raised surface and the heels weight-bearing on the floor. You may use a phone book or stacks of wood to achieve a 3-5 cm elevation beneath the balls of your feet. Hold onto a structure in front of you; a door jam works well. Maintain a standing tall position (do not bend forward at the waist).

Action: Slowly pull your body forward with your arms until you feel a gentle stretch in the calf region (there should be no sensation of pulling behind the knee). Hold this position for 1 minute.

#2A BUTT STRETCH

Hold 1 minute for each leg



Step #1

Start Position: Lying flat on your back with your legs against a wall cross your right leg as illustrated. Both buttocks should be evenly against the wall.

Action: Keeping the left foot flat on the wall bend the left knee until you feel a stretch in the right buttocks and hip region. To further increase the stretch apply gentle pressure to the right knee. Hold this position for 1 minute, then switch sides.

Step #2

Easier: Place buttocks away from the wall. Allow the right knee to be closer to your chest.

#3A HAMSTRINGS

Hold 1 minute for each leg

Start Position: To isolate the right hamstring muscles begin in a proper sitting position, with the right leg either straight or slightly bent at the knee. Place the hands on the floor behind the pelvis, sit with your back straight. Bend the left leg just enough to allow the left leg to lie sideways as shown.

Action: Move the arms and upper body forward, maintaining a straight back. Tension should be felt in the back of the right upper leg, **not** behind the knee (if tension is felt behind your knee try pointing your toes down, or bending the right knee more). Hold this position for 1 minute, then switch legs.

#4A QUADS

Hold 1 minute for each leg

Start Position: Lying on your side as illustrated flex the right knee and hold the right leg (do not hold the foot). The body should be in a straight line.

Action: Find tension in the quadriceps by gently pulling the right leg back with your hand. Do **not** arch your low back or neck! Hold for 1 minute, then switch legs.

#5A PSOAS

Hold 1 minute

Start Position: Move your left leg forward until the knee of the left leg is directly over the ankle. Your right knee should be resting on the floor.

Action: Slowly sink your hips downward to create an easy stretch. Do not let the left knee go in front of your left toes. Hold for 1 minute, then switch sides.

#6A GROIN

Hold 1 minute for each leg

Start Position: In the seated position rest your back against the wall and place the heels together starting well away from the body. Allow the legs to fall to the side as illustrated.

Action: Bring the feet toward the pelvis a little at a time until a comfortable tension is felt. Place hands on knees to increase the stretch. Back should be kept straight at all times.

4) REPEAT CIRCUIT TRAINING DRILLS

5) STRETCHING PROGRAM B

#1B LOW BACK TWIST

Hold 1 minute for each side

Start Position: Lie on your back with your right leg flexed 90 degrees at the hip and 90 degrees at the knee. Allow the right leg to cross over your body. Thus, twisting the lower half of the body as shown in the illustration. Make sure that both shoulders stay in contact with the floor.

Action: Gently apply pressure with your left hand to the right knee. A comfortable stretch should be felt in the low back and hip region. Hold for 1 minute, then switch sides.

#2B EXTENSION STRETCH

Hold for 1 minute.

Step #1

Step #2

Start Position: Lie face down with flexed arms at your sides as shown in the illustration. Keep the body as long as possible with hands and elbows anchored throughout the sequence. Rest forehead on the floor to lengthen your neck.

Action: Move your head up and away to begin back arch. Very slowly press forearms on the floor to slowly raise upper body while shoulders move toward hips. Keep neck in a neutral position and hips on the floor. Do not tilt head back, or allow shoulders to move toward ears! A very gentle and comfortable stretch should be felt in the stomach area. Do not do this stretch if it causes back pain.

#3B WRIST FLEXORS

Hold for 1 minute

Start Position: In a standing position arms length from a wall place both hands against the wall at eye level with the finger tips pointed straight down. Elbows are bent and spine is straight.

Action: Slowly straighten your elbows, bend your knees and lean forward into the stretch. The tension should be felt mainly in the forearm area.

#4B SHOULDER

Hold 1 minute for each arm

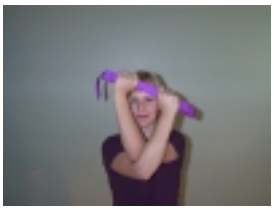
Start Position: Reach behind your head and down as far as you can with your right hand.

Action: Grab your right elbow with your left hand and gently apply pressure to the right elbow in a direction that moves the right hand further down the upper back. Do not drop your head forward or arch the low back. Hold for 1 minute and switch sides.

#5B SNAKE

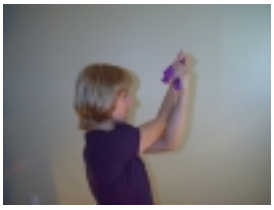
Hold 1 minute for each arm

Start Position: Cross one arm over the other. Bring your palms together if flexibility allows, or use a strap.



Step #1

Action: Move shoulders down while bringing your elbows up. Finally, move your hands away from your face to increase the intensity of the stretch. Hold for 1 minute and switch arms.

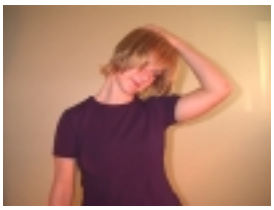


Step #2

#6B NECK

Hold 1 minute for each side

Start Position: Move your head from a central position with shoulders down and back, to the left side (left ear travels to the left shoulder). Your head should be slightly forward and turned to the left. Mild tension should be felt in the right neck area.



Action: With your left hand add gentle pressure to your head in the down and forward direction. Hold for a minute then switch sides.

#7B CAT

Repeat for 1 minute

Start Position: Begin this active stretch in the crawl position with hands shoulder width apart and knees hip width apart. Think of elongating your spine in a horizontal direction.

Action: As you exhale slowly allow the head and tail bone to relax in a downward direction while actively arching your mid-spine. Hold this position until you can exhale no more. As you begin to inhale slowly allow the mid-spine to gently arch downward. The head and tail bone should be slightly tilted up. Do not over arch your neck and low back! Hold until the lungs are filled and return to start position. Repeat sequence at a very slow pace for 1 minute.

Step #1

Step #2

Step #3

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*Do not perform the exercises and stretches if they cause discomfort or pain. These exercises and stretches are not intended to replace the advice of your medical doctor, chiropractor, physical therapist, massage therapist, personal trainer, or other healthcare provider. Consult your healthcare provider if you have an injury, are pregnant, are taking medication, have, or have had high blood pressure or a heart condition.