



UNIVERSITY OF CALGARY FACULTY OF KINESIOLOGY Sport Injury Prevention Research Centre

INJURY PREVENTION WARM-UP PROGRAM

AEROBIC COMPONENTS

1. FORWARD RUN – 2 laps around the gym. Progressing speed on the 2nd lap.



2. FORWARD RUNNING, WITH SKIPPING Knees aligned over the ankles, and lightly landing on toes.



3. FORWARD RUNNING, WITH KNEE LIFTS Landing lightly on the toes with correct alignment of the knee over the ankle on landing and not allowing the knee to buckle inward.



4. FORWARD RUNNING, WITH HEEL KICKS Alternating heels touch the buttocks, without flexing at the hip. Focus on landing lightly on the toes while keeping the knee aligned over the ankle.

9. JUMPING

1) Two-legged squat jumps

Soft landing on toes; take off and landing with hips and knees bent; maintaining knee over ankle alignment; avoiding knees buckling inward and gently engaging abdominal muscles.

2) Two-legged squat jumps over a line

Progression to this exercise includes moving forward/backward or side-to-side over a line. Avoiding the knees buckling inward or advancing too far forward.

3) Skate jump

Focus is on a soft landing on the toes; absorbing weight; lowering the heel to the floor and maintaining knee over ankle alignment while avoiding knees buckling inward. Repeat this exercise for 30 seconds to begin and progress to 1 minute.



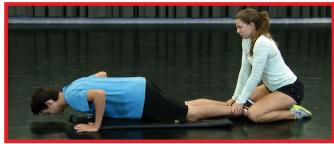




12. HAMSTRINGS

Maintain a straight line from head to knees. Slowly lower the body toward the mat, keeping the head, shoulders, hips, and knees in a straight line. Repeat 3 times and progress to 10 repetitions. Progress by achieving a position closer to the mat and holding it longer.





13. LUNGES

1) Static lunges

Bend the front knee to a 90-degree angle. Focus should be on a slow, controlled movement lowering into the lunge, ensuring correct knee alignment over the ankle; not allowing the knee to buckle inward.

2) Walking lunges

Progress to walking lunges, whereby from the lunge position, the back foot is brought directly from behind to the lead, and the front foot now lowers towards the ground and becomes the back foot.





5. SIDEWAY SHUFFLES Knees over the ankles, not allowing the knees to buckle inward.



6. ZIGZAG RUNNING

Knees are constantly bent; with correct alignment over the center of the ankle; not allowing the knee to fall inward. Progress to a faster plant and cut manoeuvre, ensuring the planting knee is aligned over the ankle. Further progression is to complete the shuffle (see component 5) in a zig zag formation.



7. FORWARD RUNNING WITH INTERMITTENT STOPS Stop in a controlled position, with the knees in the correct

alignment over the ankles.



8. SPEED RUNS

Running fast while maintaining correct running form and using the arms to support the movement.





STRENGTHENING COMPONENTS

10. PLANK

1) Plank on elbows

Maintain the body in a straight line from head to toes. Elbows are positioned under the shoulders and chin slightly tucked in. Hold for 20-30 seconds, and repeat 3 times. Progress to hold longer than 30 seconds.

2) Plank on hands

Progression to this exercise is to place hands on the floor under the shoulders instead of the elbows.

3) Plank with alternating leg lifts

Focus on correct plank position while a small leg lift is completed in a slow and controlled manner. Complete first while in plank on the elbows, then further progress to plank on the hands. Repeat 3 times on both legs initially, and progress to 10 repetitions.





11. SIDE PLANK

1) Side plank on elbows

Maintain the body in a straight line from head to toe. Elbow of the supporting forearm is positioned under the shoulder. Hold for 20-30 seconds, and repeat 3 times on each side of the body. Progress to hold longer than 30 seconds.

2) Side plank on hands

Place hand under the shoulder and raise the body, while maintaining a straight body position from head to toes. Further progression can be completed with slow and controlled leg lifts during side plank on elbows, then progress further to side plank on the hands.



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BALANCE COMPONENTS

14. WOBBLE BOARD:

1) Two foot balance

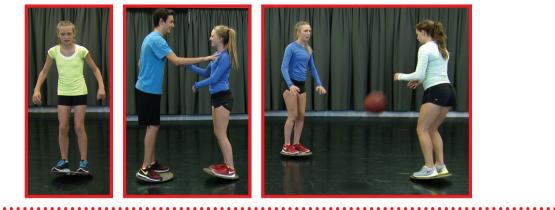
Stand with both feet on the wobble board. Body weight should be evenly distributed with the chest forward, hips back, and knees apart, slightly bent and aligned over the ankle. Maintain balance, with the wobble board surface flat, for as long as possible.

2) Two-foot balance with ball activities

Progress to two-foot balance with ball activities, such as tossing between partners or dribbling.

3) Two-foot balance with partner perturbations

Progress to a two-foot balance with partner perturbations by slightly nudging a partner with one or two fingers.



15. BALANCE PAD

1) Single leg balance

Stand on the balance pad on one foot, with the hips and knee slightly bent, hips behind the knee and the knee aligned over the center of the planted ankle. The raised knee is bent and the arms are initially used to support the maintenance of balance, but can progress to arms crossed.

2) Single leg balance with activities

Progress to a one-foot balance exercise with activities such as tossing, dribbling, or partner perturbations.

3) Single leg balance with eyes closed

Progress to an eyes closed, single-leg balance exercise.



