



PROGRAM FOR VIC SKI TEAM SKI TEAM

CORE STABILISATION #2

Trainer : Jean-Claude Legras



Introduction

The goal of core stabilization training should be to increase postural control, improve muscle length-tension relationship (LTR) and improve intrinsic stabilization of the lumbo-pelvic-hip complex to allow for the expression of functional strength. This phase of training involves gearing the acute training variables toward STRENGTH-ENDURANCE ADAPTATIONS: REPS: 20-25 SETS: 2-3 INTENSITY: 50-70% VOLUME: 36-75 REP TEMPO: 3/2/1 (eccentric/isometric/concentric) REST INTERVAL: 30-60 seconds

Warm Up

Always start by foam rolling the key areas, follow with static stretching at the end of the session.

Cardio Program

Activity	Intensity	Duration	Comments
Walking	60/79% HR Max or 6-7 R.P.E.	10-15 minutes	Perform cardio activity AFTER weight training.

Summary Of Program

Activity	Type	Sets	Reps	Duration	Tempo	Intensity	Rest
Lat - Kneeling with Stability Ball	Flexibility	1-2	20	60 sec	slow	99%	0
Lower Body Twist: Supine on Stability Ball	Exercise	1-2	20	60 sec	slow	99%	0
Hop with Stabilization - Frontal Plane (Transverse)	Exercise	1-2	20	60 sec	slow	99%	0
Bridge on Floor	Exercise	1-2	20	60 sec	slow	99%	0
Abdominal - full sit-up on stability ball (Progression 1 - medicine ball)	Exercise	1-2	20	60 sec	slow	99%	0
Cobra - Floor	Exercise	1-2	20	60 sec	slow	99%	0

Side Iso-abs with Crunch	Exercise	1-2	20	60 sec	slow	99%	0
Side Iso-abs with Frontal Plane Movement	Exercise	1-2	20	60 sec	slow	99%	0
Squat - 1 Leg	Exercise	1-2	20	60 sec	slow	99%	0
Push-Up - Scorpion	Exercise	1-2	20	60 sec	slow	99%	0
Lat Pull - Rolling on Stability Ball (Progression 1 - 1 Arm)	Exercise	1-2	20	60 sec	slow	99%	0
Plank - Stability Ball with Overhead Press	Exercise	1-2	20	60 sec	slow	99%	0
Bridge - Hamstring Curl w/Feet on Stability Ball	Exercise	1-2	20	60 sec	slow	99%	0
1 Leg	Exercise						

Balance Reach							
One leg balance with arm drives (in all directions)	Exercise						

Cool Down

The purpose of the cool-down is to slowly decrease the heart rate and overall metabolism, both of which have been elevated during the exercise session. This helps prevent any sudden pooling of blood in the veins and ensures adequate circulation to the muscles, heart, and brain; as well as preventing delayed muscle stiffness, soreness, and reducing any tendency toward post-exercise dizziness or fainting. Same stretches as warm-up.

PROGRAM EXERCISES

LAT - KNEELING WITH STABILITY BALL

Reps: 20 | Sets: 1-2 | Intensity: 99% | Tempo: slow | Rest: 0 |

Duration: 60 sec

[VIEW VIDEO](#)

Preparation :

- Position client in kneeling position with one arm

on stability ball as pictured.

Movement :

- > Turn palm up (externally rotate the shoulder), push the low back up (lumbar flexion).
- > When first resistance barrier is felt, hold for 20-30 seconds.
- > Repeat for 2-3 reps then switch to the opposite arm.



LOWER BODY TWIST: SUPINE ON STABILITY BALL

Reps: 20 | Sets: 1-2 | Intensity: 99% | Tempo: slow | Rest: 0 |

Duration: 60 sec

[VIEW VIDEO](#)

Preparation :

- > Lie on your back, heels on the Stability Ball, arms out to the side on the ground.
- > Maintain "neutrality at the lumbo pelvic hip complex" with a proper drawing in and pelvic floor contraction.



Movement :

- > Rotate legs to the side, rolling the ball and releasing the spine as far as flexibility will allow.
- > Rotate the hips back towards the midline of the

body, using the core and stabilizing with the arms and shoulders.

- > This movement should be SLOW AND CONTROLLED.
- > As the legs falls toward the floor, make sure the shoulder blades DO NOT come off the ground.

HOP WITH STABILIZATION - FRONTAL PLANE (TRANSVERSE)

Reps: 20 | Sets: 1-2 | Intensity: 99% | Tempo: slow | Rest: 0 |

Duration: 60 sec

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Preparation :

- > Balance on one leg with hands on hips and knee slightly flexed.
- > Keep abs drawn in and head in a neutral position.

Movement :

- > Move laterally to the opposite leg, stabilize the landing for 2-4 seconds, then move in reverse direction to starting position and stabilize, keeping knee over 2nd & 3rd toe.
- > Utilize the same format to move in the sagittal and transverse planes, by hopping from one leg



to the other in a forward and turning manner.

Progression Considerations :

- > Hoping with rotation in the transverse plane, stabilize the landing for 2-4 seconds, then move in reverse direction to starting position and stabilize, keeping knee over 2nd & 3rd toe.
- > Utilize the same format to move in the sagittal and transverse planes, by hopping from one leg to the other in a forward and turning manner.

BRIDGE ON FLOOR

Reps: 20 | Sets: 1-2 | Intensity: 99% | Tempo: slow | Rest: 0 |

Duration: 60 sec

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Preparation :

- > Begin by lying flat on floor in supine position with knees bent, feet flat, toes pointing straight ahead and arms by sides.
- > Activate core by drawing navel towards the spine and squeezing the glutes.



Movement :

- > With core activated and glutes squeezed, lift hips off ground to form a straight line between knees and shoulders.

- > Hold and slowly return back to floor, touching floor momentarily then repeat.
- > If your client feels their hamstring cramping, check their pelvis for correct alignment. Pelvis should be neutral - asis and psis should be even or horizontal. If there is a misalignment correct it. If you aren't sure then gently stretch the quads and try the exercise again.

ABDOMINAL - FULL SIT-UP ON STABILITY BALL (PROGRESSION 1 - MEDICINE BALL)

Reps: 20 | Sets: 1-2 | Intensity: 99% | Tempo: slow | Rest: 0 |

Duration: 60 sec

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Preparation :

- > Sit on the stability ball.
- > Slowly roll down the ball until it is in the small of the back.
- > Be sure you are balanced when back is fully extended.
- > Keep feet in proper alignment facing straight ahead.
- > Align feet directly under the knees.



- > Raise arms until they are perpendicular to the torso with palms facing towards each other.

Movement :

- > Draw the belly button in towards the spine.
- > Squeeze the glutes.
- > Contract the abdominals while curling the upper torso towards your hips.
- > Flex at the hips bringing the upper body to a fully upright position on the stability ball, maintaining same position with arms.
- > Minimize push with the legs to perform the hip flexion.
- > Slowly lower the upper body to the starting position.

Progression Considerations :

- > Hold arms in same position, but add a small medicine ball (MB) for additional weight.
- > Draw the belly button in towards the spine.
- > Squeeze the glutes.
- > Contract the abdominals while curling the upper torso towards your hips, and keep the medicine ball balanced over your center gravity.
- > Flex at the hips bringing the upper body to a fully upright position on the stability ball extending medicine ball forward as shown.
- > Minimize push with the legs to perform the hip flexion.

- > Slowly lower the upper body to the starting position keeping the medicine ball balanced through the entire range of motion.

COBRA - FLOOR

Reps: 20 | Sets: 1-2 | Intensity: 99% | Tempo: slow | Rest: 0 |

Duration: 60 sec

[VIEW VIDEO](#)

Preparation :

- > Laying face down on the floor in prone position, have arms beside your hips.
- > Activate core by drawing in navel towards spine and squeezing glutes.



Movement :

- > With core and glutes activated, lift chest off the floor, lift arms up and back towards the hips rotating thumbs towards the ceiling.
- > Pause momentarily at the top of the lift then return to starting position; at all times keeping the chin tucked into the chest.
- > Upon completion of the movement, repeat.
- > Don't over emphasize arching of the back to lift the chest off the floor. Only lift to where the client

is comfortable – no lower back pain should be felt. If so check sequencing of glute, erectors and hamstrings.

SIDE ISO-ABS WITH CRUNCH

Reps: 20 | Sets: 1-2 | Intensity: 99% | Tempo: slow | Rest: 0 |

Duration: 60 sec

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Preparation :

- > Maintain good posture throughout the exercise with shoulder blades retracted and depressed, good stability through the abdominal complex and neutral spine angles.
- > Initiate a thorough dynamic warm-up prior to starting this exercise.
- > This engages the nervous system.



Movement :

- > This movement involves a side iso-abs hold with a rotation crunch motion.
- > Perform a side iso-abs hold.
- > Take the top arm, place the hand behind the ear and rotate the elbow towards the ground (as shown).

- > Repeat for desired number of repetitions.
- > TRAINERS: Ensure the body line is straight, the visual gaze is straight ahead and the shoulders and trunk rotate.

SIDE ISO-ABS WITH FRONTAL PLANE MOVEMENT

Reps: 20 | Sets: 1-2 | Intensity: 99% | Tempo: slow | Rest: 0 |

Duration: 60 sec

[VIEW VIDEO](#)

Preparation :

- > Maintain good posture throughout the exercise with shoulder blades retracted and depressed, good stability through the abdominal complex and neutral spine angles.
- > Initiate a thorough dynamic warm-up prior to starting this exercise. This engages the nervous system.



Movement :

- > This movement involves a side iso-abs position with hip movement in the frontal plane.
- > Perform a side iso-abs hold.
- > Raise the top arm towards the ceiling with palm facing forward.

- > Looking straight ahead, move the hip complex up and down in the frontal plane (as shown).
- > Ensure not to overly side flex the spine (a movement of 10-20cm or 6-8 inches is recommended).
- > Repeat for desired number of repetitions.
- > TRAINERS: Ensure the body line is straight, the visual gaze is straight ahead and that there is movement at the Lumbo Pelvic Hip Complex as well as the shoulder complex.

SQUAT - 1 LEG

Reps: 20 | Sets: 1-2 | Intensity: 99% | Tempo: slow | Rest: 0 |

Duration: 60 sec

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Preparation :

- > Perform drawing in and pelvis floor contractions.
- > Lift one leg off the floor and dorsiflex elevated ankle.
- > Keep feet parallel in frontal plane.
- > Maintain level hips.



Movement :

- > Grip toes in your shoes or on the floor (IF NO

SHOES).

- > Initiate the squat by bending the knee, keep the shoulder blades down and together.
- > As your knees bend, flex forward slightly in the spine but keep chest up.
- > Squat down as deep as you can with good control, maintaining heel contact with floor and watching hip and knee alignment (no pronation).
- > Return back to starting position and repeat.
- > Progressions: Inertia progressions, no weight to dumbbells to cables to tubing.

PUSH-UP - SCORPION

Reps: 20 | Sets: 1-2 | Intensity: 99% | Tempo: slow | Rest: 0 |

Duration: 60 sec

[VIEW VIDEO](#)

Preparation :

- > Initiate a thorough dynamic warm-up prior to starting this exercise, this engages the nervous system.
- > Client should maintain a lengthened position (from head to toe) throughout this exercise.



Movement :

- > This exercise combines a floor push-up with a scorpion active mobility movement.
- > Start prone on the ground with the hands slightly wider than the shoulders.
- > Perform a complete push-up (for description see 'push-up' in Exercise Library).
- > Once you return to the 'up' position, perform a scorpion movement by bringing the right heel towards the left shoulder (for description of 'scorpion' movement – see active stretch section of Exercise Library).
- > Perform right heel scorpions for desired repetitions, then left heel scorpions.
- > TRAINERS: Ensure that there is no excessive arching in the lumbar spine ... especially during scorpion movements.

LAT PULL - ROLLING ON STABILITY BALL (PROGRESSION 1 - 1 ARM)

Reps: 20 | Sets: 1-2 | Intensity: 99% | Tempo: slow | Rest: 0 |

Duration: 60 sec

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Preparation :

- > Assume a kneeling position on the floor with your

hands and forearms resting on the ball about shoulder-width apart.

- > Before initiating the movement, set yourself in an optimal postural position.



Movement :

- > From the start position, draw your belly button inward toward your spine.
- > Maintaining optimal posture, flex the shoulders while extending the hips. The shoulders and hips must move together while spine is stabilised.
- > Return to the start position when the abdominals can no longer stabilise the starting postural alignment.
- > This exercise requires a lot of stabilisation! If a person cannot perform the 'draw-in' manoeuvre, this variation must be simplified!
- > Use a slow tempo (examples: 3-3-3, 4-0-2, 2-2-2).



Progression Considerations :

- > From the start position, draw your belly button inward toward your spine.
- > Place only one arm on the stability ball instead of two.
- > Maintaining optimal posture, flex the shoulders while extending the hips. The shoulders and hips must move together while spine is stabilised.
- > Return to the start position when the abdominals can no longer stabilise the starting postural

alignment.

- > This exercise requires a lot of stabilisation! If a person cannot perform the 'draw-in' manoeuvre, this variation must be simplified!
- > Use a slow tempo (examples: 3-3-3, 4-0-2, 2-2-2).

PLANK - STABILITY BALL WITH OVERHEAD PRESS

Reps: 20 | Sets: 1-2 | Intensity: 99% | Tempo: slow | Rest: 0 |

Duration: 60 sec

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Preparation :

- > Maintain good posture with shoulder blades retracted and depressed and good stability through the abdominal complex
- > Initiate a thorough dynamic warm up prior to starting this exercise, this engages the nervous system.



Movement :

- > This is a movement that involves a plank hold on a SB, combined with an overhead SB roll
- > Start in the same position as the SB plank (see exercise library – 'Plank – SB')

- > While maintaining a static position with the body, roll the SB (using the forearms) overhead
- > Complete the desired amount of repetitions
- > TRAINERS: be very aware that the low back does not arch excessively during overhead extension with the arms. Stop exercise immediately if this is noticed or if pain is experienced

BRIDGE - HAMSTRING CURL W/FEET ON STABILITY BALL

Reps: 20 | Sets: 1-2 | Intensity: 99% | Tempo: slow | Rest: 0 |

Duration: 60 sec

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Preparation :

- > Lay supine of the floor and place both feet on the ball.
- > Have arms straight out with palms facing upwards.



Movement :

- > Start by drawing-in the core and raising the hips up.
- > Maintain this position keeping the core/glutes activated and also the feet together.

- > Draw the feet into towards the glutes performing knee flexion while maintaining hip extension.
- > Continue for desired repetitions then lower the hips back to the floor in a controlled manner.

1 LEG BALANCE REACH

Reps: -- | Sets: -- | Intensity: -- | Tempo: -- | Rest: -- | Duration: --

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Preparation :

- > Stand on one leg with the knee slightly bent and hands on hips.



Movement :

- > Reach the opposite leg to the FRONT (sagittal), then to the SIDE (frontal), then diagonally BACK and OUT (transverse), without altering optimal alignment of the balancing leg. The knee must remain over the second and third toes.
- > If this multiplanar approach is too advanced, simply start with one plane at a time (i.e., sag, front, trans).
- > Maintain optimal spinal alignment throughout the exercise.
- > PLEASE NOTE: The picture ONLY demonstrates



the SAGITTAL plane.

ONE LEG BALANCE WITH ARM DRIVES (IN ALL DIRECTIONS)

Reps: -- | Sets: -- | Intensity: -- | Tempo: -- | Rest: -- | Duration: --

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Preparation :

- > Ensure the individual is very proficient at single leg exercises (search exercise library) before prescribing this exercise.

Movement :

- > Stand tall on one leg with the gaze straight ahead.
- > Keep the gaze fixed on one point throughout this exercise.
- > Bend the grounded leg to approx 20°.
- > Hold a single leg balance and bring the arms so shoulders and elbows are at 90° with full horizontal abduction and palms facing forward.
- > Move the torso in all three planes of motion as shown.
- > Take care to maintain posture and core stability as client proceeds through the different ranges of motions.



- Trainers: If there is pain, loss of balance, of altered neuromuscular control - reduce the range of motion.

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