



PROGRAM FOR VIC SKI TEAM SKI TEAM

## CORE STABILISATION #3

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PRINT

### Introduction

The goal of every 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

Start by foam rolling the key areas, and follow with static stretching and at end of 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
TVA and Pelvic Floor	Exercise	1-2	20	60 sec	slow	50-90%	0
Lower Body Twist: Supine on Stability Ball	Exercise	1-2	20	60 sec	slow	50-90%	0
Bridge on Floor	Exercise	1-2	20	60 sec	slow	50-90%	0
Abdominal - full sit-up on stability ball (Progression 1 - medicine ball)	Exercise	1-2	20	60 sec	slow	50-90%	0
Hop with Stabilization - Frontal Plane (Transverse)	Exercise	1-2	20	60 sec	slow	50-90%	0
Side Iso-abs with Crunch	Exercise	1-2	20	60 sec	slow	50-90%	0
Side Iso-abs with Frontal	Exercise	1-2	20	60 sec	slow	50-90%	0

Plane Movement								
Push-Up - Scorpion	Exercise	1-2	20	60 sec	slow	50-90%	0	
Shoulder Raise – Prone on Stability Ball with Dumbbell	Exercise	1-2	20	60 sec	slow	50-90%	0	
Pullover on Stability Ball with Weight	Exercise	1-2	20	60 sec	slow	50-90%	0	
Lat Pull - Rolling on Stability Ball (Progression 1 - 1 Arm)	Exercise	1-2	20	60 sec	slow	50-90%	0	
Plank - Stability Ball with Overhead Press	Exercise	1-2	20	60 sec	slow	50-90%	0	
Bridge - Hamstring Curl w/Feet on Stability	Exercise	1-2	20	60 sec	slow	50-90%	0	

Ball							
1 Leg Raise: Prone over Stability Ball	Exercise	1-2	20	60 sec	slow	50- 90%	0
Lunge with One-Leg Squat, Back Foot On Stability Ball	Exercise	1-2	20	60 sec	slow	50- 90%	0
Pullover on Stability Ball with Medicine Ball	Exercise	1-2	20	60 sec	slow	50- 90%	0
Ball Push- Up	Exercise	1-2	20	60 sec	slow	50- 90%	0
Hip Extension – 1 Leg Supine SB with Twist	Exercise	1-2	20	60 sec	slow	50- 90%	0

### 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

### TVA AND PELVIC FLOOR

Reps: 20 | Sets: 1-2 | Intensity: 50-90% | Tempo: slow | Rest: 0 |

Duration: 60 sec

[VIEW VIDEO](#)

#### Preparation :

- > Maintain good posture throughout the exercise with shoulder blades retracted and depressed and neutral spine angles.



#### Movement :

- > Contract the pelvic floor by imagining you are stopping the flow of urine
- > Hollow out the abdominals by 'drawing in' the belly button towards the spine.

### LOWER BODY TWIST: SUPINE ON STABILITY BALL

Reps: 20 | Sets: 1-2 | Intensity: 50-90% | 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.

## BRIDGE ON FLOOR

Reps: 20 | Sets: 1-2 | Intensity: 50-90% | Tempo: slow | Rest: 0 |

Duration: 60 sec

## VIEW VIDEO

### 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: 50-90% | Tempo: slow | Rest: 0 |

Duration: 60 sec

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## VIEW VIDEO

### 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.

## HOP WITH STABILIZATION - FRONTAL PLANE (TRANSVERSE)

Reps: 20 | Sets: 1-2 | Intensity: 50-90% | Tempo: slow | Rest: 0 |

Duration: 60 sec

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[VIEW VIDEO](#)

### 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.

## **SIDE ISO-ABS WITH CRUNCH**

**Reps: 20 | Sets: 1-2 | Intensity: 50-90% | Tempo: slow | Rest: 0 |**

**Duration: 60 sec**

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**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 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: 50-90% | 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.

## PUSH-UP - SCORPION

Reps: 20 | Sets: 1-2 | Intensity: 50-90% | Tempo: slow | Rest: 0 |

Duration: 60 sec

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[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.

## SHOULDER RAISE – PRONE ON STABILITY BALL WITH DUMBBELL

Reps: 20 | Sets: 1-2 | Intensity: 50-90% | Tempo: slow | Rest: 0 |

Duration: 60 sec

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[VIEW VIDEO](#)

### Preparation :

- > Maintain proper alignment through the kinetic chain by positioning the feet straight, glutes tight, 'neutral' spine angles, shoulder blades retracted and depressed, and chin tucked for good cervical alignment.
- > Activate the core with a proper drawing in and pelvic floor contraction.



### Movement :

- > Choose light dumbbells (DB) and perfect the technique before moving to a heavier load.
- > Lie prone with your lower abs/hips on the stability ball, feet against a wall and alignment described in the 'preparation'.
- > Start with the DBs under the chest in line with the ground.
- > Perform a rear delt raise to a full range of motion,

the shoulder blades should retract, then protract as you lower the weight slowly.

- > Keep the core and glutes tight to avoid lower back discomfort.

## PULLOVER ON STABILITY BALL WITH WEIGHT

Reps: 20 | Sets: 1-2 | Intensity: 50-90% | Tempo: slow | Rest: 0 |

Duration: 60 sec

[VIEW VIDEO](#)

### Preparation :

- > Ensure that the client is used to the stability ball.
- > Activate core with proper drawing-in and pelvic floor contraction.



### Movement :

- > Grab a weight plate and sit on the stability ball.
- > Slowly roll down the ball while comfortably placing your shoulder blades, head and neck on the ball with both feet straight ahead.
- > Lift your hips up until they are in line with your knees and shoulders.
- > Position the arms and weight perpendicular to the ceiling (straight up). Perform shoulder flexion and allow the weight plate to travel over your



head.

- > NEVER flex the shoulders to the point where the back arches or the shoulder joint is stressed.
- > Maintain a strong inner unit activation and glute squeeze.
- > Extend the weight SLOWLY back to the starting position.

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

Reps: 20 | Sets: 1-2 | Intensity: 50-90% | Tempo: slow | Rest: 0 |

Duration: 60 sec

[VIEW VIDEO](#)

### 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: 50-90% | Tempo: slow | Rest: 0 |

Duration: 60 sec

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[VIEW VIDEO](#)

### 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: 50-90% | Tempo: slow | Rest: 0 |

Duration: 60 sec

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[VIEW VIDEO](#)

### 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 RAISE: PRONE OVER STABILITY BALL

Reps: 20 | Sets: 1-2 | Intensity: 50-90% | Tempo: slow | Rest: 0 |

**Duration: 60 sec**

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**VIEW VIDEO**

**Preparation :**

- > Push-up position with arms slightly bent and stability ball under hips.
- > Activate core (pull navel towards spine and maintain for entire exercise, keeping breathing shallow).
- > Legs straight and together, resting just above the floor.



**Movement :**

- > With core/glute activated, lift leg towards the ceiling into full hip extension (do not hyper-extend your lower back).
- > Slowly lower leg to starting position and then repeat with opposite leg.
- > Control is essential, so keep a slower pace as you alternate legs through desired repetitions.
- > If you feel any discomfort in the lower back, discontinue the exercise. When you feel fatigue in the back, stop!

**LUNGE WITH ONE-LEG SQUAT, BACK FOOT ON STABILITY BALL**

Reps: 20 | Sets: 1-2 | Intensity: 50-90% | Tempo: slow | Rest: 0 |

Duration: 60 sec

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[VIEW VIDEO](#)

#### Preparation :

- > Stand on one leg (in optimal alignment with the knee over the 2nd toe), and place the rear leg on the desired size of BALL, maintaining neutral spine. (**NOTE:** The larger the ball, the more flexibility is required!).



#### Movement :

- > Lower body as low as can be controlled in NEUTRAL SPINE and in optimal KNEE ALIGNMENT over the 2nd toe (i.e. the "balance threshold").
- > Push back to the top of the motion focusing on the glute.
- > Repeat as desired.

### PULLOVER ON STABILITY BALL WITH MEDICINE BALL

Reps: 20 | Sets: 1-2 | Intensity: 50-90% | Tempo: slow | Rest: 0 |

Duration: 60 sec

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## VIEW VIDEO

### Preparation :

- > Head and shoulders positioned on the stability ball, allowing chin to point to ceiling.
- > Shoulders, hips and knees in common alignment.
- > Activate transverse abdominus by pulling belly button towards the spine and holding it there for the entire exercise, continuing to breathe shallowly.
- > Feet approximately shoulder-width apart for good stability.



### Movement :

- > Start with medicine ball positioned over the chest, slowly lower the ball back over your head to where you feel comfortable making sure the arms remain straight.
- > Make sure not to hyper-extend the shoulder!
- > Once you have reached the end of the movement return to the starting position and repeat.
- > Breathe in when lowering the medicine ball and breathe out when raising it.
- > Maintain good form throughout entire exercise, if you are arching the back, the medicine ball is too heavy.

## BALL PUSH-UP

Reps: 20 | Sets: 1-2 | Intensity: 50-90% | Tempo: slow | Rest: 0 |

Duration: 60 sec

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[VIEW VIDEO](#)

### Preparation :

- > Begin in a push-up position with feet on the SB and hands on the floor slightly wider than shoulder width.
- > Draw in abdomen and contract glutes.



### Movement :

- > Keeping back flat and hips in line with shoulders and heels, slowly lower body towards ground by flexing elbows and retracting and depressing shoulder blades. Stop at first point of compensation.
- > Push back up to starting position by extending elbows and contracting chest.
- > Keep cervical spine and head in proper alignment during exercise.

## HIP EXTENSION – 1 LEG SUPINE SB WITH TWIST

Reps: 20 | Sets: 1-2 | Intensity: 50-90% | Tempo: slow | Rest: 0 |

**Duration: 60 sec**

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**VIEW VIDEO**

**Preparation :**

- > Lie on your back on the floor with your heels on the stability ball, hands to the side of your body for balance.
- > Initiate a drawing-in and pelvic floor contraction.



**Movement :**

- > Lift hips off the floor and maintain neutral spine angles.
- > Keep glutes tight and shoulder blades down and together.
- > Lift one leg to approximately 90°.
- > Maintaining body alignment, while rotating the lumbar spine and hips, lower the elevated leg across the body as shown.
- > Rotate back and repeat.
- > TRAINERS: Make sure client keeps a straight line between the shoulders, hips and ankles throughout the exercise.
- > Progression: unloaded to loaded: from bodyweight to extrinsic load (foot weight to tubing).



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