

Advanced Cycling Muscular Endurance Program

Introduction

Purpose: Perform the Intermediate program before you do the advanced program. Develop cycling specific muscles and muscular endurance to improve lactate tolerance by increasing blood capillary density and the number/size of mitochondria where energy is produced by doing high reps and circuit training. Also, develop overall fitness to prevent injuries. Frequency: 2-3 times/week in combination with on the bike training, this program helps you maximize your cycling performance. Note: Hard training on the bike and weight training should be performed more than 6 hours apart and up to 24 hours apart ideally for proper recovery.

Warm Up

Spinning on stationary bike/trainer or running at moderate pace for 10-15 minutes

Summary Of Program

Activity	Type	Sets	Reps	Duration	Tempo	Intensity	Rest
Plank - Stability Ball Writing Name	Exercise	2-3	Your name		Moderate		
Lower Body Twist - Prone on SB	Exercise	2-3	15-20		Moderate		
Half Bicycle w/Bosu Ball	Exercise	2-3	20-30 each side		Moderate		
Lateral Trunk Flexion	Exercise	2-3	20-30 each side		Moderate		60-90 sec
Push Up - Hands on SB	Exercise	2-3	20-30		Moderate		
1 Leg Squat w/Bungee Row	Exercise	2-3	20-30 each side		Moderate	Light	60-90 sec
Good Mornings	Exercise	2-3	20-30		Moderate	Light	
Squat Jump	Exercise	2-3	20-30		Moderate		
Ice Skaters - Contralateral Arm Drive	Exercise	2-3	20-30		Moderate		60-90 sec

Cool Down

Spinning on stationary bike/trainer at moderate intensity at high cadence like 90+ rpm for 15-20 minutes. This is important to remind the muscles what they are training for! Stretching is encouraged and foam roll if you have chronically tight areas.

PLANK - STABILITY BALL WRITING NAME

Reps : Your name **Sets :** 2-3 **Intensity :**

Preparation :

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

Movement :

- This exercise combines a stability ball plank with arm movements
- Start with the feet shoulder width apart on the floor with the elbows on the stability ball (as shown)
- Hold a straight body position, looking at the SB
- Using small arm motions, write your name by moving the SB with your elbows and forearms
- STOP exercise if you see: excessive arching in the lower back, excessive elevation of the scapula, or the chin migrating forward



Notes : Circuit training with Lower Body Twist, Half Bicycle, and Lateral Trunk Flexion is encouraged

LOWER BODY TWIST - PRONE ON SB

Reps : 15-20 **Sets :** 2-3 **Intensity :**

Tempo : Moderate **Rest :** **Duration :**

Preparation :

- Lie prone on the ground, hands are slightly wider than shoulder width and spine angles are 'neutral'.
- Place thighs on the stability ball.
- Activate core with a drawing in and pelvic floor contraction.

Movement :

- With your arms extended, bring your legs back into triple extension (at hip, knee, and ankle).
- Rotate the legs along a transverse axis at the trunk.
- Perform slow and controlled movement and stabilize the action through the shoulder complex and lumbo pelvic hip complex.
- AVOID letting your back sag by keeping the core engaged and activating the glutes and lats.



HALF BICYCLE W/BOSU BALL

Reps : 20-30 each side **Sets :** 2-3 **Intensity :**
Tempo : Moderate **Rest :** **Duration :**

Preparation :

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

Movement :

- This movement involves a twisting crunch with the lower back supported by the Bosu ball.
- Position Bosu ball under the small of the back.
- With the body line lengthened, perform a bicycle crunch.
- Perform desired number of reps.
- Ensure the client does NOT exhibit the following: a forward head carriage, excessive cervical lordosis or an expression of pain of ANY kind – these may be signs that the exercise is too advanced and should be regressed (i.e., on the floor).

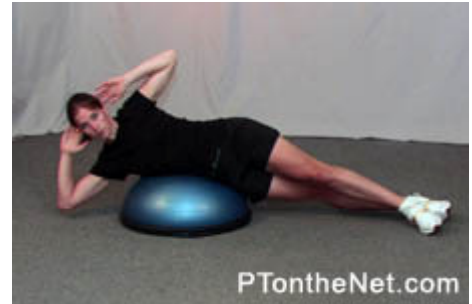


LATERAL TRUNK FLEXION

Reps : 20-30 each side **Sets :** 2-3 **Intensity :**
Tempo : Moderate **Rest :** 60-90 sec **Duration :**

Preparation :

- In a side-lying position, center the waist directly on top of the dome.
- Adjust the legs into a long lever, "scissor" position with the top leg forward of the bottom leg.
- Place the hands behind the head.
- Point the top elbow toward the ceiling and the bottom elbow forward.
- Flex the trunk laterally toward the floor, until a slight stretch is felt down the side of the torso.



Movement :

- Laterally flex the trunk away from the floor, pulling the bottom of the ribcage down toward the top of the hip bone.
- Pause at the top of the movement.
- Then slowly lower back to the starting position.
- Perform eight to 20 repetitions to fatigue.
- Perform the exercise on both sides of the body.



PUSH UP - HANDS ON SB

Reps : 20-30 **Sets :** 2-3 **Intensity :**
Tempo : Moderate **Rest :** **Duration :**

Preparation :

- Start by lying face down on the ball.
- Slowly roll forward leaving shins on the ball and place hands in a comfortable position on the floor.
- Lift your hips up until they are in line with your knees and shoulders.



Movement :

- Brace the spine by contracting the abdominal wall.
- Squeeze the glutes.
- Perform push up while maintaining back stability (do not allow low back to sag).
- Perform repetitions SLOWLY (4-2-2) to enhance stabilization strength.
- Only move as far as you can maintain balance and core stability.
- Do not allow knees to "jet" forward.
- The pelvis should remain stable throughout the entire exercise.
- Maintain glute activity throughout the entire exercise.



Notes : Circuit training with 1 leg squat w/ bungee row is encouraged
1 LEG SQUAT W/BUNGEE ROW

Reps : 20-30 each side **Sets :** 2-3 **Intensity :** Light
Tempo : Moderate **Rest :** 60-90 sec **Duration :**

Preparation :

- Initiate a thorough dynamic warm up prior to starting this exercise, this engages the nervous system.
- Maintain a tall posture in the spine throughout the exercise and good stability through the abdominal complex.

Movement :

- This movement involves a 1 leg squat combined with a bungee row
- Start the exercise on 1 leg with the bungee cord in front
- Perform a 1 leg squat (for description – see '1 leg squat' in the exercise library)
- As you perform a squat and return to an upright position, perform a bungee row – as shown
- Perform the desired number of reps and switch legs
- TRAINERS: watch for – excessive valgusing of the stance leg, excessive protraction of the scapula, or rolling of the thoracic spine. Observing these traits may be indications that the exercise is too advanced and needs to be regressed.



GOOD MORNINGS

Reps : 20-30 **Sets :** 2-3 **Intensity :** Light
Tempo : Moderate **Rest :** **Duration :**

Preparation :

- Ensure the barbell sits on the trapezius muscle (below the C7 spinous process) and NOT the cervical spine!

Movement :

- Stand tall with a soft bend in the knee (approx. 20 degrees).
- With a close grip on the bar and the shoulder blade retracted and depressed, hinge at the hips and flex down to 90 degrees (if you are able).
- The back must remain flat.
- If the back starts to bow, reduce the weight and range of motion and initiate a flexibility program to the hips.
- Return to start position and repeat.
- Pay close attention to the video to observe the relative timing of this movement.



Notes : Circuit training with Squat Jump and Ice Skaters is encouraged
SQUAT JUMP

Reps : 20-30 **Sets :** 2-3 **Intensity :**
Tempo : Moderate **Rest :** **Duration :**

Preparation :

- Initiate a thorough dynamic warm up prior to starting this exercise, this engages the nervous system.

Movement :

- This movement involves a jump in place.
- Start with your hands by your shoulders.
- Squat down to approximately 90 degrees.
- Initiate movement with an explosive vertical jump, and at the same time explosively push your arms overhead.
- Land onto toes and then heels.



ICE SKATERS - CONTRALATERAL ARM DRIVE

Reps : 20-30 **Sets :** 2-3 **Intensity :**
Tempo : Moderate **Rest :** 60-90 sec **Duration :**

Preparation :

- Initiate a thorough dynamic warm up prior to starting this exercise; this engages the nervous system
- Ensure that the individual is very proficient at single leg exercises (search Exercise Library) before prescribing this exercise.

Movement :

- Start in an athletic position as shown.
- Perform an ice skater hop side to side
- As you land, load both arms to that side as shown.
- Drive with the leg and hop to the other side, transferring the momentum to the arms.
- Take care to observe the relative timing of this exercise.
- TRAINERS: If there is pain, loss of balance, of altered neuromuscular control -- REDUCE the range of motion of legs and arms.



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