

- **Common cycling injuries:** This injury-prevention routine targets the areas of the body that are most commonly susceptible to over-use injuries in cycling. Due to repetitive motion and a sustained bent-over position the most common areas for chronic injury are the knees and the lower back.
- **Common cycling imbalances:** In general, cycling involves one very repetitive motion. That means that cyclists can easily develop very strong muscles in some areas, and leave other areas very under-developed. Since cyclists are always moving in the sagittal plane (forward) and very rarely move in the lateral plane (side to side). This means that off-the-bike it's important to give a little extra attention to the muscles that contribute to lateral movement.
- **The Demands of cycling:** This routine considers what cycling demands of an individual and helps to prepare someone to stand up to those demands. For example, cycling requires balance and the ability to produce power through one side (one leg) of your body at a time. This means that injury prevention routines should incorporate single-sided exercises, balance exercises, and exercises that activate the core.

Keep in mind that this injury prevention routine was developed for people who are already injury-free and want to work on common imbalances to stay that way. Let's get started!

1. **Bird-Dogs**

Begin on your hands and knees in a quadruped position. Focus on having your hands directly below your shoulders and your knees below your hips. Think about having a flat back. Now, extend your right arm and left leg straight out until they are parallel with the floor. Maintain a flat spine, level hips, and pull your belly button inward. Return to the starting position and do it again with the other arm and leg.

- **Sets/Reps:** Complete 2 x 10 reps on each side

- **What it does:** This exercise helps to engage a large number of core muscles including the gluteus medius, multifidus, and spinal erector muscles. It also involves balance and is a staple in many rehab programs for lower back pain.

2. **Deadbugs**

Lay on your back with your arms and legs straight up in the air and the knees bent to 90 degrees. Slowly lower your right arm back behind your head and left leg down to the floor (straighten the leg as you lower it) until they are both hovering just above the ground. Focus on making sure that your lower back is firmly against the ground the entire time. Return to your starting position and then complete the same with the other arm and leg.

- **Sets/Reps:** Complete 2 x 10 reps on each side

- **What it does:** The *rectus abdominis*, internal and external oblique are all activated equally during this exercise which demonstrates core stability despite limb movement. This exercise helps to prevent low back pain.



Hannah Finchamp demonstrates the deadbug. *Photo: Hannah Finchamp*

- **Clam Shells**
Lay on your side with your knees bent to 90 degrees and your hips bent to 45 degrees and your legs stacked on top of each other. Lift your top knee away from the bottom knee while keeping your feet together. Add a band around your thighs for added resistance.
 - **Sets/Reps:** 2 sets of 10 reps on each side
 - **What it does:** This helps engage the *glute medius* which is under-activated when cycling. This can help prevent knee pain and injuries such as IT Band Friction Syndrome and Patellofemoral Pain Syndrome.
- **Glute Bridges**
Lay on your back and bend your knees until your feet can lay comfortably flat on the ground. Then flex your glutes and lift your back off the ground until only your shoulder blades and feet are in contact with the ground.
 - **Sets/Reps:** 2 sets of 10 reps each side
 - **What it does:** This exercise helps engage the glutes. This can make you

stronger and more efficient on the bike as well as help prevent knee pain and back pain by assisting with pelvic alignment. Many cyclists have under-activated glutes while riding. This exercise can help to activate the glutes before getting on the bike.

- **Lunge Stretch**

Take a large step forward. Then keep the back leg straight and bend the front knee. Bend the front knee until you feel a good stretch in your hip flexor on the opposite leg. If your front knee begins to creep over your toes, then take a larger step forward.

- **Sets/Reps:** Hold for at least 30 seconds on each side

- **What it does:** This helps stretch the hip flexors. When the hip flexors are too tight they can pull the pelvis forward, create an arched back, lower back pain, and present itself as lower crossed syndrome. This posture is common in athletes or people who spend large amounts of time seated.

- **Plank**

Stabilize yourself on your forearms and toes. Focus on having a flat back from the top of your head all the way through your toes.

- **Sets/Reps:** Begin with just 20-30 seconds and build up to 2 minutes.

- **What it does:** Plank helps to increase abdominal endurance and strength. With a strong and stable core, you'll have a better platform to produce power from through your limbs.



Megan Jastrab planks on the campus of the Olympic Training Center.

- **Leg Raises**

Lay on your back. Raise your legs until they are straight up in the air. Lower your legs until they are just hovering above the ground. Keep your legs straight. Keep your back pressed against the ground the entire time.

- **Sets/Reps:** 2 sets of 15 raises

- **What it does:** This helps to strengthen the lower abdominals and creates stabilization of the spine.

- **IT Band foam-rolling**

Lay on your side, with the foam roller on the side of your thigh. Move a couple of inches at a time and pause whenever you feel a tender area.

- **Sets/Reps:** Foam roll for at least 30 seconds each leg

- **What it does:** This can help to release tension in the IT Band and loosen the fibers, which can help to decrease tension, help with patellar tracking, and reduce pain in the knees.

- **Quad Stretch**

Standing or laying down, pull your heel back toward your glutes.

- **Sets/Reps:** 30 seconds per leg

- **What it does:** Stretching the quads can help prevent both knee and hip pain because the quadricep muscles cross the joint line of both the hip and the knee.

- **Single-Leg RDL**

Keeping both legs straight, stand on one leg, and slowly lean forward while keeping a flat back and allowing the opposite leg to extend behind you. You can hold weights in your hands or complete this bodyweight.

- **Sets/Reps:** 2 x 10 reps per leg

- **What it does:** This helps to strengthen the hamstrings. As a quad-dominant sport, activating the hamstrings can help with typical cycling imbalances, help to create a neutral pelvis, and help to prevent lower back pain.