

Skeletal Loading Exercises

Off bike exercises for cyclists to load the skeleton, through muscular and gravitational means, with the aim of optimising body composition and bone health.

Please try to complete 3 times a week. Exercises should take about 15-20 minutes so recommend include as part of your post training cool down and stretching, particularly on recovery days.

Please record (manual entry on Strava/Training Peaks/elsewhere).

1. **Plank.** Hold minimum 1 minute. Repeat 2 times. Progress to raising alternate legs during each minute. Tips: make sure actively push into ground with forearms to activate serratus anterior. Engage core: abs and squeeze glutes, to keep body aligned.



2. **Side plank.** Hold minimum 30 seconds, set of 2 on each side. Progress to sliding top leg up and down lower leg. Tips: make sure elbow directly under shoulder and actively push forearm into the ground. Imagine body between 2 planes of glass: engage abs and glutes. Don't let bottom hip drop!



3. **Back extension** lying on front arms by sides, palms upwards. Raise upper body and arms off ground. Legs can just hover off floor. Hold for count of 3. Brief lower to raise and hold again. Tips: Keep looking down at mat so neck long. Engage glutes and abs (think of lift abs off mat) to protect back. Repeat 3 times. Then 3 times with arms rotating to open V and return. Tips: keep body same level off floor as move arms smoothly. Think pulling out through fingers tips to give shoulder joint space and shoulder blades flat on back throughout.

Progression 1: With arms extended to front: lift, hold for count 3 and lower. Repeat 6 times

Progression 2: as per progression 1 holding full water bottles and with ankle weights.



4. Front loading skeleton, choose depending on availability of Swiss ball.
- Swiss ball.** If you have a Swiss ball available, legs on Swiss ball. Draw legs in and out. For 30 seconds. Repeat 2 times Tips: engage abs to protect back, squeeze glutes on extending legs



- Mountain climber** If no Swiss Ball available. In press up position alternate legs, run on spot. For 30 seconds repeat 2 times. Progress to forarms arms on Swiss ball (less stable!) Tips: keep trunk still by engaging abs and actively pushing through hands/forearms.



5. **Weighted lunges** moving forwards holding hand weights above head (aiming for 5kg, build up as necessary). Stepping forward with each lunge, hovering with foot off ground. Repeat 1 minute, 2 times. Tips: at all times focus on leg alignment: knee caps over balls of feet. Focus on core control: upright trunk throughout.



6. **Weighted squat** with hand weights/filled water bottles. Keep back flat and supported throughout. Feet paced reasonably wide, squat down with weight more in heels. Come to standing by using back extensor muscles and squeeze glutes. Rise onto tip toes taking arms overhead by raising arms sideways and to overhead. Engage abs and glutes to support spine (no banana back!) For 1 minute, repeat 2 times.



7. **Squat jumps:** with feet hip width apart, jump vertically as swing arms up. Land WITH CONTROL going through feet and bending knees with control. Don't collapse through feet/legs, in other words should be very controlled, almost silent landing. Tips: think of resisting gravity on landing. If possible perform in front mirror to check alignment of hips, knees and feet. Repeat for 30 seconds continuously. Repeat 2 times



8. **Multidirectional hops:** 5 hops on spot, 5 hops forward and back, 5 side to side. Repeat on other leg: 5 of each on spot, forward/back and side/side. Twice through. Progression: as above with 10 hops throughout, twice through.

