

Core Values

A strong core will boost your power output and your pedalling efficiency, but which exercises are best for cyclists? We bust the myths and reveal the ultimate core workout

Words Mark Bailey **Photos** Joseph Branston

All the key components of good cycling performance – from power output and pedalling efficiency to aerodynamic posture and muscle endurance – are dependent on one vital but often overlooked quality: core strength. Without a solid core, you won't channel as much power through your pedals, you'll suffer an unbalanced pedalling technique, you won't be able to hold an aero position and you'll become vulnerable to aches and injuries.

"A strong core will optimise your ability to produce power because you will have a more solid base," explains Bianca Broadbent (@thecyclephysio), specialist sports physiotherapist at Spire Healthcare and bike fitter at Fit Your Bike. "There's an old saying: 'You wouldn't fire a cannonball from a raft.' And you especially need a strong core at low cadences, like going uphill or riding out of the saddle, where the reactive forces often need to be higher. A strong core will improve your resistance to



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fatigue, allow you to hold your position for longer and adopt a more aggressive position. It will reduce inefficient movements, which can lead to energy wastage, especially as you start to fatigue. And it will improve your ‘saddle stability’ to prevent you shuffling about and getting friction-related saddle disorders.”

There are many misconceptions about core strength – not least in our understanding of what it actually means. “Core musculature is not just limited to the abdominals,” explains Broadbent. “It includes the spinal extensors in your back, leg muscles, such as your glutes, and the deep postural muscles that work at lower thresholds for longer periods of time to help you maintain a stable position on the bike. All of these muscles contribute to core strength.”

Cycling also places some pretty unique demands on your core. Cyclists have

to hold their upper body steady while moving their lower body; both legs must work in unison; and cyclists endure constant imbalances as one leg rises and the other is lowered with each pedal stroke. This means that many standard core exercises used by gym-goers are ineffective for cyclists.

“Cycling, unlike many other sports, does require us to hold a relatively static position so good muscular endurance is helpful,” says Broadbent. “But we can also consider cycling an anti-rotation sport because you don’t want your body to rotate as you pedal. A degree of truncal stiffness is beneficial for comfort and performance. But too much rigidity may compromise your ability to react fluently to the environment, like when avoiding potholes. So it’s important to bring both static and dynamic exercises into the mix.”

Cyclists also have to practise their breathing when doing core exercises. It sounds obvious, but it’s easy to brace too tightly and forget to breathe. You might get away with it during a 30-second exercise, but if you don’t learn to breathe while bracing your core it will affect your performance on the bike, as Broadbent warns. “What often happens is an excessive ‘bracing’ response, which inhibits our ability to breathe deeply and that’s pretty essential when performing an aerobic sport. We ideally want a balance between engagement of our targeted muscles and the ability to facilitate normal torso mechanics, such as breathing.”

To help you find the right balance, Broadbent has devised the ultimate cycling core workout – one that will benefit cyclists of all levels – and guides us through the movements below. It includes static and dynamic exercises, compound movements that work several muscles in unison, and exercises which recruit the side, leg and back muscles too. “Incorporating some of these into your routine twice a week will deliver sufficient improvements in strength,” she says. So, here is your 10-step plan to a stronger core.



Dead bug

01

How to do it: Lie on your back with a gym ball in your hands. Lift your feet up so your hips and knees are at 90 degrees and rest your hands on the side of the ball. Take your right arm off the ball and reach away from your body, and extend your left leg simultaneously. Keep the other limbs in contact with the ball to hold it in

place. Repeat the other side. Remember to keep breathing steadily throughout the movements as this is key to strong bike performance. **Core value:** “This targets the major abdominals,” explains Bianca Broadbent, “so it teaches you to engage your core – especially if those core muscles are weak to start with.” It also involves

moving your arms and legs independently, while bracing your core, making this a perfect drill for cyclists. “The added benefit is that by simultaneously moving your arms and legs, you learn to move your limbs independently of the spine, promoting a stiffer core.” **Dose:** 3 sets of 12 to 15 reps **Level:** Intermediate

02 Stir the pot



How to do it: Start in a kneeling position while resting your forearms on a gym ball. Allow about a 90-degree angle at the shoulder joint. Push up through your arms and feet into a plank position, then use your forearms to move the ball in small circles, both clockwise and counter-clockwise. Speed up to make it harder. **Core value:** “This is a functional way to target

your abdominals, including the rectus abdominis and obliques [side muscles],” explains Broadbent, “while simultaneously adding some upper limb work.” It’s especially good for helping you to hold a more aggressive and aerodynamic road or TT position. **Dose:** 3 sets of 6 to 8 reps each way, or roughly 30 to 45 secs per set **Level:** Advanced



Pallof press

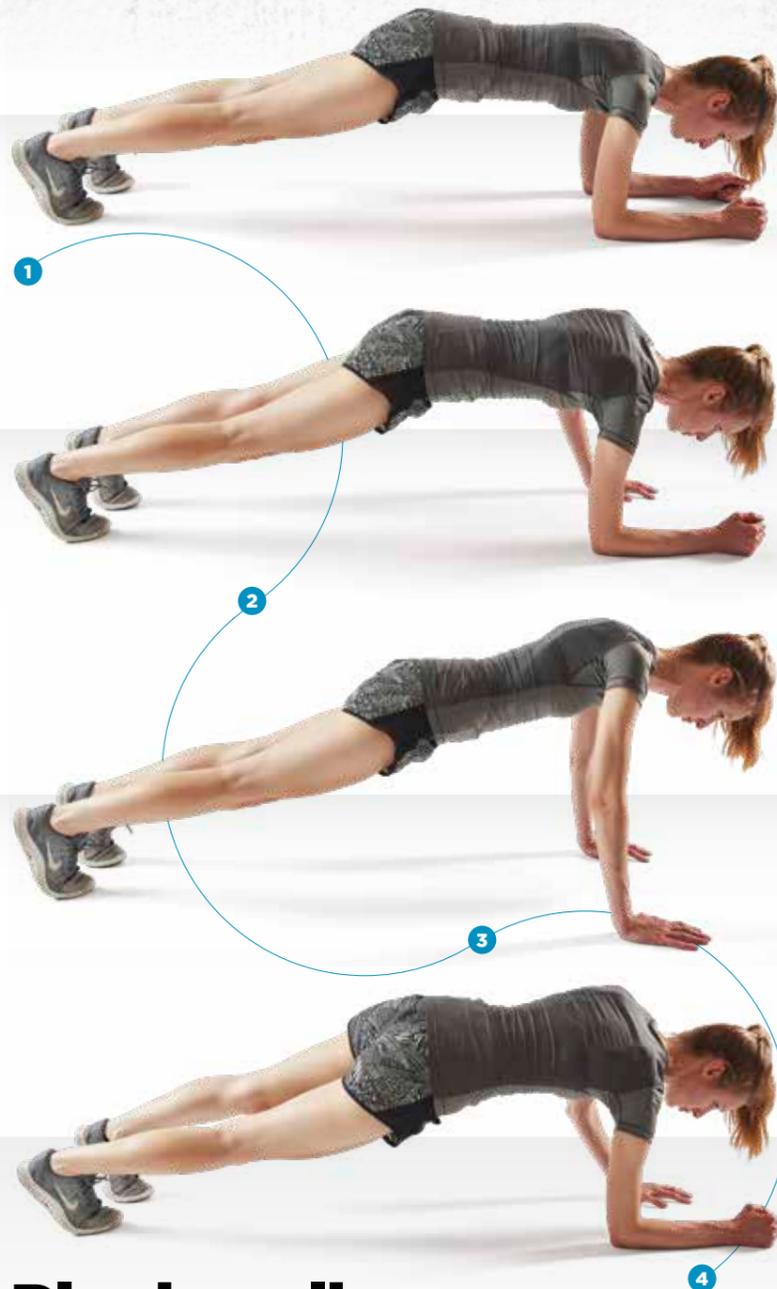
03

How to do it: Wedge a resistance band under one knee and adopt a split kneeling position. Hold the band close to your chest then push the band away from your body along a horizontal line, while keeping your trunk still. Repeat on the other side. To work your obliques as well, try pushing

the band away and to the side as well, which will strengthen your side muscles ready for when you take on tight hairpin bends. **Core value:** This will help you hold a steady position on the bike – even while wrestling your bike up a hill. “With this exercise, you will recruit the abdominal

muscles isometrically, in other words with a static contraction,” explains Broadbent. “But it will also work the obliques and spinal extensors while incorporating movements of the upper limbs.” **Dose:** 3 sets of 6 to 8 reps per side **Level:** Beginner

“This will help you hold a steady position on the bike, even while wrestling your bike up a hill”



Plank walks

04

How to do it: Adopt a plank position and hold your spine straight. "It's common to be bum up or bum down," warns Broadbent. Move your left hand backwards so it's underneath your shoulder and push through it until it is straight. Then repeat on the other side until you are in a press-up position. Place your weight down through each forearm to return to the

starting position.
Core value: "This is good for resisting fatigue on long rides, when out of the saddle or when riding with aero bars," explains Broadbent. "That's because it targets your triceps, shoulder stabilisers and abdominals all at once."
Dose: Aim for as many reps as you can in 3 x 30 secs, building up to 3 x 60 secs
Level: Intermediate

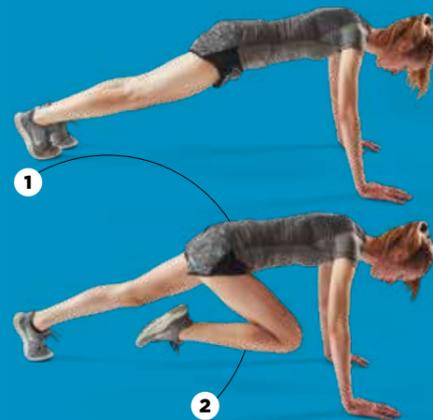
05 Mountain climbers

How to do it: Start in a press-up position and keep your spine in a neutral position. Lift your right knee up towards your shoulder and back again, then repeat with the left side.

Core value: "These target the neglected but important hip flexors – which bring your legs up to your trunk as you pedal and help transfer force – as well as the abdominals," explains Broadbent. "They also potentially reduce the likelihood of lower back pain."

Dose: 3 x 60 sec efforts

Level: Beginner: a TRX suspension trainer (resistance bands) will increase difficulty

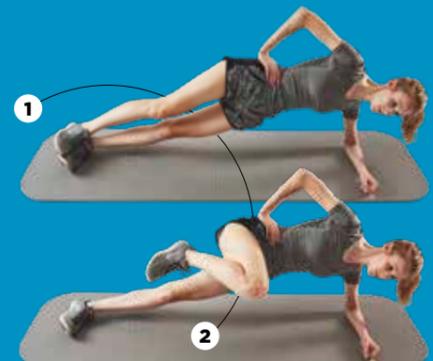


06 Side plank 'bicycle'

How to do it: Lie on your side and push up through your arm and lower leg into a side plank. Lift the top leg away from your midline slightly, then take the leg through a pedalling motion.

Core value: "This targets the obliques and glute med muscles, which are essential for mitigating unhelpful rotational forces in the trunk and lower limbs," says Broadbent. "As a result, this will optimise your power production, as well as reducing the incidence of anterior knee pain or lower back pain."

Dose: 2 to 3 sets of 30 secs, building to 60 secs
Level: Intermediate to advanced



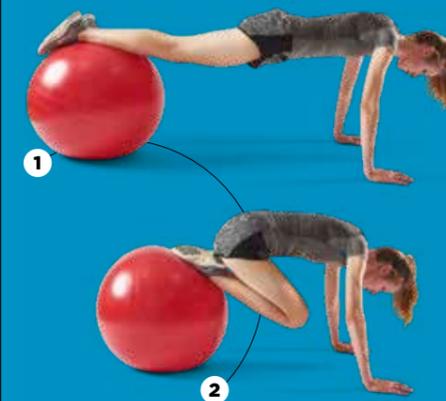
"It teaches you to engage your core, – especially if those core muscles are weak to start with"

Medicine ball throws

07

How to do it: Stand with your feet shoulder-width apart, with a wall to your right-hand side. Adopt a squat position with a medicine ball in your hands at waist level. Rotate the ball to the right, away from the wall, then throw the ball across your body and into the wall, pushing off your left leg. Catch the ball, then after one set repeat on other side.

Core value: "This rotation-based exercise introduces some variety and balance to your routine," explains Broadbent, "but it will also help strengthen your core for when you need to power up out of the saddle and push hard with your legs."
Dose: 3 sets of 12 reps each side
Level: Beginner through to advanced



08 Jack knife

How to do it: Adopt a press-up position with both your feet on a gym ball. Keep a relatively neutral spine position, otherwise your arms will do most of the work and quickly fatigue. Keeping your feet on the ball, pull your knees towards your chest, then return to the start.

Core value: "This is a hugely demanding core exercise that will target your hip flexors, rectus abdominis, obliques and upper-body stabilisers. It will particularly help those who ride in an aggressive position on their time trial bike."

Dose: 2 to 3 sets of 6 to 8 reps, but focus on form over volume
Level: Advanced



Goblet squat

09

How to do it: Stand with your feet shoulder-width apart. Hold a dumbbell or kettlebell about 20cm from your chest. You should feel your abs and spinal muscles tighten to counter this. Now bend your knees and squat as far as you can before returning to the start.

Core value: The squat is a powerful exercise that works your hips and glutes. But by simply altering the position of the weight, you can bag a bonus core workout. "Holding the weight in front of you helps to recruit not only the large muscles like the rectus abdominis and

erector spinae but some of the deeper postural muscles too," explains Broadbent. "This helps you to hold a stronger position while pushing hard on the pedals."

Dose: 3 sets of 6 to 8 reps

Level: Beginner through to advanced as you increase the weight

10 Deadlifts

How to do it: If you have access to a gym, use a barbell, but a dumbbell will also work. Stand with your feet shoulder-width apart, bend your knees and hinge forward at the hips and spine, maintaining a relatively flat spinal position. Pick the weight up from the floor, and push through your feet so you extend through your hips, knees and ankles back to your starting position.

Core values: Don't be intimidated by this classic strength exercise: it works lots of key strength and stabilising muscles to help you produce power more efficiently. "You'll target the stabilising muscles in the spine, as well as the spinal extensors, glutes and hamstrings," says Broadbent. "This will have a widespread impact on your ability to produce force through your legs."

Dose: Aim for 3 x 12 reps with a light weight – this is about stability as well as strength

Level: Beginner through to advanced

