

Spinning in Circles

Because it's winter and more difficult to get out on the bike to put in long hours, it's a great chance to work on different aspects of our cycling skills that may get neglected once we get back to riding outdoors. One such cycling aspect is your 'spin' – your ability to move your feet in round circles on the pedals in a fluid and efficient manner.

Before we got bikes with toe clips or clipless pedals, we propelled ourselves simply by pushing down on the pedals. As we graduated to bikes with toe-clips (for us old timers) or clipless pedals, we still tend to pedal the way we learned, mostly pushing down. Toe clips and then clipless pedals were developed so that we can not only push down on the pedals, but also push and pull on the pedals in other parts of the pedal stroke. This adds additional power to the pedal stroke and uses muscles that would otherwise not be used. It also smoothes out the pedal stroke because force is being applied in a more continuous motion.

Facing your right crankset, think of it as a clock face. The majority of the force is applied from about the 1 o'clock to the 5 o'clock positions. You can do this with or without your feet attached. But clipless pedals allow you apply force through the rest of the pedal stroke. When your foot moves back up on the pedal it is essentially dead weight, which by the way the other foot has to push back up, creating more work for it, and your leg weights quite a bit. With your shoe attached to the pedal, you can now pull through the bottom of the stroke (5-7 o'clock), pull up (7-10 o'clock) and then push over the top (10 – 1 o'clock). Now despite the expectation that pulling up on the pedals actually helps propel the bike forward, at best it simply unweights the leg so the other leg doesn't have to push it back up. Experiments have shown this but to convince yourself, all you have to do is get on a trainer with one foot clipped in and start pedaling with one leg. You will find that there is a dead spot (about 9 o'clock) where it's really difficult to lift the leg and actually pull up on the pedal. But even so, unweighting your leg reduces significantly the amount of work the other leg has to do so it's worth doing.

Over the years I've heard people say "pedal in circles". What they are meaning is to apply force all the way around the pedal stroke. When I am riding and remind myself to concentrate on pedaling in circles, my speed increases instantly a half to a full mile per hour. However, I have to admit I have somewhat of a hard time thinking about pedaling in circles: push down, pull back, pull up push forward, all in less than a second, and then to do it with two legs going in opposite directions! It takes a lot of concentration (kind of like patting your head and rubbing your stomach). What I've found works easier and better for me is to think about pushing and pulling with my feet. I push forward from the 10 o'clock to 4 o'clock positions, and then pull back on the pedals from 4 – 10 o'clock. This is a lot easier to think about and I seem to get the same result. When pushing forward, you are also pushing down on the downstroke, and when pulling back, you are also pulling slightly up. So give this a try sometime and see if it helps. It should smooth out your pedal stroke and may increase your speed. Eventually with enough practice, you won't need to think about it. It should just happen, but it has to be practiced to get to that point.

So when you are riding indoors, don't forget to do some high speed and one-legged spinning to train your legs to spin in circles. It's a good warmup exercise, and a good drill to do on recovery days as it

isn't too tough on the legs.

For more information on building structured training plans, get my free booklet, Basics of Cycling Training, on my website www.CyclesportCoaching.com

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Ride on -- David Ertl

David Ertl is a USA Cycling Level 1 (Elite) Coach and NSCA Certified Personal Trainer. He coaches individuals interested in improving on their current cycling ability, whatever level that may be. He also provides cycling training plans and ebooks at his website.

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