Beyond Your Comfort Zone
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- Everyone has a “comfort” cadence range they prefer
- Your indoor “comfort” cadence is probably higher than your outdoor cadence due to the weighted flywheel
- A cadence which is higher or lower than your “comfort” cadence feels challenging because you are less efficient
- You can train your cardiovascular and neuromuscular systems to prefer a higher or lower “comfort” cadence

Cadence Comfort Zone
The number of revolutions of the crank per minute (rpm) is your cadence. More simply, it is the speed at which you turn the pedals. Cycling is a power sport. Your power is the product of the force you apply to the pedals times your cadence. You want to pedal as fast as you can with the greatest amount of force you can maintain.

Your comfort cadence is the speed and force at which you ride that feels most comfortable for both your cardiovascular and muscular systems. Your optimal cadence is likely a combination of the strength of the cardiovascular and muscular systems. Outdoors, elite cyclists typically have a cadence between 80 -120 while recreational cyclists pedal between 60 - 80 rpm’s. Respectively, their comfort cadence falls somewhere in between those numbers. Indoors, your cadence will probably be higher due to the weighted flywheel. Faster cadence requires a well developed cardiovascular system to support the aerobic demand of higher pedal turnover. Lower cadence requires more muscular strength to develop the force needed to turn a higher gear.

Cadence has both a motor-learning and physiological element to it. If your comfort cadence is 75, it will be difficult to pedal at 90 rpm’s for a long length of time because your neuromuscular system is not conditioned to perform at that level. It will feel more difficult because you lack efficiency at that higher cadence. The good news is that cadence can be trained. In order to do this, you need to train Beyond Your Comfort Zone!

Physics of Cadence
Two cyclists can weigh the same, have identical bikes, have identical aerodynamics and are riding next to each other at the same speed on a flat road. Because they are riding the same speed, theoretically, they are performing the same amount of work. However, one cyclist is at 70 rpm’s and the other at 110 rpms. One cyclist is pressing hard on the pedals with each stroke. The other is pushing lightly on the pedals, but much more frequently.

Physiology of Cadence
Low cadence cycling requires you to push harder on the pedals generating a higher force contraction. This then requires the leg muscles to recruit more fast-twitch muscle fibers vs slow-twitch fibers. High cadence cycling is just the opposite.

Fast-twitch fibers:
- Burn glycogen for fuel. Glycogen is stored within the muscles and is in relative short supply, about 2000 calories for a well-trained, well-fueled athlete.
- Fatigue quickly, are NOT built to go all day.
- Take a long time to recover before they can be used again.

Slow-twitch fibers:
- Primarily burn fat for fuel, an almost limitless supply of fuel.
- Are very resistant to fatigue, they are built to go all day.
- Recover quickly when allowed to rest.