

May 2012 part 1

The Simple, Beautiful Pedal Stroke

(Not Quite as Simple as You Might Think)

Regardless of your reasons for riding, the simple act of pedaling your bike deserves more attention than you likely give it. *"But I'm not a cyclist, I'm riding a spin bike, why would I care about my pedal stroke?"* Perhaps the simplest reason is that a proper pedal stroke produces more power, more power translates to more

calories burned. Interested now?

Without a doubt you've heard instructors urge you to "push and pull" on the pedals. But if you think about it, pushing and pulling connotes a linear trajectory, or at best pedalling a square. Instead, imagine the pedal stroke as a clock face.



The stroke is then divided into four distinct phases:

Top Dead Centre (12:00)

11:00 - 1:00

Roll The Barrel

Imagine that your foot is on top of a barrel and you are rolling it forward allowing your foot to move across the top of the pedal stroke.

Imagine your toes pushing towards the front of your shoe.

Power Phase

1:00 - 5:00

Fully Engage Core

Begin to Drop Heel

Relax the belly but engage the core by bringing your ribs to meet the hips. This will fully engage the core and provide a strong platform for your legs to push up against.

During the power phase many riders will rotate the pelvis forward as the knee is in the flexed position which results in a loss in power.

It's important to try to keep the hips square.

Begin to drop heel in this phase.

Bottom Dead Centre (6:00)

5:00 - 7:00

Scrape Mud

Begin this phase with the heel dropped.

Drag the foot across the bottom of the stroke leading with the heel which engages the powerful muscles of the gluteus and hamstring group. Imagine trying to lengthen the crank arm.

Recovery Phase

7:00 - 11:00

Unweight Pedal

Help with the power phase by floating the foot on the pedal.

As you approach 10:00 imagine throwing the entire leg over the handlebars.

Practice the four phases with enough resistance on the bike to feel the entire stroke.

If you have access to a computer which provides watts, try your old way of pedalling and then pedal full smooth circles (be sure to keep the cadence and resistance consistent with both efforts). You've now learned how to pedal efficiently through the "dead" spots at the top and bottom of the stroke, becoming more productive and powerful simply through a better understanding of the beautiful, simple pedal stroke.

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May Issue: More on the Pedal Stroke - Engaging the Brain and your Legs

Upcoming Certifications: April 11-13/12 C.O.R.E I & II Brandon, MB. April 21-22/12 Traverse City, MI. April 21-22/12 Edmonton, AB. May 5-6/12 Mississauga, ON. May 11-12/12 Fredericton, NB

May 2102

The Simple, Beautiful Pedal Stroke - part 2

Learning a New Skill - Engaging Your Legs and Your Brain

We all learn differently, some by doing (kinesthetic) some by hearing (auditory) and some by watching (visual). While one learning style dominates we generally have a combination of all three. Cuing our instructions by keeping these learning styles in mind gives participants a greater chance of grasping what you are trying to say. Visual learners will flourish with a handout or something they can visually refer back to, while kinesthetic learners will need to "feel" the drill. Tap into this style of learning by focusing on bodily cues, like "scraping mud off your shoe" to cue the 5:00 - 7:00 phase of the pedal stroke (see part 1). Auditory learners will need to *hear* your instructions clearly, they respond well to word associations "*feel* the *heel* drop" or "scrape the *poo* from your *shoe*."

Conveying the purpose of each drill is critical. In part 1 of "The Simple, Beautiful Pedal Stroke" you learned the importance of pedaling "smooth, round circles" rather than "pushing and pulling" and to break the pedal stroke into 4 distinct phases. (An efficient pedal stroke makes you more powerful. More power = more calories burned). Conveying the desired outcome of the drill is just as important. (For some the calorie quotient is enough, for others becoming more efficient and powerful on the bike becomes the desired outcome).

Current research indicates that *external focus* is the most effective approach to learning a new skill. External focus is a type of *attentional control* where the participant focuses on an element that is outside of his/her body. For example, when cuing a smooth round pedal stroke, have the participants imagine that they have a marker attached to their ankle and are drawing a perfect circle on a white board beside them. Have them visualize the circle they are drawing ensuring that the marker line is the

same thickness and has the same value throughout (meaning they're applying the same pressure throughout the entire stroke).

"If possible, external focus should be directed toward an element, an anticipated effect, or an outcome that is far from the performer's body... suggest to athletes that while executing the movement, they should pay attention to or concentrate on (1) something external to their body or (2) the expected outcome of their movements..." Coaching Association of Canada

Imagining that the crank arm is made of thick elastic is another great example of *external focus*. *Stretching the crank* from 5:00 to 7:00 and engaging the heel creates awareness of the dead spot at the bottom of the pedal stroke. Visualizing that your foot is on top of a barrel while you push the barrel along, (*rolling a barrel*) from 11:00 to 1:00 helps to eliminate the dead spot at the top of the pedal stroke.

Spending just a few minutes at the start of each class to practice external focus and pay attention to the simple pedal circle will go a long way in producing a smooth, powerful and efficient stroke.