

## Week 2 - Session 2:1 - Pedal technique

**Goal:** Make circles with our feet rather than pistons mashing down and hitting the bottoms then bouncing back up

### Why?

- i) It's more efficient
- ii) If you push down too hard you lift yourself up off the saddle (a tiny amount) and then plop back down again, this can get quite painful after a while!
- iii) By making circles we start to use the muscles at the back of our legs (hamstrings and glutes) as well as quads, both sharing the load so we can go for longer, and helping to develop these 'posterior chain' muscles which tend to be underactive given today's lifestyle, therefore helping to reinforce a more balanced body
- iv) A vital skill if you want to learn to increase your cadence, which can help prevent fatigue of the leg muscles. See more next week.

### Are you aiming for equal power all the way round?

No, the strongest part of your stroke will always be 2-5 o'clock, we're not trying to change that, but we're aiming to minimise the dead spots at the top and bottom of the stroke and slightly ease the burden on your quads by ensuring your hamstrings play their part as well.

### Do you need cleats to do these drills?

No! Great skills development to maintain a good pedal stroke without cleats, but the part of the stroke where you pull up at the back will be quite minor without cleats.

### Do you have to do the drills?

Nope, you can just do the training, but why not take the opportunity to work on your skills as well. Plus, dare I say it, but indoor Z2 turbo sessions can sometimes get a bit boring, so having something to focus on can help pass the time.

### Is it the same technique peddling outside?

Yup, 100% but it's a lot easier to work on these sorts of drills inside when you're not worrying about potholes and traffic.

### Drills

- Overview: Think about making circles with feet rather than just pushing down at the front (if using a Watt bike check for the sausage/peanut shaped curve rather than a figure of 8). Push down at the front, then scrape along the bottom, and pull up at the back. If you don't have cleats you won't be able to pull fully up at the back, but you can certainly work on the pull along the bottom, and start the pull up at the back.
- For the following drills imagine a clock face with your cranks as the hands of the clock. Make sure you keep the stroke effortless and fluid, get rid of any unnecessary tension.

- You're going to focus on one leg at a time - both feet are clipped in but you'll 'unweight' one foot so that you're doing the majority of pedalling with one leg.
- Don't worry too much about the power ranges, if it drops the first time you do the drills that's fine. After the first round you should find it a bit easier, try and keep to power, but again, don't worry too much. Ensure the cadence is high enough to keep it smooth and fluid. Set it where you find it most comfortable, ideally around 90 rpm.
- If you find it too hard then drop the power or switch legs to take a break. Make a note in the workout notes, especially if you find one leg weaker than the other and make sure you start with the weaker leg next time.  
Adapt the timings as needed but aim for around R: 30, L:30, both: 60, before moving to the next focus.
- Continue cycling through the drills, focussing first on the R leg, then L, then both, keep rotating through the drills on each interval, ensuring that you don't drop the power.
- Pedal drill 1: **Make rainbows** - Starting with the right foot focus on 10 – 2 o'clock on the clock face for 30 seconds, so instead of mashing down at the front with your quads, you're lightly kicking over the top of the top of the pedal stroke. Then swap to the left. Pedal using both feet for 60 seconds, focussing on the top part of the stroke with both feet.
- Pedal drill 2: **Make smiles** - Starting with the right foot, focus on 4 – 8 o'clock on the clock face for 30 seconds. Rather than just ending the stroke at the bottom (6 o'clock), instead, as your foot gets to 4 o'clock, imagine gently scraping your foot along the floor, lightly using your hamstrings to pull along the bottom and back up to 8 o'clock, repeat with left for 30, both for 60.
- Pedal drill 3: As above but focussed on **pulling up at the back** i.e. 5 o'clock to 12.
- Pedal drill 4: Focus on **Now put it together** kicking over the top, pulling across the bottom and back up to the top. Focus on one foot, then the other, then both. [R: 60, L:60, both: 60 x 2]

Note: The strongest part of your stroke will always be 2-5 o'clock, we're not trying to change that, but we're aiming to minimise the dead spots at the top and bottom of the stroke and slightly ease the burden on your quads by ensuring your hamstrings play their part as well.

## Session 2:2 - Introducing Sweet Spot

**Goal:** Raise our threshold power whilst minimising recovery demands

**How:** By cycling just below our lactate threshold so that our body is forced to adapt but taking longer rests than we might otherwise, and limiting the amount of time spent at threshold.

### More detail:

A key concept in turbo training is that of the lactate threshold – the point at which an athlete begins producing lactate faster than their body can process it, leading to that heavy leg feeling and limiting your ability to continue putting out power.

You're probably familiar with the feeling of pushing hard, and everything feels ok, and then relatively quickly, it becomes much harder to maintain the same power or speed. That's (probably) because you've hit that threshold.

If we increase our threshold we can put out more power for longer (and therefore go faster), before we hit threshold.

If we train at or around the threshold the body is forced to adapt, it becomes better at recycling the waste products of exercise, and we raise our threshold. But training at threshold is very hard on the body, it takes longer to recover from, so instead we're going to do intervals at 'Sweet Spot', an intensity so named because it gives greater returns in terms of helping to raise the threshold, without needing extended recovery.

And rather than going for an all-out, sustained effort, we break the training into intervals, allowing us to train at threshold, then recover, then up to threshold again, allowing us to spend a longer total amount of time at threshold, but without ever reaching the point of complete exhaustion, therefore limiting the risk of damage to our bodies.

We'll begin the plan with some sessions based on RPE so that you get used to holding constant power, before we add in a test.

Note – many people find these longer intervals hard on the mind. But bear in mind, for most races you will need to be able to hold constant power, so this is an essential skill to build!

It's much easier once you've done your FTP test and can hold yourself to account on the numbers rather than guessing on effort level. So stick with these first few sessions, work on your mindset, and don't worry, it will get easier!