



## Indoor Cycle Instructor PROFILE

# Getting Started with Intervals

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Training Type: **Intermediate**

Working HR Zones: **Zone 3 to Zone 4**

Cycling Specificity: **3**

Total Class Length: **60 minutes**

### **PROFILE DESCRIPTION**

This class provides an opportunity to introduce the concept of interval training to your riders. In addition to learning some different types of intervals, they will also gain the experience of how to properly warm-up and recover, both between drills (sets) and between the intervals (reps) themselves.

### **OBJECTIVE AND INTENSITY**

The objective of this profile is to allow riders to first understand that there are many ways to perform intervals. An “interval” is just a duration of time. Not only can the amount of time spent during each interval vary, but the approach as well. For example, intervals can focus on strength, aerobic fitness, threshold management or pedal stroke technique. In addition to the length of each effort, the target intensity and target cadence play a role in how the body interprets the stress and benefit.

### **A Good Self-Assessment Ride**

These intervals will focus on 3 elements of a rider’s fitness starting with strength development, then aerobic development and finishing with leg speed development.

#### **Strength Development Intervals**

The key to performing these efforts effectively is the emphasis on the muscles of the legs. Because of this, a leg speed of 60-80 RPM is recommended. The slower cadence will allow riders to add more resistance. The intervals will be shorter with an focus on “force”. Keep in mind, due to the length of these efforts and the slower legs speeds, high heart rates are often not obtained. It is also important that riders maintain good form. It is common for riders to begin pulling and tugging on the handlebars when attempting to push heavier resistance.

#### **Aerobic Fitness Intervals**

These efforts will target a leg speed between 80-90 RPM to reduce the emphasis on the legs and direct the stress more to the cardiovascular system. The intervals are longer which will cause riders to dig deeper to physically and mentally sustain each one. Expect heart rates to be high, even driving riders above their second threshold (T2, VT2 or LTHR).

### **Leg Speed Development Intervals**

The target leg speed will be dependent on the type of riders you have in your class. Although many outdoor riders can maintain leg speeds of 100-120 RPM, many indoor riders may find 100 RPM challenging. The focus is not only on leg speed but proper form. The rider must have as much resistance on their bike that still allows them to pedal at the target cadence. Remember, leg speed is a skill that needs to be developed. If riders are not able to follow the cadence you are prescribing, encourage them to find a leg speed that is challenging to them.

### **Warm-Up**

Take the time to prepare the body properly. These are high-intensity efforts that will require a combination of muscular strength, aerobic and anaerobic energy. I suggest a 20 minute (structured) warm-up that allows the rider to increase heart rate and body temperature, while activating the legs and priming aerobic and anaerobic energy systems.

### **Intermediate Recovery**

It will be important to point out the importance of recovery to your riders. This profile provides both intermediate recovery between each effort (interval) and between each set (drill). Letting riders know the amount of recovery they will have will free them to give all they have during the efforts removing the worry of not having the opportunity to pull it back together.

## THE PROFILE

### WARM-UP (Part 1)

Length: 5:00 Minutes

Intensity: 50-60% PE / Zone 1-2

Cadence: 95 RPM

Cover the standard safety banter and provide an overview of the ride's objective.

*“Today we are going to experience a way to get started with interval training. There are many ways to use intervals to increase our fitness, but today we are going to focus on 3: Strength Development Intervals, Aerobic Development Intervals and Leg Speed Development Intervals.”*

*“This is a high-intensity workout so it is important that you monitor your body throughout. There will be adequate recovery provide not only between each set or section, but recovery between each interval – so there will be no excuse for you not to give it your all.”*

*“Also, remember that form is more important than performance. It is better to use less resistance or less leg speed if trying to do more will cause you to lose your form. If you find your form wavering at any point, reduce your effort and focus on your form until you can recapture it.”*

### Leg Speed Primer

Length: 5:00 Minutes

Intensity: 60-75% PE / Zone 2-3

Cadence: 60 – 100+ RPM

Riders will start by performing a 15-second fast cadence effort followed by 15 seconds of recovery. After 2 minutes (4 efforts), they will perform two 30-second fast cadence efforts with 30 seconds of recovery between each. Finish with a 60-second fast cadence effort.

*“We are still in the warm-up but are going to progressively increase our intensity as we bring the body into the workout.”*

*“We are going to perform a number of fast cadence efforts starting at 15 seconds. Then we'll move to 30 seconds and end with a 60 second fast cadence effort.”*

*“You should have enough resistance on the bike so you remain in control of the weighted flywheel at all times. If you find yourself bouncing in the saddle, either add resistance or reduce the speed of your legs until the bouncing stops.”*

## Moderate Climb

Length: 7:00 Minutes

Intensity: 70-80% PE / Zone 2-4

Cadence: 60 RPM

The goal of the climb is to activate the muscles of the legs without over-stressing them. The focus is on consistent pressure. Keep riders from attacking at the top or pushing too hard by reminding them of the difficult just ahead. As the riders climb, keep them relaxed and allow them to stand and sit depending on their preference.

*“Yep, we are still in the warm-up. This is how the pros do it, so welcome to the ranks of the elite. We are going to embark on a 7-minute climb. The leg speed will be a bit slower (around 60 RPM) to allow us to place some consistent force on the legs and prepare them for the intervals to come.”*

*“Feel free to use a combination of seated and standing climbing technique as you make your way to the top.”*

*“Remember, there are no KOM (King of the Mountains) points awarded at the summit so hold back on the bravado and save it. You will need it later.”*

## OPENERS & RECOVERY

Length: 5:00 Minutes

Intensity: 60-90% PE / Zone 1-5

Cadence: 80 - 100 RPM

Before riders get to fully recovery it is important to have them “open up” the anaerobic pathways before they will need to rely on them during the intervals. The final step in priming the systems. Have the riders perform two 30-second maximum efforts separated by 30 seconds of recovery. After the second max effort they will have 3 minutes to recover before the first set of intervals.

*“All Right, it’s time to open up our high-intensity energy systems. We are going to perform two 30-second maximum efforts. You are only going to have 30 seconds to recover between each. THEN you will be able to recover for 3 minutes before our first set of intervals. The final stage of the warm-up (and we’ve worked hard already).”*

*“You can perform these max efforts in or out of the saddle or a combination of the 2. Let see what we came in with today.”*

*...after the openers...*

*“Now let’s 3 minutes to let our heart rates recover. Find an easy flat road and grab a drink.”*

### STRENGTH DEVELOPMENT INTERVALS

Length: 6:00 Minutes

Intensity: 70-80% PE / Zone 3-4

Cadence: 60 – 70 RPM

Riders will perform 3 1-minute intervals with maximum resistance at a cadence of 60 RPM. They will get 1 minute to recover between each interval and 3 minutes to recover after the set.

*“Now for our first set of intervals focus on developing muscular strength. The leg speed is going to be slower to keep the stress on the muscles of the legs.”*

*“The goal is to add as much resistance as you can and then maintain your cadence for 1 minute. If you have concerns about your knees and/or joints or have an injury that prevents you from using a lot of resistance, back off to where you feel comfortable.”*

*“These intervals are best performed seated, but feel free to stand in between efforts to stretch the legs.”*

*“Remember, form is key. If you can maintain your posture and form, back off until you can. As your muscular fitness increases, you will be able to add more resistance. If you try to turn too much resistance too soon you risk injury.”*

### RECOVERY

Length: 3:00 Minutes

Intensity: 50-60% PE / Zone 1

Cadence: 80-100 RPM

Riders may find that using a faster leg speed to recover after strength intervals is more effective to flush the legs of the by-products and acidity produced during the effort. Encourage them to listen to their body and have them take a mental assessment of how the intervals felt to them. Were they easy, manageable or very difficult?

### AEROBIC DEVELOPMENT INTERVALS

Length: 6:00 Minutes

Intensity: 80-90% PE / Zone 4-5

Cadence: 85-90 RPM

Riders will perform two 2-minute intervals with maximum resistance at a cadence of 85 RPM. They will get 2 minutes to recover between each interval and 5 minutes to recover after the set. They will find themselves balancing both the change in leg speed (not placing emphasis on the cardiovascular system) and the duration of the interval being twice as long.

*“This set of intervals will turn the focus toward our aerobic system. The cadence (~85 RPM) will be key so try to either pedal at the tempo of the music or match your leg speed to mine.”*

*“The question now becomes, how much can you sustain for 2 minutes – twice the length of time. They may introduce a mental challenge in addition to the physical one.”*

*“Since the speed of our legs is important in targeting the proper stress on our cardiovascular system, make sure your leg speed doesn’t drop during the intervals. If you find it hard to maintain your cadence, reduce the resistance to restore or sustain your speed.”*

*“The up-side to increasing the length of the intervals is that you will also have twice as long to recover between efforts - 2 minutes. Work hard and “earn” those 2 minutes. You will be given 5 minutes to recovery after this set and trust me, you will need every second.”*

**RECOVERY**

Length: 5:00 Minutes

Intensity: 50-60% PE / Zone 1

Cadence: 80-100 RPM

Riders may find that they are starting to feel fatigue so keep them motivated by recapping where they have been and what is still to come. Encourage them to listen to their body and have them take another mental assessment of how the last intervals felt to them. Were they easy, manageable or very difficult?

**LEG SPEED DEVELOPMENT INTERVALS**

Length: 6:00 Minutes

Intensity: 70-80% PE / Zone 3-4

Cadence: 90 – 110 RPM

Riders are given 3 options for approaching this last set. (1) Perform a solid 4-minute interval and then shut it down, (2) Perform a solid 4-minute interval, recovery for 1 minute (tabata affect) and then another short 1-minute interval or (3) Perform a solid 6-minute interval. Leg speed is emphasized so heart rates will not be as high.

*“Now for our last set of intervals. The emphasis will be on leg speed but the faster cadence will still place more stress on your aerobic system than your leg muscles.”*

*“The good news is that this set only has 1 interval. The bad news (or challenge) is the interval is a minimum of 4 minutes depending on how you approach it.....(explain the options).”*

*“Although the emphasis is on leg speed, everyone may have walked into the room this morning with different abilities. Don’t worry about what the rider next to you is doing. Focus on your leg speed. If you can’t turn the pedals at the speed of the music, they target a cadence that you consider fast and work with that. The key is always form and technique first.”*

**COOL-DOWN / STRETCH**

Length: 10:00 Minutes

Intensity: 50-60% PE / Zone 1

Cadence: 70 - 80 RPM

I recommend taking the first 4 minutes to allow riders to spin their legs and cool-down reducing their heart rate and body temperature. Use the last 6 minutes for stretching or allow riders to choose to stay on the bike if needed.

This is a good time to review not just what your riders accomplished but how they felt performing each type of interval. Which set was the easiest and which was the hardest? This may provide some insight for them allowing them to assess which areas of their fitness need more focused training and where they are rock solid.

Don't skip over this self-assessment! This is an opportunity to show them that our classes are not only focused but provide tremendous value. Our classes represent: Real Cycling, Real Training and Real Results (that's my motto).

### **THE MUSIC:**

Song Title	Time	BPM	Artist	Focus
In the Mirror	5:21	96	Jens Buchert	Warm-Up
Car Chase On Phoenix Avenue	4:55	67	Capri	Leg Speed Primer
2012	7:29	60	Mystical Sun	Moderate Climb
Bass Instinct	5:33	84	Gaudi & Antonio Testa	Openers & Recovery
Altitude (Bonus Track)	6:28	70	Hybrid	Strength Intervals
Cellar Funk	3:08	105	Down to the Bone	Recovery
Masters of the Universe	6:05	84	Juno Reactor	Aerobic Intervals
Further from Home	5:03	105	Groovecatcher	Recovery
Chicken Neck	6:13	96	Sal Difusco	Leg Speed Intervals
Bhajya Sahita	5:57	70	Hands Upon Black Earth	Cool-Down
Aureole	5:49	60	Jens Gad Presents	Stretching