

TOP SECRET

**File: Indoor Cycle Training
PREVIEW**

Matty Graham

Sport Scientist and Performance Coach

Exponential Performance Coaching

Caution: Contents will result in pain and excessive sweating when used properly!

Disclaimer: IMPORTANT that you read this before continuing

While every reasonable precaution has been taken in the preparation of this document, neither the author nor Exponential Performance Ltd assumes responsibility for errors or omissions, or for damages resulting from the use of the information contained herein.

The information contained in this document is believed to be accurate. However, no guarantee is provided. Use this information at your own risk. It is unconditionally required that before acting on any information contained within this document that you have read, understand and agree to the following:

1. "I" (the reader of this document) understand that I am fully aware of all the inherent risks involved with indoor cycling. I understand, acknowledge and agree that there are inherent dangers with exercise. I acknowledge and accept that indoor cycling is physically demanding and carries with it certain risk of injury and the possibility of death. As such, I agree to indemnify and keep indemnified Exponential Performance Ltd from any claims whatsoever and agree that I shall not hold Exponential Performance Ltd, its owner/s, employees or agents responsible nor be held liable for any personal injury, mental anguish, loss of whatsoever nature or kind however caused or that may occur during or after the application of any information contained herein.

2. I assume full responsibility for any injury or loss that may occur or I may sustain or I may cause to others in connection with the application of any information contained here within this document, and I, on behalf of myself, my successors in interest, heirs, assigns, and representatives hereby fully release and agree to hold harmless Exponential Performance Ltd, their employees, officers, directors and agents from any and all liability, claims, rights, or actions for death, bodily injury, property damage or any other loss or inconvenience whatsoever, suffered by me or caused by me, at any time hereafter occurring as a result of my voluntary participation in the application of any information contained herein.

Introduction

Welcome to Exponential Performance Coaching Indoor Cycle Training file. Indoor cycle training is a highly efficient way to train as well as being a safer and often more comfortable alternative to training outdoors during the cold, wet and dark winter months.

The winter phase of your training should be focused on developing your base aerobic endurance. Traditionally this was done via long slow distance training which is not often practical for busy athletes balancing work and family commitments. Recent research indicates that many of the cardiovascular and metabolic adaptations associated with improved aerobic function can be obtained from short duration, high intensity training (i.e. you can get the same benefits from shorter harder sessions). A number of the training sessions included in this library are based on this research so you can maximise the time you spend on your indoor trainer.

Peddalling efficiency is important to maximise the transfer of your energy from your lower body into your pedals and finally into forward momentum. For this development to occur the neuromuscular pathways from the brain to the muscles need to improve so the correct muscles are fired in the correct sequence over and over again. Winter is the ideal time to give your pedalling technique a revamp on the wind trainer. In this file you will also find a technique session that focuses specifically on the development of your pedalling efficiency. These concepts should also be applied across all of the sessions.

Along with these physical training benefits one factor that is often overlooked that indoor training can help develop is mental toughness. Developing the ability to 'suffer' on the bike is something that indoor training is great for. You, your slowly ticking watch and the deep burning in your legs as you grind past the half way point in another interval is something that when used properly can build an athlete's mental toughness. I have included some 'top secret' tips to help you develop an iron mind this winter.

The training sessions outlined in this file should be integrated into your current training schedule to replace similar planned on road sessions when time is short, during adverse weather or when it is too dark to safely ride outdoors. They can also be used to supplement your training to work on those specific aspects that are often missed in base development programmes. It is still recommended that your long rides are performed on the road rather than indoors as repeated prolonged indoor training sessions can lead to staleness and burnout. However, I have outlined a number of sessions that can be used as a long ride alternative for certain situations.

Indoor Cycling Tips

- The lack of air flow during indoor cycling often results in athletes perceiving their work rate greater/harder than it actually is. A good fan and ventilation is important to minimise overheating and a decrease in work rate.
- During the hill climbing sessions elevate your front wheel (~5 - 10 cm) using some blocks of wood. This angle helps recruit muscles specific to hill climbing that are not activated the same when on the 'flat'.
- To change your training load or resistance during your session use a combination of your gearing and trainer resistance. Different indoor trainers will have varying degrees of adjustability so use the first few sessions to work out the best way to adjust the resistance during your sessions.
- To help develop your pedalling technique set your trainer up next to and/or in front of a mirror. Using this visual feedback can be extremely beneficial to making changes to your pedalling technique.
- The high sodium concentration in your sweat makes it extremely corrosive. Insure that after each session that you give your bike a wipe down so any metal components do not start to corrode. Using a specialty wind trainer tyre will last longer than using a standard road tyre. Also putting a mat or towel under your trainer is a good idea so that your carpet does not get covered in sweat, worn rubber from your tyre or lubricant from your chain.
- Every five minutes change your position by standing for a few seconds, moving in your saddle or adjusting your hand grip to relieve any pressure points developing.
- Due to the lack of traffic lights, down hills, tail winds and freewheeling indoor training time is on average ~ 20% less time for the same training benefits as outdoor training for the same session. With this in mind you can take any programmed outdoor session and move it indoors altering the time (see table 2). While this can be useful to help get in those steady sessions it is recommended that you limit your time to a maximum of 2 hours to avoid staleness and burnout.

Table 2: Approximate conversion of outdoor to indoor ride time

<i>Outdoor time</i>	<i>Approx indoor time</i>
1 hour	45 minutes
1.5 hours	1.25 hours
2 hours	1.5 hours
2.5 hours	2 hours

Technique development session 1

Warm up: 10 min easy riding

Drill 1: High cadence 110 rpm+ focusing on holding a strong core to minimise upper body movement. Perform 3x30 sec blocks with 15 sec recovery between using a low/ easy gear.

Drill 2: Shoe scrapers.

- Imagine you are scraping mud off the bottom of your shoe. Activate your hamstrings and glutes pulling through the bottom of your pedal stroke

Drill 3: Kicking the door.

- Imagine you are kicking a door shut. At the top of your pedal stroke work on keeping consistent pressure on the front of your shoe, as you kick over the '12 O'clock' position.

Drill 4: Eyes closed.

- With your eyes closed pedal with a focus of applying pressure throughout the full pedal stroke holding a strong core, pulling through the bottom and kicking over the top.

Perform each drill for 2 min with 1 min easy riding between each and repeat 2-5 times depending on your ability and time availability.

Warm down: 5 min easy

Get your hands on the full Top Secret indoor cycling file for 10 more specific sessions:

Session 1: Sweet Spot intervals: Designed to improve your threshold without the punishing Zone 4 intervals

Session 2: Short of time 1: Research proven time effective session

Session 3: Short of time 2: Research proven Tabata based session

Session 4: Threshold maintenance: Come out of winter without losing the precious threshold gains from last season

Session 5: Technique development session 2: Build your pedalling efficiency and maximise your power development.

Session 6: Long 'split' ride: To wet and cold for a long ride on the road? This session allows you to clock up some good base mileage without losing your mind.

Session 7: Suicide pyramid: Be prepared to suffer on this session!

Session 8: Hill climbing interval ladder: Aimed to develop your strength endurance through simulated hill repeats

Session 9: TV 'break-away' ride: A fun way to get in some VO₂max sharpening intervals

Session 10: Endurance ride with cadence and resistance ladders: Develop your endurance while breaking up the monotony indoor training.

TOP SECRET: Indoor Cycle Training

Matty Graham

Sport Scientist and Performance Coach

exponential.performance@gmail.com