

EXPLOSIVE TRAINING Agenda • Experience the RAW INTENSITY of Explosive Training (60-minute ride) What is Explosive Training Guidelines **Explosive Efforts and Indoor Cycling**









Presenter: Tom Scotto

Benefits of Explosive Training My classes love it (no, really) Increased muscle fiber recruitment Promote rapid communication between the nervous system and muscle (rate of fire/contraction) Develop/Strengthen fast-twitch (Type II) muscle fibers Training for cycling events that require explosive efforts COMPERENCE - BOSTON CYCLING FUNCTION OF TRAINING SETTINGS.

Maximal Recovery Rest and Recovery is the Key. Unless the body is fully rested before the start of this workout, a rider will be limited in producing a maximum effort. This includes: - Muscular System - Cardiovascular System - Fuel & Hydration COMPERENCE - BOSTON CYCLING PUSION CONFERENCE - BOSTON CYCLING PUSION CYCLING PUBLISHED PUBLISHED

Intermediate Recovery Besides entering the workout fully rested, it is important to provide the appropriate amount of recovery between each explosive effort during drills. So....what is appropriate?



EXPLOSIVE TRAINING

The Indoor World

Although it may be tough to get riders to recover for 4 minutes between each sprint during an indoor cycling class, a 2-minute recovery is a good alternative.

You can always instruct riders to skip a sprint if they require additional recovery.



EXPLOSIVE TRAINING

Not All Explosive Efforts provide Maximal Recovery

There are times when explosive efforts occur with no rhyme or reason.

- Jumps
- Attacks (Multiple)
- Tabata Training



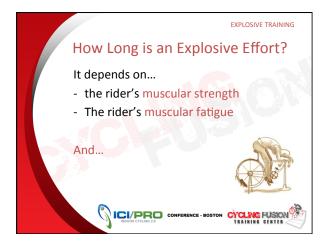
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EXPLOSIVE TRAINING Perceived Effort? Target Zone? • 110% or GO HOME! • 110% or DON'T BOTHER! Heart rate can not respond fast enough to capture the intensity Neuromuscular Power (watts) can be 2+ times your sustained power at 100% RPE

EXPLOSIVE TRAINING **Target Cadence** Leg speed can vary. Some of the top pro sprinters turn their legs between 95 and 125 RPM during explosive efforts Goal: Heaviest Resistance at the Fastest Leg Speed Slow (< 70 RPM) can place excessive stress on muscles Fast (> 120 RPM) can place excessive stress on joints CONFERENCE - BOSTON CYCLING FUSION TRAINING CENTER





FUEL: Hello Anaerobic Pathways!
 Explosive efforts are often too short and intense for effective use of energy generated aerobically
 Muscle Glycogen
 Creatine Phosphate (ATP-CP)
 Maximal: ATP-CP (8-12 seconds) augmented by muscle glycogen = ~30 seconds

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EXPLOSIVE TRAINING

When are Explosive Efforts Appropriate?

- Riders should have a good fitness base.
 This includes 8 to 12 weeks of training to condition connective tissues and develop muscular endurance and strength.
- For the cyclists: March/April and on
- Depends on your class demographics (beginners, special populations, etc.)



Explosive Efforts & Indoor Cycling

One Cycling

Conference - Boston Cycli

Explosive Efforts and Indoor Cycling

- Safety First
- Bike Limitation(s):
 - Most Bikes do not move Side to Side
 - Bikes do not move forward and backward
- Controlling the weighted flywheel
- Maximal Resistance!





Sample Explosive Efforts
Form Sprints
Length: 15-30 Seconds
Intermediate Recovery: 60+ Seconds

• These are often performed at 85% of a rider's maximum ability

• Great way for riders to experiment with the amount of resistance they will use

• Allows riders to practice proper "form" and the formula for safe explosive efforts.

Sample Explosive Efforts

Jumps

Length: 10 – 15 Seconds
Intermediate Recovery: 2 Minutes

• Heavy resistance

• Start with a slow cadence and then explode (sprint) until the resistance is overcome

• Excellent training for muscle fiber recruitment.

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EXPLOSIVE TRAINING Sample Explosive Efforts **Attacks** Length: 15-30 Seconds Intermediate Recovery: 30+ Seconds • Simulates actual race conditions where jumps and attacks are not predictable Don't exacerbate your riders in an attempt to provide a hard workout Don't use this as an excuse to violate the science and physiological principals

