

# Strength Training for Cycling

Why Are We Missing The Mark?

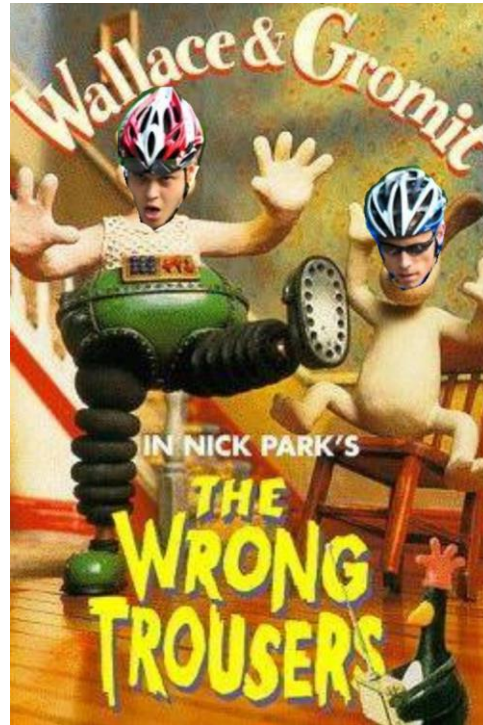


# AKA ... “The Cyclists and the Wrong Trousers”



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## “The Cyclists and the Wrong Trousers”



# With Immense Gratitude

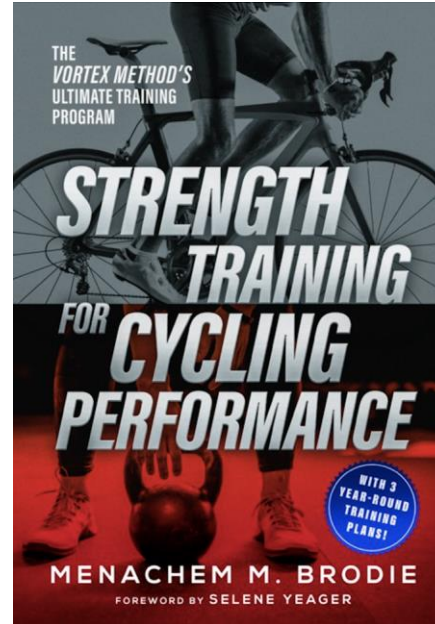
- Anton Von Gerwen - Science in Cycling Organizer
- Sebastian Weber- Inscyd
- Dr. Stuart McGill - Backfitpro.com, University of Waterloo
- Israel Cycling Federation
- Steve McEwan - Israel Cycling Federation
- Tim Beltz - NSCA-CSCS, University of Pittsburgh
- Glenn Pawlak - Owner, Big Bang Bicycles
- Dr. Joel Alcott - Power Lifting Coach, Mentor
- Laurie Wood - Director of Fitness, JCC Pittsburgh

All of the athletes who have allowed me to help them along their quest of health, fitness, and strength!!



# Who Am I?

- Israel National Track Program  
Strength Coach
- USA Cycling Expert Level Coach
- NSCA-CSCS
  - 3 yrs. Physical Therapy Setting
  - 4 yrs. NCAA Division 1 Top 25
- McGill Certified Practitioner
  - Lower Back Pain
- Exercise Physiologist
  - ACSM Accredited program
  - ASMBS Bariatric Surgery Center of Excellence
- SICI Certified Bike Fitter



# “Strength Training”



What's that supposed to mean?

# What is “Strength Training”?

- A systematic approach of physical training to overloading the individual with resistance, allowing for strength improvement.
- MUST be done consistently for results to “stick”



# We Are Not After Strength In The “Classic” Sense...

So why are we measuring akin to Power Sports (Oly, Powerlifting, CrossFit)?

Measuring progress as:

- 1RM/ Rep Max
- Increases in weight used
- Repetitions Completed
- Barbell focused/oriented





# The Wrong Trousers, The Wrong Train



# So why are we doing these?

## Sample 1

5 min warmup on stationary bike

Warmup squat bar only

Barbell Back Squat 2\*4-6 RPE 8

Deadlift 2\*4-6 RPE 8

Lunge 1\*12 RPE 7

Box Step RPE 6

Box Jump RPE 6

Core

## Sample 2

Front Squat 3-4\*8-10

Deadlift 3-4\*10-12

Barbell Back Squat 3-4\*10-12

Pushup 2-3\*8-10

Row 2-3\*10-12



Cycling is an energy intensive sport...  
Performing Heavy Deadlifts & Squats in  
the same day requires more recovery  
time, both neural and metabolic

# “Because, Research”



We're (Primarily) After The  
NEURAL Adaptations

We're Teaching Engrams &  
Strategies for Force Control,  
Efficiency, and Economy



**“Force creates motion, but stiffness controls motion”**

-Dr. Stuart McGill

# We can (and *must*) do better

1. Breathing
2. Dynamic Warmup Focused on improved movement, skill of core stiffness
3. Plyometrics/ Explosive
4. Focal Strength
5. Complimentary Strength
6. Global Challenge
7. Breathing

# What We REALLY want

1. Better Performances on the bike
2. Improved Repeatability
3. Better postures on & off the bike
4. More EFFICIENCY
5. Improved ECONOMY
6. Decreased Recovery Time
7. Longevity & Resilience



Photo by: Fred Jordan Photography

# Strength Training Should Be *Prescriptive*

- Done Correctly, we are Writing/ Rewriting Movement Engrams
- Strength Training = opportunity to improve rider economy & efficiency
- Neural & Energy taxation must be properly accounted for
- Upper body just as important as lower body
  - Fascial Systems
  - Proximal Stiffness
  - Breathing
- Exercise order & Pairing + Execution are paramount!





**More is not better....**  
**BETTER is better**

When done properly Strength  
Training can have a positive,  
progressive effect...

...But when done poorly,  
without a focus on true  
performance enhancement, it  
can have a deleterious effect.

# Possible Stations On The Road Ahead

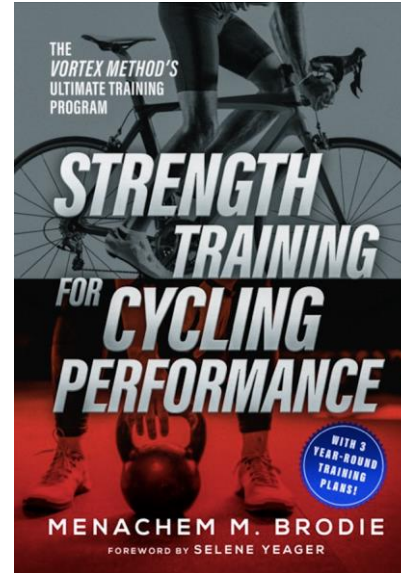
- **There's an evolution that has to happen**
- Research Studies looking at performance programs
- Look at use of Tempo, Velocity Based Movements in lifting and their effects on riding efficiency & economy
- Explore Increases in Efficiency and Economy after a Performance Oriented Strength Program
- Explore Recovery *Boosting* abilities of Strength for performance
- Posture & Breathing focus
- Deeper exploration of the Fascial System
- Change from a lens of Strength competing with riding, to a lens of strength of complimenting riding



# Thank You!



The Strong Savvy Cyclist  
& Triathlete Podcast



Book  
Available on Amazon

[www.HumanVortexTraining.com](http://www.HumanVortexTraining.com)

