



Conflict of Interest Statement

I currently have an affiliation and financial interest with HIIT Science Inc. around this presentation, including:

- Education
- Employment
- Research funding
- Scholarships
- Authorship royalties

NSCA 2019 COACHES CONFERENCE JANUARY 10 - 12 | INDIANAPOLIS, IN

Science and Application of High-Intensity Interval Training

Book & Online Course
Available December 2018

@PaulLaursen
@HIITScience
paul@hiitscience.com

NSCA 2019 COACHES CONFERENCE JANUARY 10 - 12 | INDIANAPOLIS, IN

What is High Intensity Interval Training (HIIT)?

“Exercise consisting of repeated bouts of high-intensity work performed above the lactate threshold (a perceived effort of ‘hard’ or greater) or critical speed/power, interspersed by periods of low-intensity exercise or complete rest”.

NSCA 2019 COACHES CONFERENCE JANUARY 10 - 12 | INDIANAPOLIS, IN

HIIT - Just one piece of the performance puzzle, but often an important one

NSCA 2019 COACHES CONFERENCE JANUARY 10 - 12 | INDIANAPOLIS, IN

NSCA 2019 COACHES CONFERENCE JANUARY 10 - 12 | INDIANAPOLIS, IN

CONTEXT

Sport Demands
Athlete Profile
Athlete psychological state
Long-term adaptations
Events of the day

CONTENT

Desired physiological objectives
Desired physiological objectives
Format of the HIIT session
e.g. metabolism involved, amount of neuromuscular load, integration of sport-specific skills, cognitive load, volume and intensity

Training periodization
- Daily plan
- Micro cycle
- Meso/macro cycle

2019 COACHES CONFERENCE JANUARY 10 - 12 | INDIANAPOLIS, IN

Performance - Context is Important

Triathlon

Football (Soccer)

Component	Triathlon (%)	Football (Soccer) (%)
Physical	85%	25%
Tactics	10%	30%
Skills	5%	45%

2019 COACHES CONFERENCE JANUARY 10 - 12 | INDIANAPOLIS, IN

Soccer

Speed ↑
Strength ↑
Endurance →

50-200m, MMA, Tri-Olymp, Open Water, Marathon, Road, Soccer, Middle

Component	Percentage (%)
Physical	25%
Tactics	30%
Skills	45%

2019 COACHES CONFERENCE JANUARY 10 - 12 | INDIANAPOLIS, IN

Fitness

- Being fitter/faster can't guarantee success
- Not being fit/fast enough can be a problem

- ✓ Skills +++
- ✓ Players interactions +++
- ✓ Game insights (decision making) +++

#1

→ Physical capacities:
→ cope with the demands of the match
→ execute their tactical roles efficiently
→ Fit with the game model of the team

2019 COACHES CONFERENCE JANUARY 10 - 12 | INDIANAPOLIS, IN

- 1- History & Evolution of HIIT
- 2- Traditional HIIT Methods
- 3- Physiological Targets of HIIT
- 4- Manipulating HIIT
- 5- Fine Tuning HIIT Weapons
- 6- HIIT & Concurrent Training
- 7- HIIT & Health
- 8- Surveillance II: Training Load
- 9- Surveillance I: Load Response
- 10- Putting it Together: Application

SOCCER	CYCLING
BASKETBALL	SWIMMING
TENNIS	TRIKATON
CRICKET	RUGBY UNION
BASISBALL	ROWING
AMERICAN FOOTBALL	AUSTRALIAN FOOTBALL
MIDDLE DISTANCE	CRUIS COUNTYER SKIDDING
ROAD RUNNING	HOCKEY 7
FIELD HOCKEY	HANDBALL
ICE HOCKEY	COMBAT SPORTS

2019 COACHES CONFERENCE JANUARY 10 - 12 | INDIANAPOLIS, IN

Chapter 3 - Physiological Targets of HIIT

Aerobic Anaerobic Neuromuscular

2019 COACHES CONFERENCE JANUARY 10 - 12 | INDIANAPOLIS, IN

2019 COACHES CONFERENCE JANUARY 10 - 12 | INDIANAPOLIS, IN

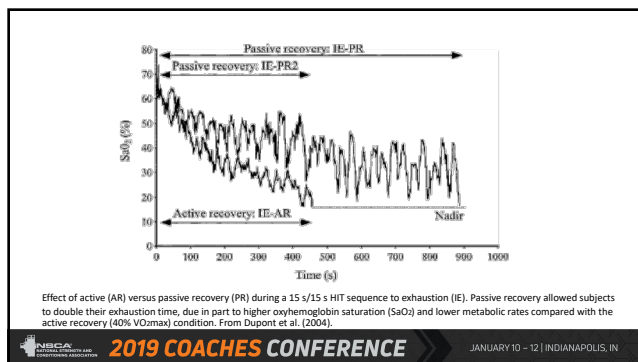
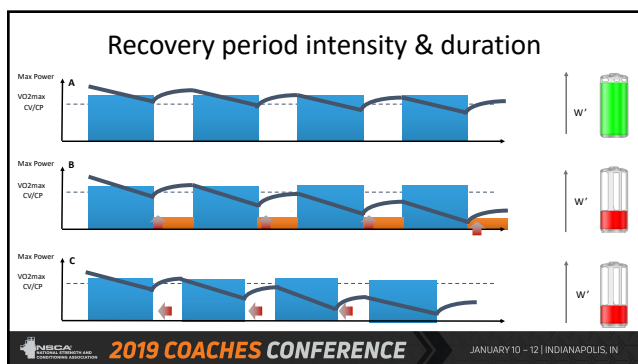
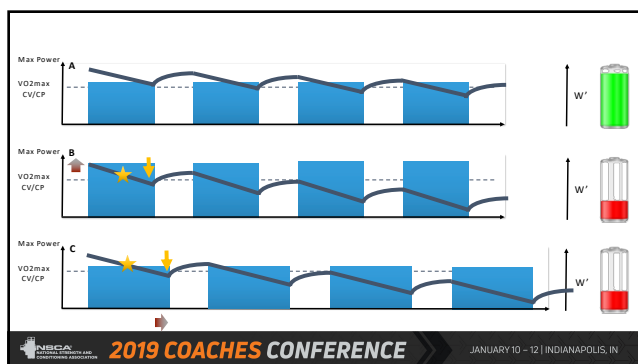
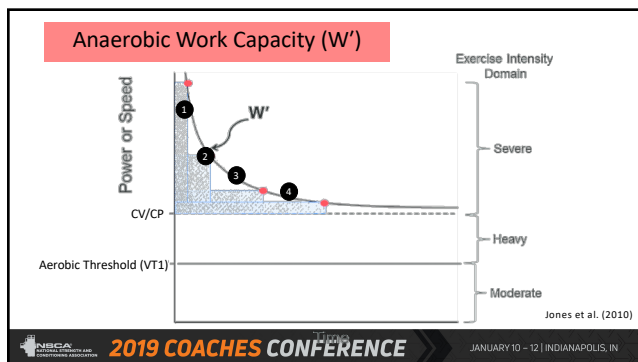
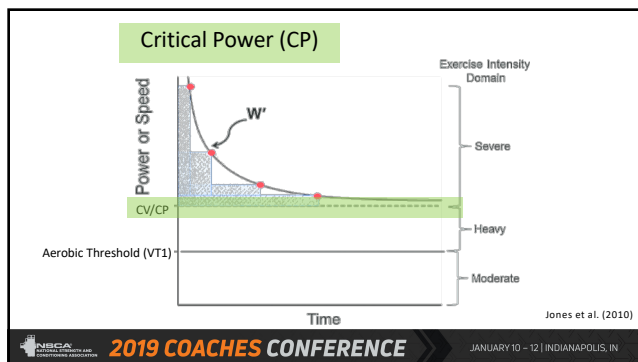
2019 COACHES CONFERENCE JANUARY 10 - 12 | INDIANAPOLIS, IN

2019 COACHES CONFERENCE JANUARY 10 - 12 | INDIANAPOLIS, IN

2019 COACHES CONFERENCE JANUARY 10 - 12 | INDIANAPOLIS, IN

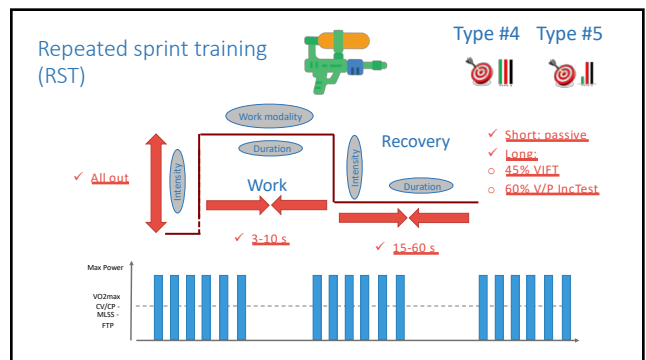
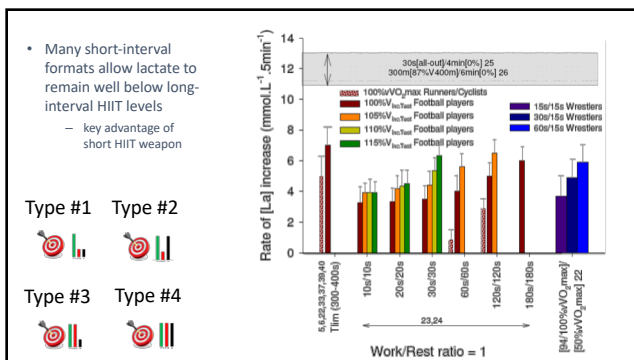
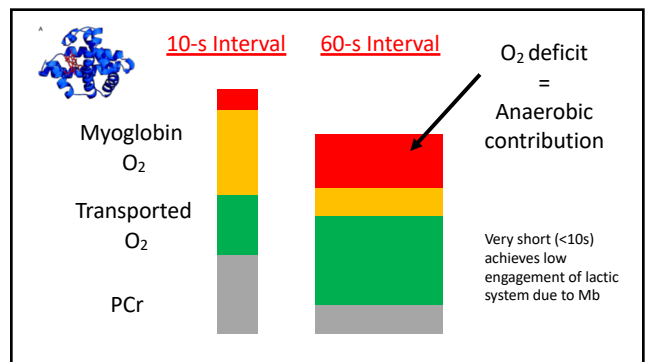
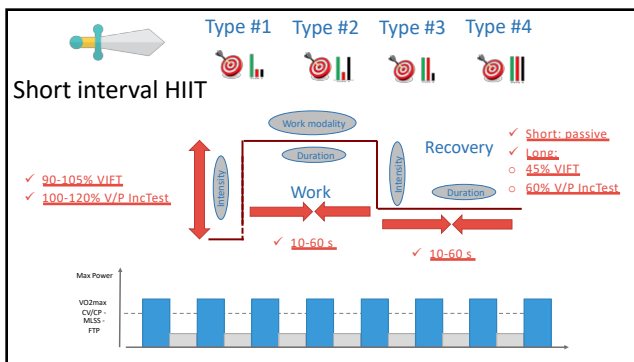
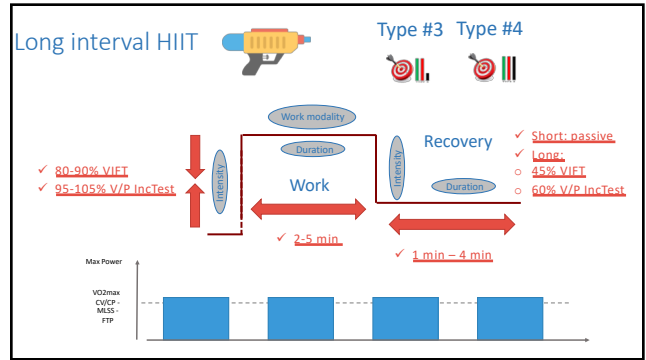
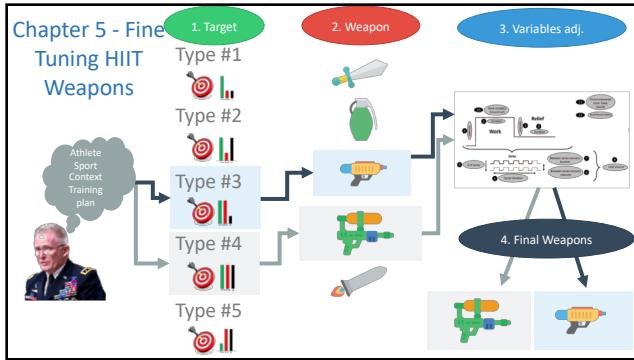
2019 COACHES CONFERENCE JANUARY 10 - 12 | INDIANAPOLIS, IN

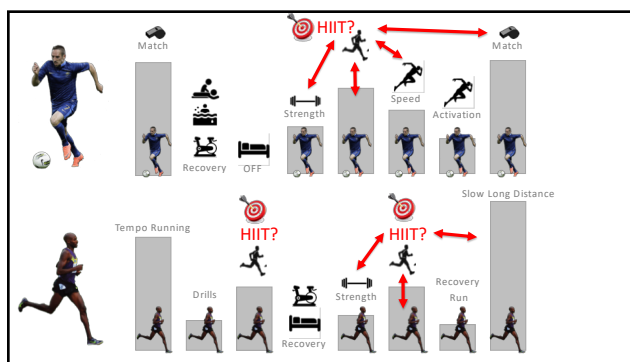
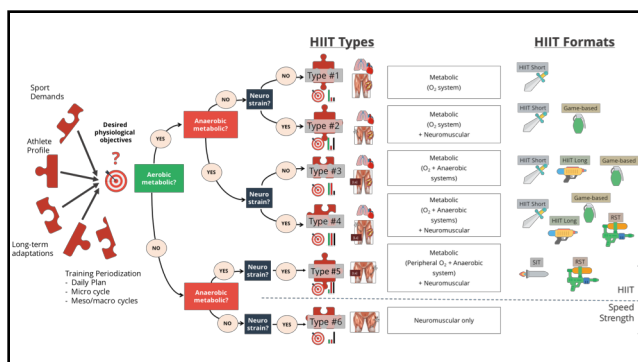
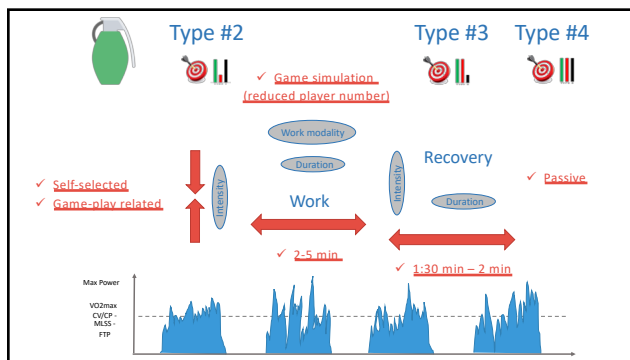
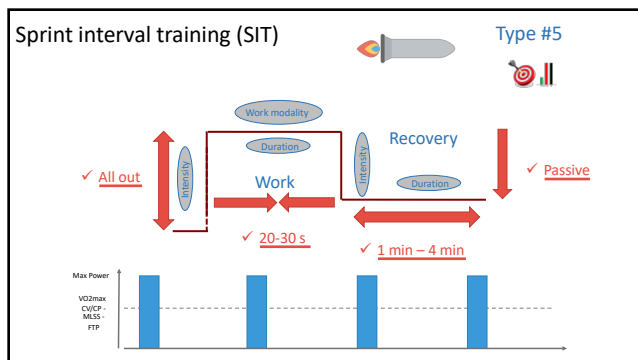
2019 COACHES CONFERENCE JANUARY 10 - 12 | INDIANAPOLIS, IN



- Maximal recruitment?
 - Passive
 - Longer recovery durations
- Maximal aerobic metabolic conditioning effect?
 - Active

OPPORTUNITY AHEAD





Science and Application of High-Intensity Interval Training

Book & Online Course Available December 2018

@PaulBLaursen
@HIITScience
paul@hiitscience.com

NSCA
NATIONAL STRENGTH AND CONDITIONING ASSOCIATION

2019 COACHES CONFERENCE

JANUARY 10 – 12
INDIANAPOLIS, IN
2.0 CEUS

#COACHES19