Welcome to:

Conditioning The What, Why and How

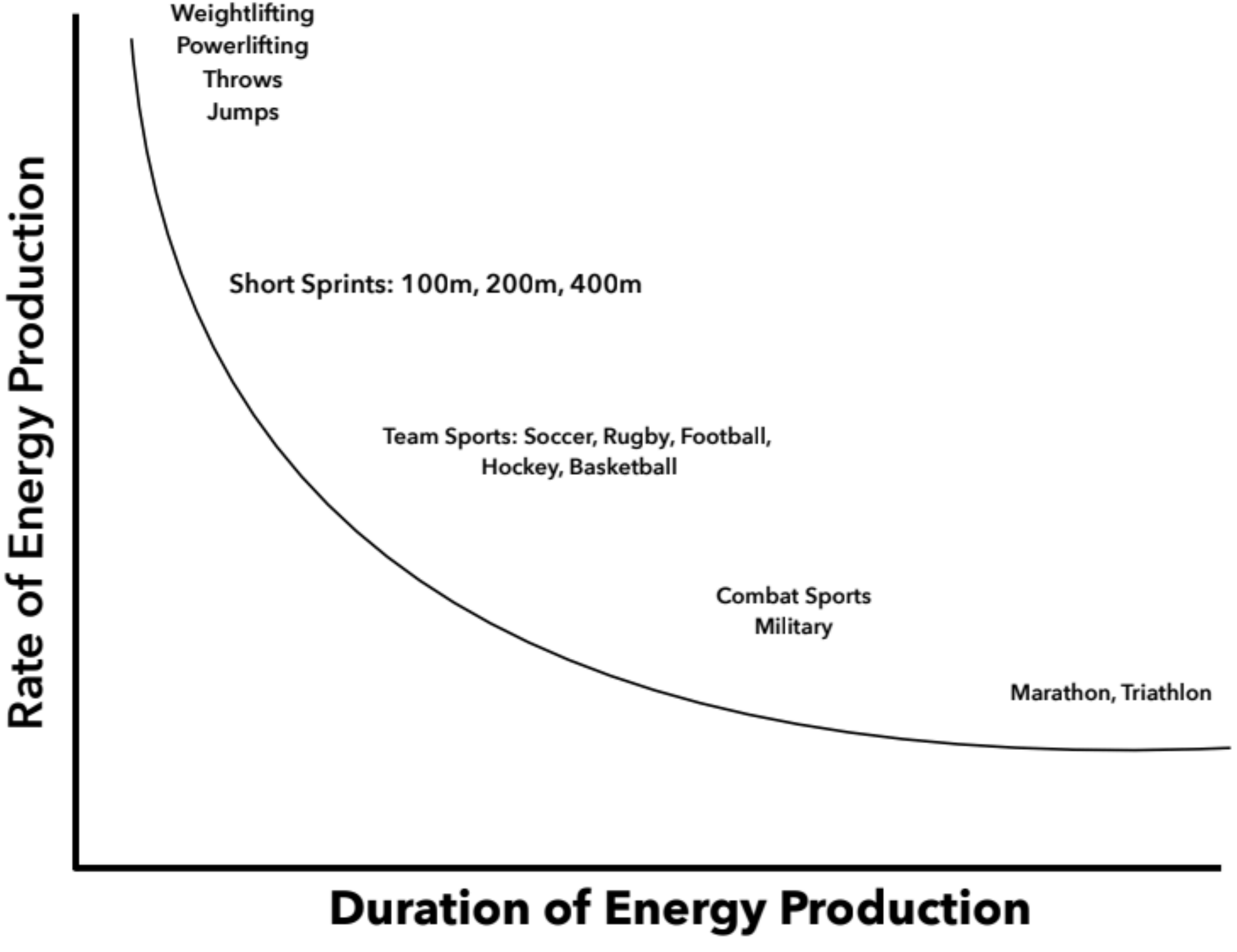
w/ Brendon Rearick, Kevin Carr, and Stephen Bigelow

- **Use the Q&A box**
- **Pre-reading**
- **Each of our thoughts What, Why, How of both programming and coaching**
- **Questions**
- **Post Email w/ Recording & PDF**

"THE GOAL IS TO KEEP THE GOAL THE GOAL."

DO YOU WANT TO MAKE THEM TIRED OR DO YOU WANT TO MAKE THEM BETTER?

DO YOU WANT RACE HORSES OR WORK HORSES?


Weightlifting
Powerlifting
Throws
Jumps
Short Sprints: 100m, 200m, 400m
Team Sports: Soccer, Rugby, Football,
Hockey, Basketball
Combat Sports
Military
Marathon, Triathlon
Rate of Energy Production
Duration of Energy Production

Rule #29

No one conditions alone.

One of my top 5 educational fitness articles is “No One Conditions Alone” by Kevin Neeld. Conditioning, in strength & conditioning, is everyone’s least favorite part of the process. Their lungs hurt, it’s the end of the workout, they're tired and they’re ready to go home. Let’s not add salt to the wound and have them do it alone.

As the coach, it’s in your power to shift what some consider a loathsome but necessary part of the workout into a friendly and spirited competition. To do this, pair people up in 2’s, 3’s, or 4’s, or if they’re running sprints alone, run with them.

Not only will they run faster and finish stronger, they’ll respect you more because those who struggle and overcome together, stick together. This is why group and team training is so powerful.

**Coaching Rules* by Brendon Rearick (book available this summer 2020)

Rule #49

Don’t forget that *everything* is conditioning.

Conditioning is happening the entire time your clients and athletes are at the gym, and not just during the “conditioning portion” of the program. This is especially true of general population clients. So, make the conditioning portion of the program really count.

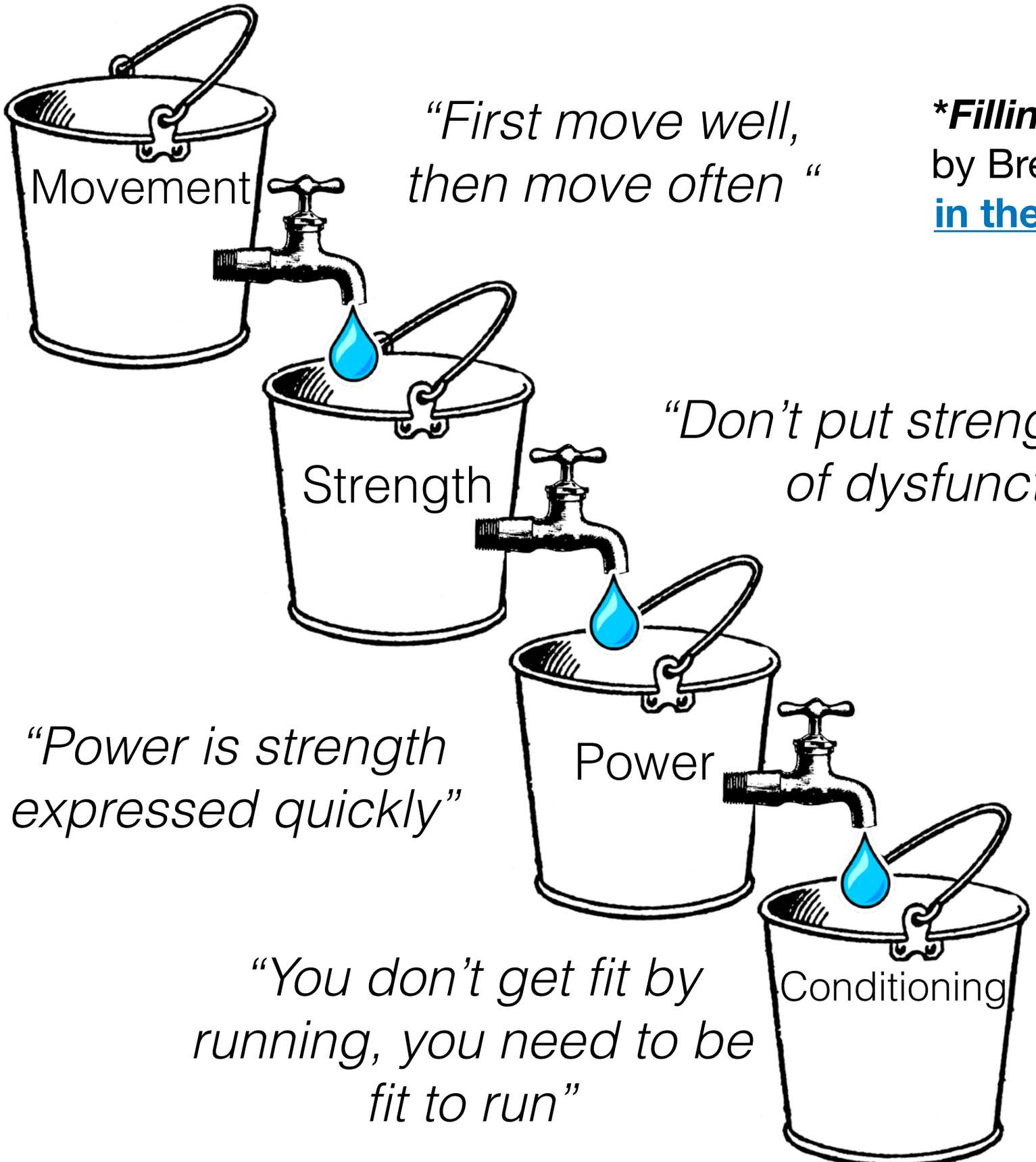
During the warm up and the strength portions of the program, if you were to put a heart rate monitor on your client, you would see that they generally stay in their “aerobic zone”. What does that mean? It means that they are technically conditioning during the warm up and strength portions of the program.

Therefore, true conditioning happens in the “anaerobic zone” (above 80% max heart rate). For the conditioning portion of your program, your focus should be on getting your client’s heart rate into that anaerobic zone since they just spent the first ~50 minutes of the program conditioning in their aerobic zone.

How is that best accomplished? By pursuing high-intensity interval training. High-intensity interval training will get your client’s heart rate into the anaerobic zone quickly, getting them the true conditioning they need in just a matter of minutes.

Coaching Rules by Brendon Rearick (book available this summer 2020)

Bucket Hierarchy?



"First move well, then move often "

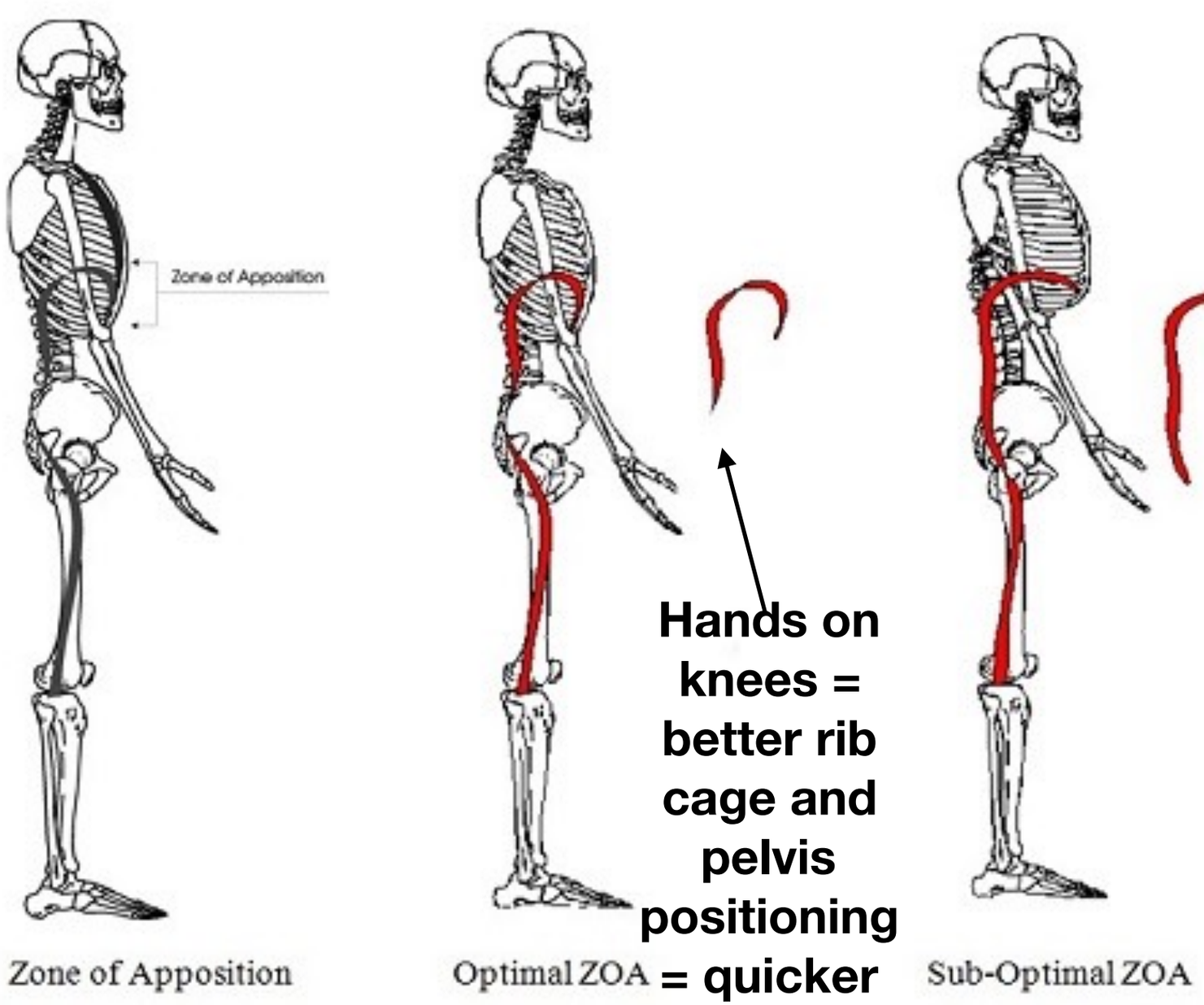
"Don't put strength on top of dysfunction"

"Power is strength expressed quickly"

"You don't get fit by running, you need to be fit to run"

Filling Buckets** presentation by Brendon Rearick **available in the CFSC resource folder

Hands on your knees!
Not on your head



https://www.posturalrestoration.com/the-science/zone-of-apposition-zoa

https://www.achievefitnessboston.com

https://www.functionalmovement.com

Rule #50

Coach breathing strategies.

There is not one good way to breathe. It's context dependent. What does the situation call for:

- Running a short sprint or lifting a heavy weight? Hold your breath.
- Just finished running a gasser or a 1 mile run? Put your hands on your knees (not on your head, this restricts your airway!) and take in air through the nose.
- Stretching? Deep inhales and exhales trying to relax into the stretch on your exhale.
- Tying your shoes? You shouldn’t be breathing heavy or have to hold your breath.
- Saving someone from a fall? Your breath rate and heart rate will elevate.
- Sleeping? The breath should be relaxed.

All situations call for different strategies.

We get in trouble when trying to use one strategy to do everything. Some of us use a breath holding pattern to sit at a desk. Some of us prepare to tie our shoes like we are deadlifting 500 pounds. Some of us breathe like we’ve just run a 400 meter sprint when we sleep. This is a problem. We need to be able to turn it up and turn it down. Sometimes a high threshold strategy is needed. If I'm playing hockey and skating into someone at 15 to 20 mph and I relax I may not absorb that hit very well. If I go to squat 300 pounds relaxed I'm not going to fare very well. There are times I want to rest and times that I want to brace. Your breath training should reflect that.

So, as a coach, pay attention to your client or athlete as they breathe. Be prepared to give contextual feedback and reorient breathing patterns to better reflect the demands of the task at hand.

Coaching Rules by Brendon Rearick (book available this summer 2020)

Aerobic = Size of the Gas Tank

Capacity/Anaerobic Threshold = MPG and Efficiency

Anaerobic Power = Engine/Horse Power

Need this to get on the field!

500 HP
50 MPG
6 Gallon gas tank
= Explosive and Efficient but can't make all 4 quarters or the second half. i.e. Basketball or Soccer player
= Fill the aerobic bucket (walks, bike rides, metabolic conditioning, functional training)

350 HP
10 MPG
70 Gallon gas tank
= Good gas tank and decent power but terribly inefficient and power won't last long. Learn how to tap more into your ON with interval training. Producing power multiple times over a certain time frame

90 HP
40 MPG
100 Gallon gas tank
= Monster gas tank and efficient but no speed. Good for an endurance sports but bad for explosive sports and and timed events. Fill the strength and power buckets.

CONDITIONING FOR ATHLETIC PERFORMANCE

- Why/How/What……..Who?
  - Bucket Filling/Overcomplication
  - Sport/Age Specificity
- Theoretical vs. Practical
  - What you know vs. What you can apply
- Basic Conditioning Outline

WHY/HOW/WHAT…WHO

- Do you need to condition your athletes?
  - What performance buckets are already filled?
  - Who are the best players in the sport?
- What does the athlete need?
  - Resting HR
  - 1-2 minute HR Recovery
  - How to reach these standards?
- What is the best training modality for the job?
  - Specific to the sport?
  - Specific to the athlete?

THEORY VS. PRACTICE

- Do not overcomplicate training
  - Fit the science to the game
  - 10% rule + monitoring yardage
  - Short to Long; Inverted Pyramid
- The role of the S&C coach
  - What actually happens in practice? – Dan Baker
  - Interval Training and MAS
  - Testing should reinforce training
- Logistical considerations

BASIC SCHEME

- Phase 1: Return to training and volume accumulation
  - Tempo Running (sprint motor pattern; minimal direction change; non-competitive)
  - Weekly volume increases
  - Testing to determine MAS
- Phase 2: Introduction to hard work/intervals
  - Shuttles and COD
  - Training @120% MAS
  - HR-based recovery
- Phase 3-4: Moving towards pre-season
  - Intervals directed by sport specificity
  - Specific work:rest ratios
  - Factor in “external” training

Mike Thalken Adaptations for individuals who can't have high impact.

Susan Comfort would you program conditioning for power athletes before or after they lift

Edward Vizcaino What are your favorite conditioning assessments?

Anna Sanfilippo What strategies do you use to make conditioning fun/ interesting for athletes while still ensuring a quality workout?

Dustin Doren How to discuss conditioning with people who only want to run?

Pat VanGalen How much tech do you guys rely on? For health & well-being? Athletic performance? IT DEPENDS, right? **Steve Price** How do you use heart rate monitoring during team conditioning?

Andy Stangroom What is the minimum effective dose for conditioning for someone in gen pop vs a high school/ collegiate athlete with busy schedule / time constraints?

Julia Stollen I would like to know your point of view regarding conditioning for extreme sports and especially for wakeboard. How to define the energy systems for developing? For example, if we speak about a wakeboard training it could be riding during hours with some rests. If we speak about a contest, normally it is one lap (one attempt) approximately from one minute to one and half (it depends how big the cable is)

Mark Durcan how you would periodize your conditioning for field-based athletes (e.g. over an 8-12 week pre-season) and your rationale that would be fantastic.

Sean Cryan Like we have come to find out that there is such a thing as strong enough, can the same be said for conditioning?

MBSC Summer 2019 Conditioning Program

Phase 1	Day 1	Day 2	Day 3	Day 4
Week 1	Tempos x10	(10/20)x1	Tempos x10	(10/20)x1
Week 2	Tempos x12	(10/20)x2	Tempos x12	(10/20)x2
Week 3	Tempos x14	2 Mile Test	Tempos x14	(15/15)x1
				(10/20)x1
Phase 2	**Day 1**	**Day 2**	**Day 3**	**Day 4**
Week 4	4x150yd	(15/15)x2	Tempos x14	(10/20)x2
	FB: 8x60yd			
Week 5	5x150yd	(15/15)x2	Tempos x15	(15/15)x2
	FB: 9x60yd			
Week 6	6x150yd	2 Mile Test	Tempos x16	(20/10)x1
	FB: 10x60yd			(10/20)x1
Phase 3	**Day 1**	**Day 2**	**Day 3**	**Day 4**
Week 7	1x200yd	(20/10)x2	Tempos x16	(10/20)x2
	5x150yd			
	FB: 11x60yd			
Week 8	2x200yd	(20/10)x1	Tempos x16	(20/10)x1
	4x150yd	(10/20)x1		(10/20)x1
	FB: 12x60yd			
Week 9	3x200yd	(20/10)x2	Tempos x16	(20/10)x1
	3x150yd			(10/20)x1
	FB: 14x60yd			
Phase 4	**Day 1**	**Day 2**	**Day 3**	**Day 4**
Week 10	1x300yd	3 Mile Test	Tempos x16	(10/20)x2
	5x150yd			
Week 11	2x300yd	(20/10)x2	Tempos x16	(20/10)x2
	3x150yd			
Week 12	2x300yd	(30/30)x1	Tempos x16	(30/30)x1
	4x150yd	(20/10)x1		(10/20)x1

***Middleton divide Tempos/2**

***60yd Shuttle = 15/10/5 up/back**

***ASK ABOUT PRACTICE AND GAMES**

MAS = Avg RPM for 2 Mile Test

10/20 @ 120% MAS

20/10 @ 110% MAS

15/15 @ 120% of MAS

30/30 @ 110% of MAS

CFSC Conditioning (Updated April 2020)

CERTIFIED FUNCTIONAL STRENGTH COACH

Key:

HR = Heart Rate
BPM = Beats Per Minute
MAS = Max Aerobic Speed

How to Find Max Aerobic Speed?

2 Mile Assault Test (5 to 6 minute)
The Average RPM Per Minute = Max Aerobic Speed

Cardiac Output

Most important for those w/ a resting HR <60
Target Heart Rate Range = 130-150
Duration = 30 min - 60 min

Warm Up/Plyo/Medball/Lift
Steady State Bike Ride
Walking/Running
Complexes/ Met-Con

Tempo Work

10-15 seconds @ 70%
Recover 60-90 seconds or to 125 - 140 BPM
Reps = x8/x10/x12/x14

Tempo Running
Treadmill Tempos

Aerobic Power

1-5 minutes @ Max Aerobic Speed
Recover to 130 BPM

Assault Bike - .3's to 2 miles
.3's - .5's for x 3 to 5 reps
1 - 2 mile rides for x 1 to 3 reps

AirDyne
.5's - 1 mile for x 3 to 5 reps
3 mile ride

AirDyne or Assault
10/20 @ 120% of MAS x 8 reps
20/10 @ 110% of MAS x 8 reps

Alactic Power

3 - 10 seconds ON
60 - 120 OFF
Reps = x6 to 8

Repeat Sprint Drills - Run or Sled

Alactic Capacity

10 - 15 seconds ON >90%
60 - 120 OFF
Reps = x5 to 8

Repeat Sprint Drills - Run or Sled

Lactic Power

20 - 40 seconds ON
90 - 120 OFF

75 yds Shuttles
150 yds Shuttles
300 yds Shuttles
Sideboards

Lactic Capacity

90 - 120 seconds ON
2 min OFF
Reps = x2 to 5 reps

Bike (1 mile rides)
or Run (600-800 meters)

Running Progression

Tempos @ 70 % x 60 yd (30 yard down and back no turns)
Week 1 - x 8 = 480 total yds
Week 2 - x 10 = 600
Week 3 - x 12 = 720
Week 4 - x 14 =840
Weeks 5 - 12 = Tempo runs on Day 2 x 16 = 840 yds

75 yd Shuttles (25 yard turns)
Week 5 - x 6 = 450 total yds
Week 6 - x 8 = 600
Week 7 - x 10 = 750
Week 8 - x 12 = 900

300 yd and 150 yd Shuttles (25 yard turns)
Week 9 - 300's x 1 and 4 x 150's = 900 total yds
Week 10 - 300's x 2 and 3 x 150's = 1050
Week 11 - 300's x 2 and 4 x 150's = 1200
Week 12 - 300's x 3 and 3 x 150's = 1350

Slideboard Progression

x10 touches :30 seconds rest Sets: x5/x6/x7 (weeks 1 -3)
x10 touches :30 seconds rest Sets: x8/x9/x10 (weeks 1 -3)
x20 touches :60 seconds rest Sets: x5/x6/x7 (weeks 1 -3)
x20 touches :60 seconds rest Sets: x8/x9/x10 (weeks 1 -3)

Post-webinar Recommended Reading

- https://simplifaster.com/articles/implementing-high-intensity-aerobic-energy-system-conditioning-field-sports/

- Two studies are attached in your email. One is a review of all the data showing the validity and reliability of the subjective questionnaire and the other has the specific 5 questions assessment as part of the study.

- https://athletesacceleration.com/the-plight-of-the-elite-fast-twitch-athlete/

- Ultimate MMA Conditioning Paperback – January 1, 2009 by Joel Jamieson (Author)

- How Bad Do You Want It?: Mastering the Psychology of Mind over Muscle by Matt Fitzgerald

Pre-webinar Articles

- https://www.stack.com/a/mike-boyles-conditioning-rule-for-athletes
- https://www.otpbooks.com/mike_boyle_on_conditioning/
- https://www.8weeksout.com/2018/08/23/the-ultimate-conditioning-template/
- https://robertsontrainingsystems.com/blog/widening-aerobic-window/
- Interval Training- HIIT or Miss? https://www.strengthcoach.com/public/1766.cfm

Resources

Brendon Rearick
IG: @coachbrendonrearick
Website: www.brendonrearick.com
Email: brendonrearick@gmail.com

Kevin Carr
IG: kev_in_carr
Website: www.movement-as-medicine.com
Email: coachkevincarr@gmail.com

Stephen Bigelow
IG: stigelow
Email: stpbigelow@gmail.com

CFSC $150 OFF of the Online Certification Right Now
https://cfsc.inspire360.com/cfsc/cfsconline

50% OFF Building Exercise Checklists Code: ZoomWebinar
www.exercisechecklists.com/p/exercise-checklists