

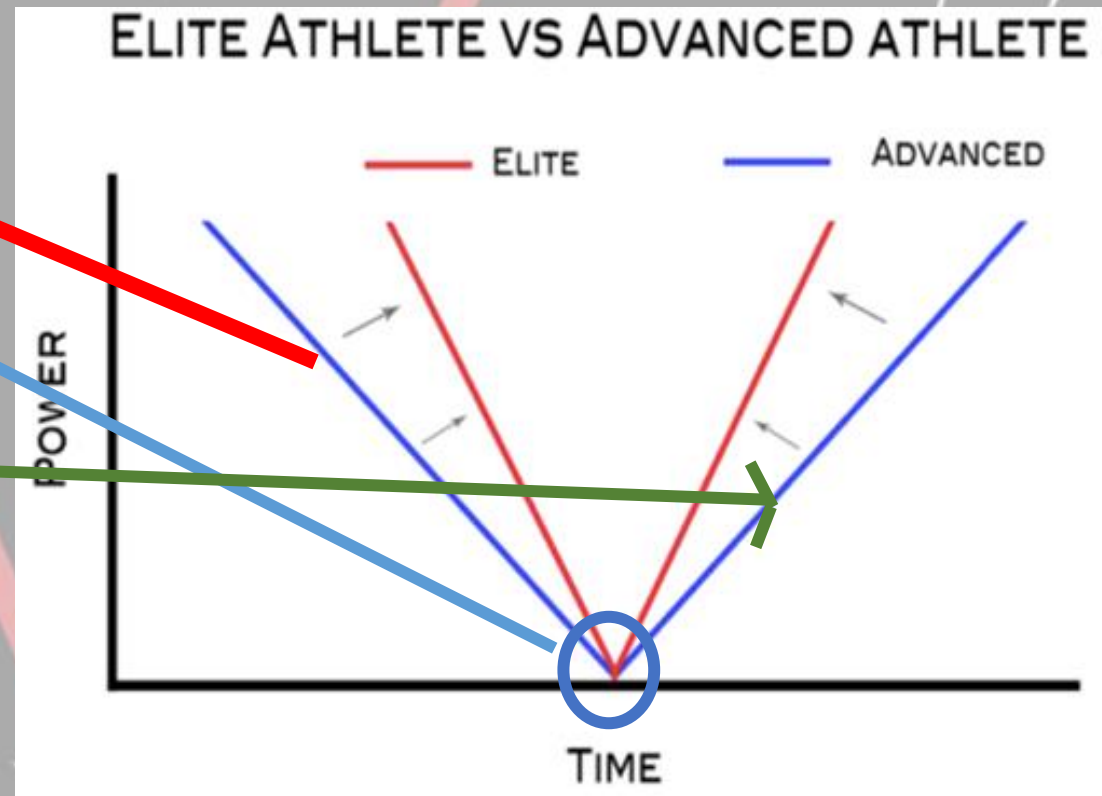
A large, stylized number '127' is centered in the background. The number is rendered in a light gray color with a subtle gradient and a thin red outline. The '1' and '2' are connected at the top, and the '7' is positioned to the right of the '2'.

*Advanced Methods in
Triphasic Training*

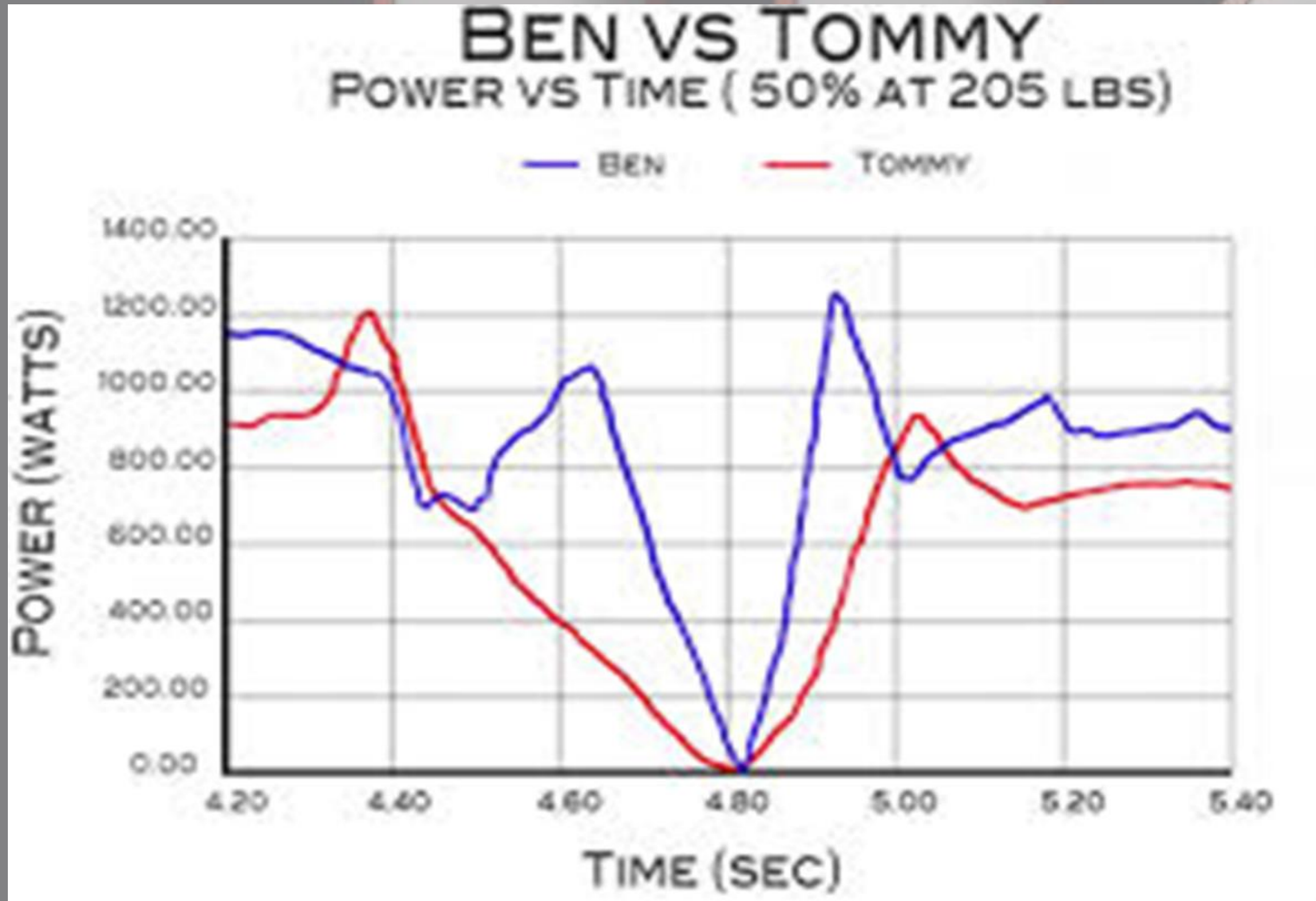
Cal Dietz – cal.dietz@gmail.com

Triphasic Muscle Action

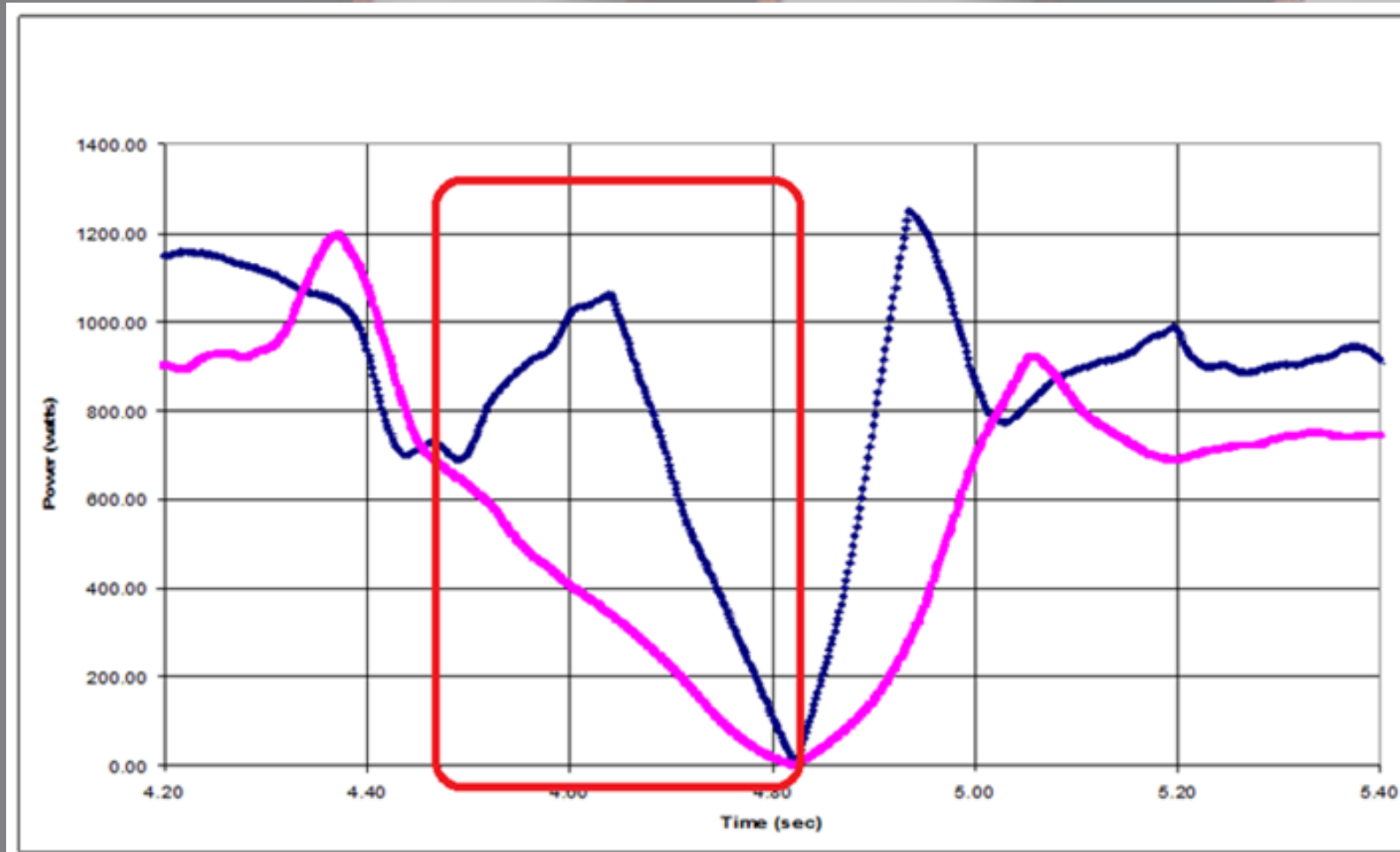
- Every movement contains 3 phases
 - **Eccentric**
 - Muscle lengthening
 - **Isometric**
 - No length change
 - Most commonly missed action
 - **Concentric**
 - Muscle shortening
- Ultimate goal is improving efficiency and power of SSC



Notice how steep the eccentric and concentric slope of Ben's repetition is in comparison to Tommy's. This indicates Ben's ability to absorb more force at a faster rate and, consequently produce more force concentrically. This explains why, although the two athletes had similar strength, Ben could throw the shot 10' further.

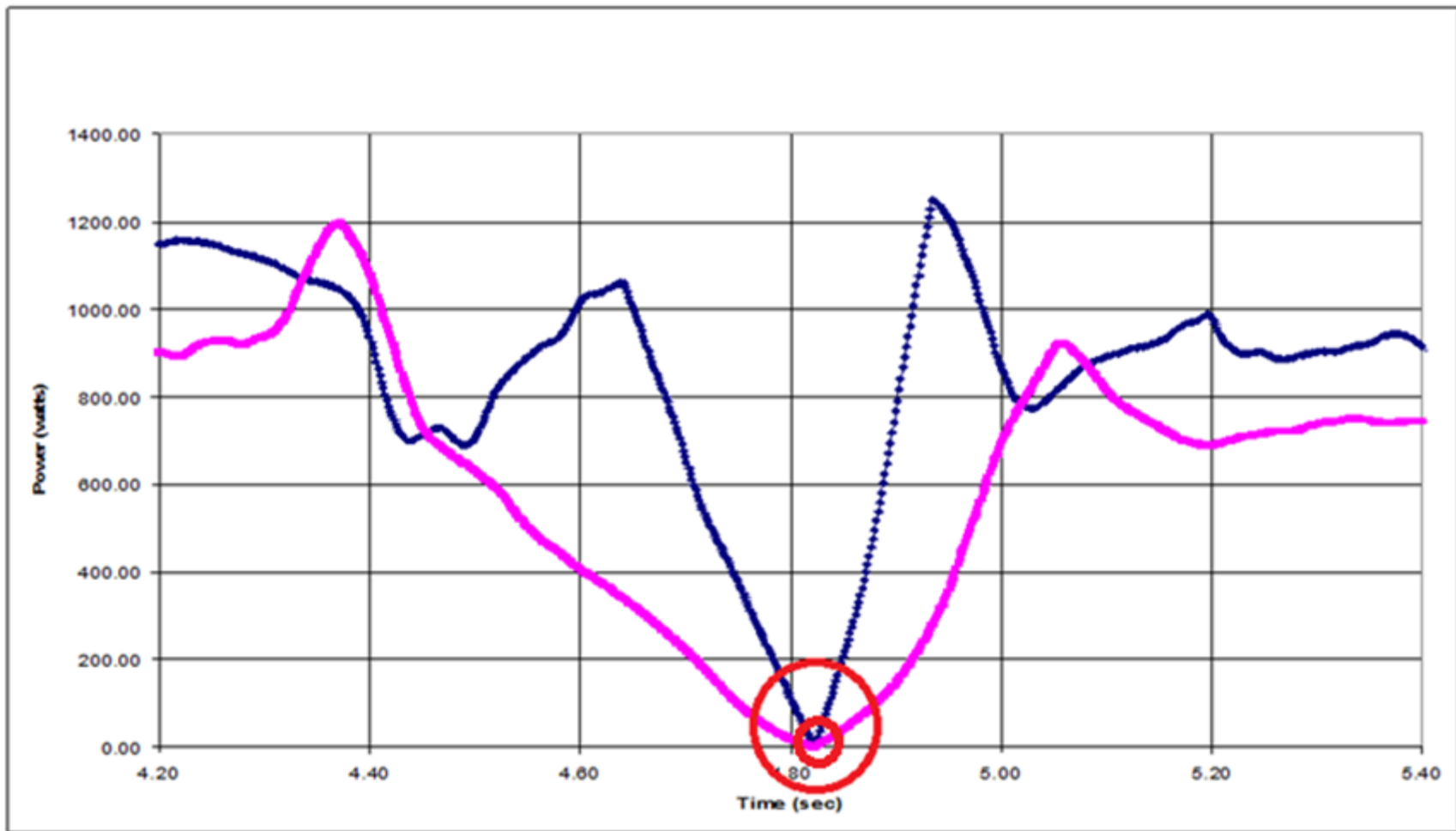


Eccentric Phase

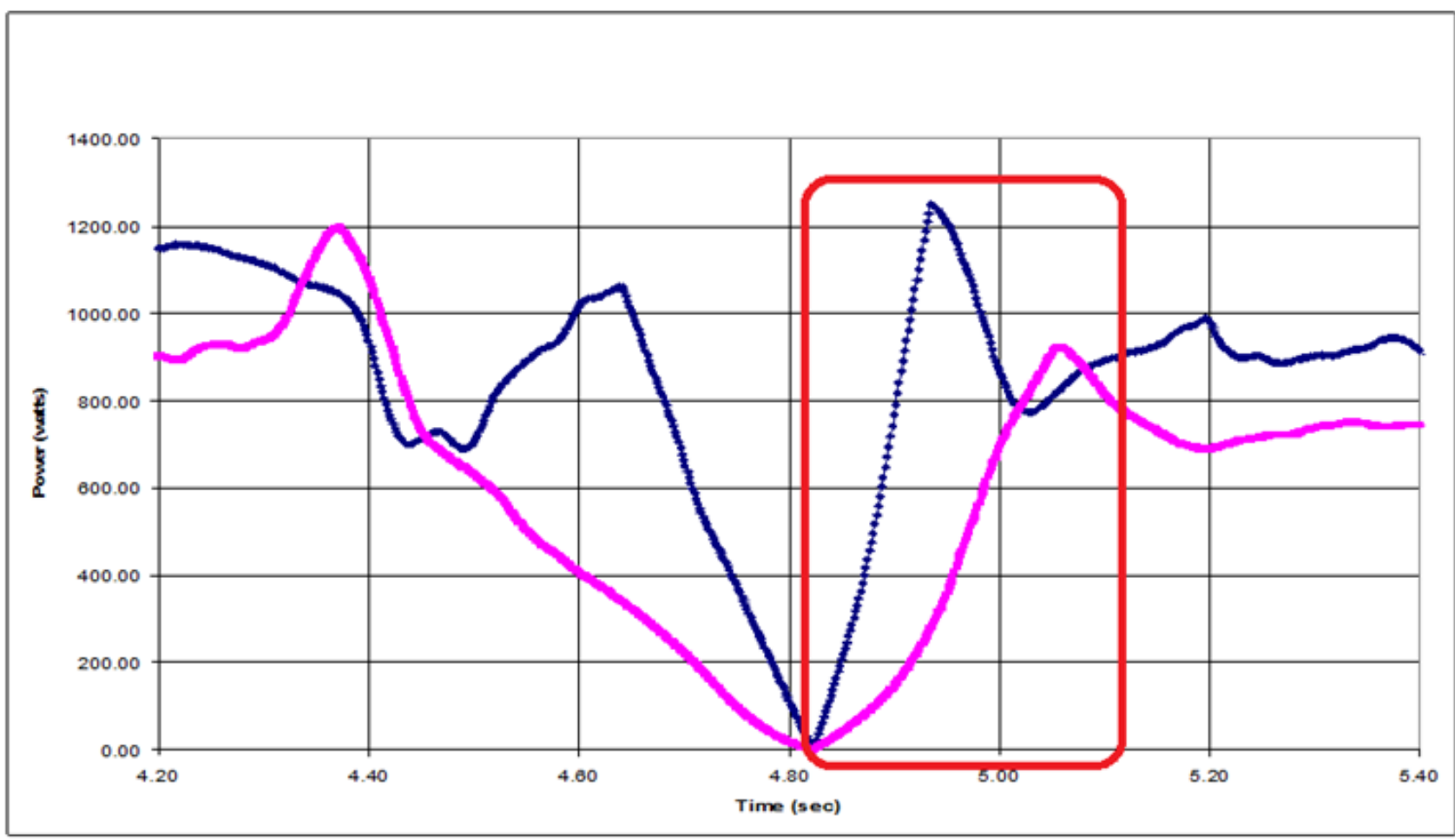


[Throwing Sample](#)

Isometric Phase



Concentric Phase



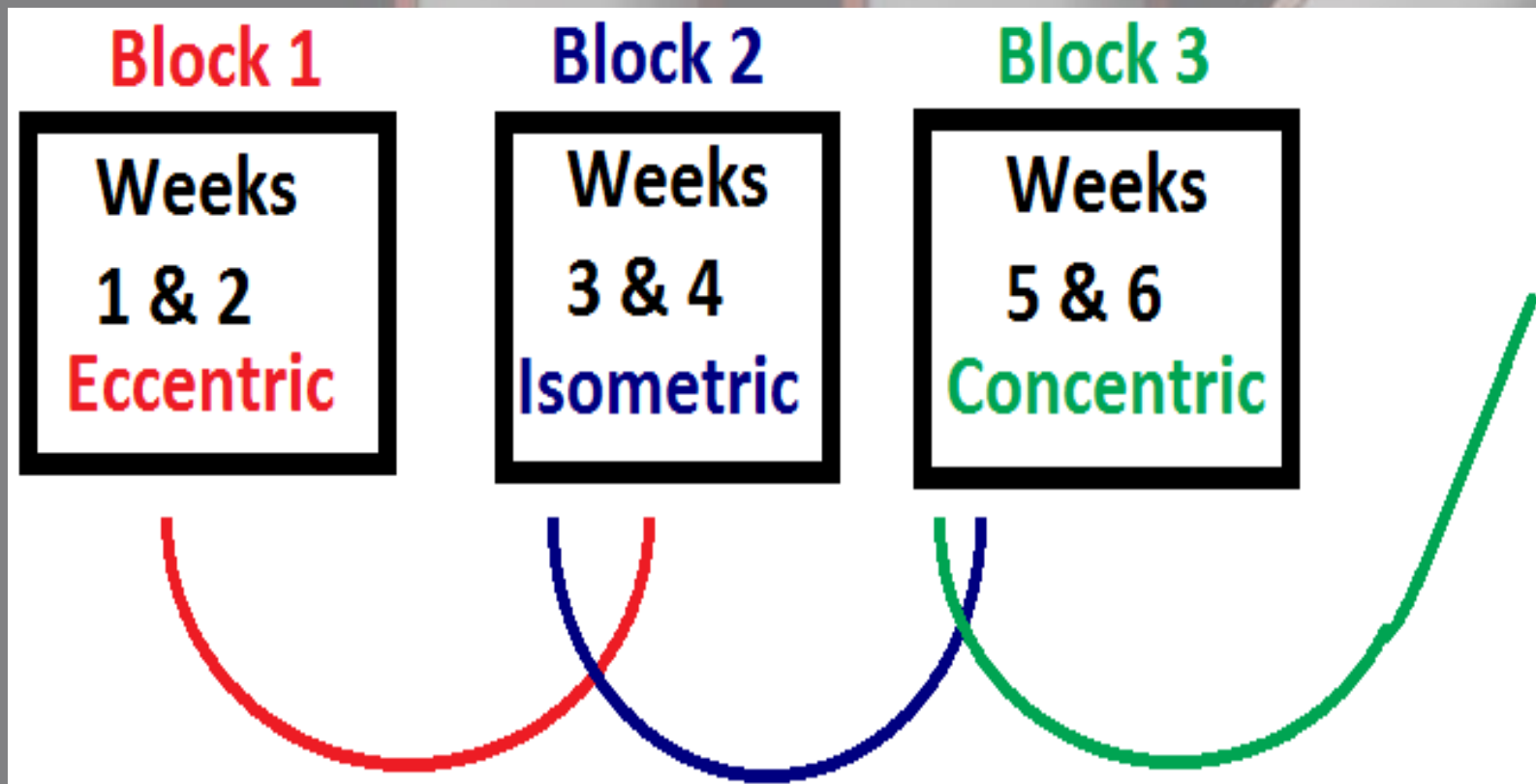
Tri-Phasic Undulating Block Method – Squat Example

Block 1	Block 2	Block 3
Weeks 1 & 2 Eccentric	Weeks 3 & 4 Isometric	Weeks 5 & 6 Concentric
Eccentric Squat 6:0:0:0	Isometric Squat 0:3:0:0	Explosive Squat 0:0:0:0

Technique : Ecc , Iso , Con

[Throwing Sample](#)

Tri phasic Undulating Block Method - Peaking



Peaking for Sport - Triphasic Supramaximal with GPP Model

Phase	GPP						Supramax Strength		Aerobic	Supramax Strength		Aerobic	Triphasic Strength		Aerobic	Triphasic Power		Aerobic	Triphasic Speed	
Weeks	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Quality Addressed	Aerobic	Aerobic	Lactate	Lactate	Alactic	Alactic	Eccentric	Eccentric	Download	Isometric	Isometric	Download	Concentric	Concentric	Download	Power	Power	Download	Peaking	Peaking
Percent Load	Below 50%		50-75%		Above 80%		120-105%		Below 50%	120-105%		Below 50%	Above 80%		Below 50%	Below 80%		Below 50%	Below 55%	
Durations			over 10 sec. sets		under 10 sec. sets		20-30 sec. sets			20-30 sec. sets			under 10 sec. sets			under 10 sec. sets			under 10 sec. sets	

Add Ons

Fasted State																				
Tape Mouth																				
Fast Twitch RSA Capacity																				
Fast Twitch RSA Hypertrophy																				
Potential Clusters																				
French Contrast																				
Hyperlinks for Examples	Aerobic	Lactate	Alactic	Supramax-Ecc	ex	Supramax-Iso	Contra.	Concentric	Contra.	Power	Contra.	Speed								

Peaking for Sport - Triphasic Supramaximal Compressed Model

Phase	GPP		Supramax Strength		Supramax Strength		Triphasic Power		Triphasic Speed/Peaking Can Last 4-6 wks			
Weeks	1	2	3	4	5	6	7	8	9	10	11	12
Quality Addressed	Aerobic	Aerobic	Eccentric	Eccentric	Isometric	Isometric	Power	Power	Peaking	Peaking	Peaking	Peaking
Percent Load	Below 50%		120-105%		120-105%		Below 80%		Below 55%			
Durations			20-30 sec. sets		under 10 sec. sets		under 10 sec. sets		under 10 sec. sets			
Fasted State												
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French Contrast												
Hyperlinks for Examples	Aerobic		Supramax-Ecc		Supramax-Iso		Power		Speed			

YouTube - [Triphasic Training Cycle Duration Hack](#)

Classic Triphasic with Full GPP Model

Phase	GPP						Triphasic Strength		Aerobic	Triphasic Strength		Aerobic	Triphasic Strength		Aerobic	Triphasic Power		Aerobic	Triphasic Speed	
Weeks	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Quality Addressed	Aerobic	Aerobic	Lactate	Lactate	Alactic	Alactic	Eccentric	Eccentric	Download	Isometric	Isometric	Download	Concentric	Concentric	Download	Power	Power	Download	Peaking	Peaking
Percent Load	Below 50%		50-55%		Above 80%		Above 80%		Below 50%	Above 80%		Below 50%	Above 80%		Below 50%	Below 80%		Below 50%	Below 55%	
Durations			over 10 sec. sets		under 10 sec. sets		under 10 sec. sets		under 10 sec. sets				under 10 sec. sets		under 10 sec. sets				under 10 sec. sets	

Triphasic Compressed Model

Phase	GPP		Triphasic Strength		Triphasic Strength		Triphasic Power		Triphasic Speed/Peaking Can Last 4-6 wks	
Weeks	1	2	3	4	5	6	7	8	9	10
Quality Addressed	Aerobic	Aerobic	Eccentric	Eccentric	Isometric	Isometric	Power	Power	Peaking	Peaking
Percent Load	Below 50%		Above 80%		Above 80%		Below 80%		Below 55%	
Durations			20-30 sec. sets		under 10 sec. sets		under 10 sec. sets		under 10 sec. sets	

Most Advanced Method

- Supra-maximal Loading
- 120 to 100 % + Loading During Eccentric/Isometric
- Most Effective Results in Speed and Reactiveness
- Compressed Training Effect

RESULTS OF APPLIED INTEGRATION

- Week 0: 65-70 Resting heart rate (RHR)
- Weeks 1-3: 55-60 RHR
- Weeks 4-5: 48-52 RHR
- **Weeks 6-8: 32-38 RHR – Post Super max Isometrics**
- All this happened with no conditioning: why?
- Training – Block , Breathing , RPR – Reflexive performance Reset
- Youtube
- [Triphasic Training Bioenergetics Integration Dynamics Method Part 1](#) AND [Workout Structure off Season](#)

Functional Reserve Range

- Twins
- Athlete 1 - Resting Heart Rate – 65
- LTH – 165 – FRR – **100**

- Athlete 2 - Resting Heart Rate – 32
- LTH – 172 – FRR – **140**
- Difference of 40 beats

What We Have Seen SBSS - Safety Bar Split Squat

- Nervous System
 - Throwers didn't back squat...
 - Gained AVERAGE 57lbs on squat in 8 weeks
- Cardiovascular System
 - Week 0: 65-70 resting heart rate (RHR)
 - Weeks 1-3: 55-60 RHR *GPP*
 - Weeks 4-5: 48-52 RHR *ECC*
 - Weeks 6-7: 32-38 RHR *ISO*

Muscular System

Female Athlete

132 body weight

355 Safety Bar Squat

Single leg - 800 Pounds

<https://www.youtube.com/watch?v=H4SLuXqxWmg>

Why Safety Bar Squat

Lower body → Unilateral, total body
Global stressor

Sport-Specific

Increased stress on individual leg muscles

No hands placed on Safety Bar
Removes balance from equation
Allows for heavier loads used

↑ Core Stabilization?



Why Supramaximal?

- STRESS
- SUBmaximal ECC and ISO is not enough
 - Various mechanisms allow body to lower more weight than lift
 - E.g. 120% ECC = 100% CON
 - With this, 90% CON = 70% ECC!!!
 - Not enough!
- Greater hormone release
 - Must monitor cortisol - sets are under 10 seconds
 - Breaks down NEW tissue first

How to Implement - ECC

First training block

Tempos

Monday - :07

Wednesday - Any Implement @ 90-97%

Friday - :10

Pairings

French Contrast Exercises

Prehab Exercises

Equipment

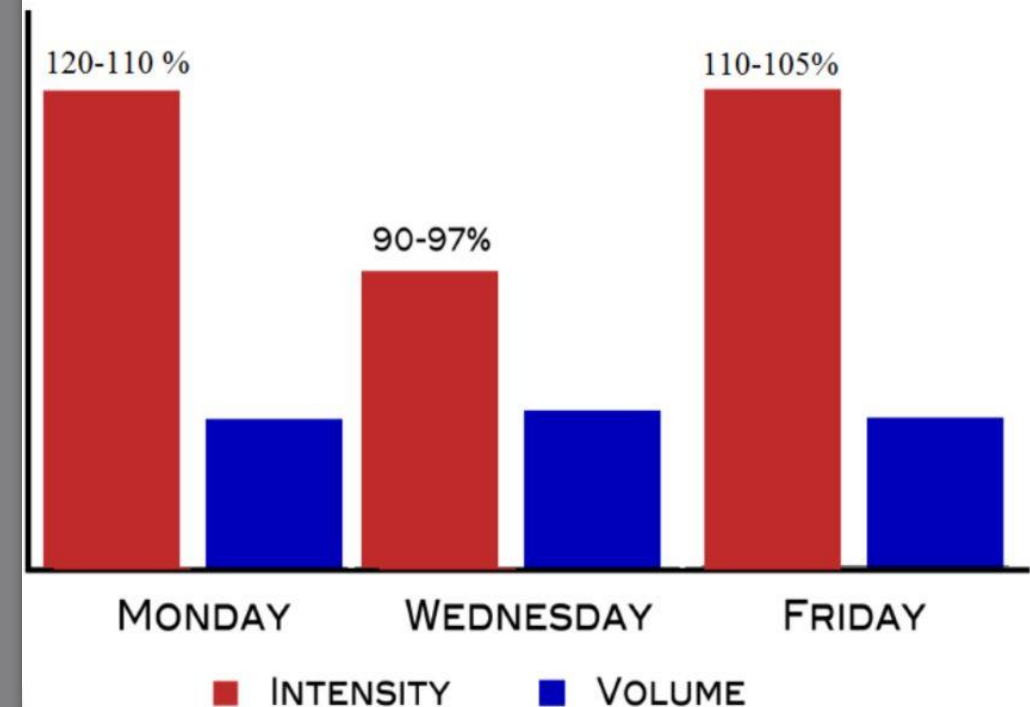
Safety Bar

Weight Releasers

Fixed Barbell for hands-on assistance

[Hex Bar](#)

Supramaximal Weekly Loading



Coaching Cues - ECC

Adjust height of bar, crash bars, weight releasers accordingly

Spine neutral with chest up

Front and Back Leg at 90° at Knee and Hip

Don't let back leg get too extended

Belly Breathe in, hold breathe during lift

Slow, smooth and controlled descent - Half Range

Make sure descent is even throughout specified tempo

Big toes and Glutes!

Explode up!

2 spotters on either side of bar assist for fast CON

Example:



How to Implement - ISO

First training block

Tempos

Monday - :07

Wednesday - Any implement @ 90-97%

Friday - :10

Pairings

French Contrast Exercises

Prehab Exercises

Equipment

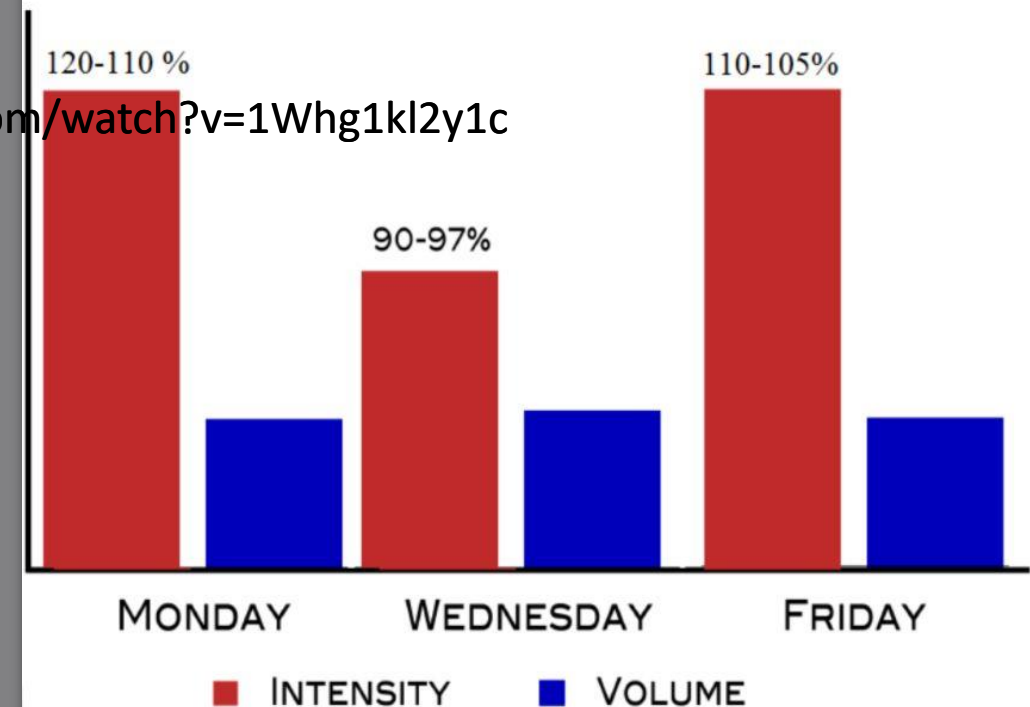
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Fixed Barbell for hands-on assistance

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Supramaximal Weekly Loading



<https://www.youtube.com/watch?v=1Whg1kl2y1c>

Coaching Cues - ISO

Adjust height of bar, crash bars, weight releasers accordingly

Spine neutral with chest up

Front and Back Leg at 90° at Knee and Hip

Don't let back leg get too extended

Belly Breathe in, hold breathe

Controlled descent into position with hard stop

Hold position for specified tempo

Drop to engage weight releasers

Big toes and Glutes!

Explode up!

2 spotters on either side of bar assist for fast CON

Example:



Weekly Block Loading Model

Block Focus	Monday	Wednesday	Friday
Block 1-2 Weeks	Loading Day 1	Loading Day 2	Loading Day 3
Eccentric	120-110%	90-92%	110-105%
Block 2-2 Weeks	De-load week	De-load week	De-load week
Isometric	120-110%	90-92%	110-105%
Block 3-2 Weeks	De-load week	De-load week	De-load week
Con- Strength	85%	90-92%	85%
Con- Speed	65%	80%	55%

Concentric SBSS – Has Many Options

- Above 80% loading
- Below 80% loading
- 55% - 25% loading – [Video](#)
 - The Reason for [Knee in front of toe](#)

Peaking for Sport - Triphasic Supramaximal with GPP Model

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More Speed and Power Examples for Peaking

Power Training – 75%-55% Loading

- [Psoas Single Leg Kick Prone](#)
- [Single Leg Band Hamstring Kick](#)
- [Hip Thrust Single Leg OC](#)
- [Banded Abduction Glute](#)

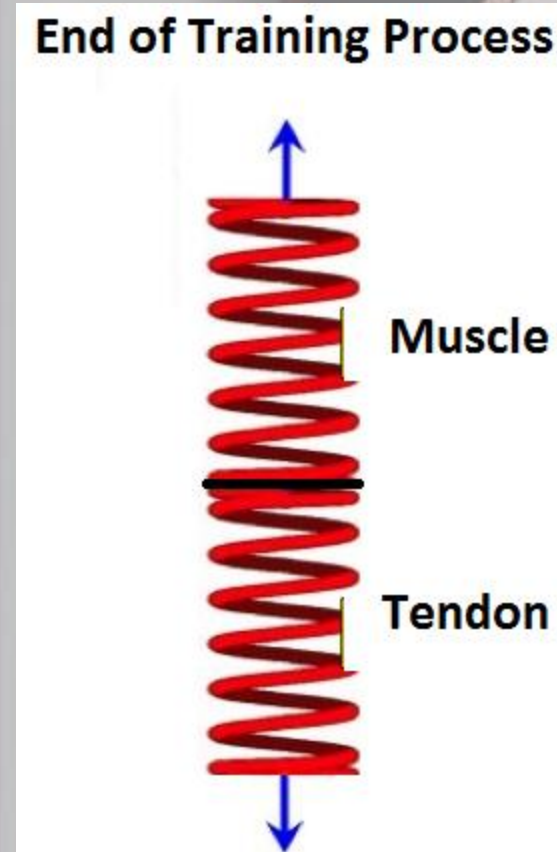
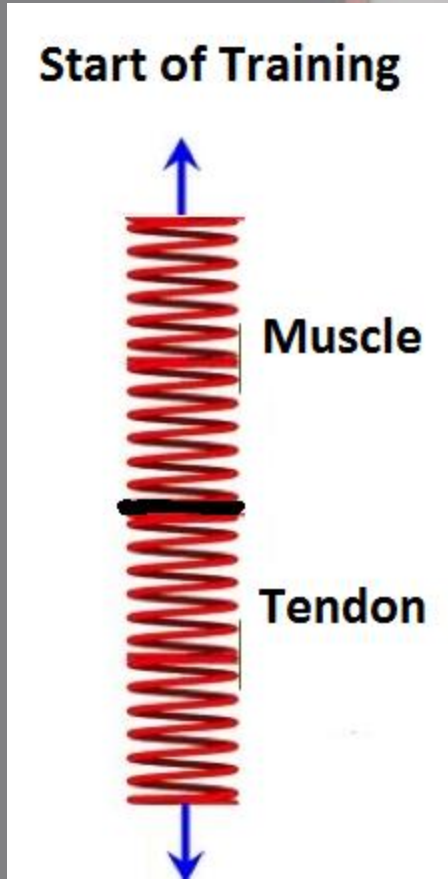
Speed Training – 50%-25% Loading

- [Psoas Double Leg Kick Prone](#)
- [Double Leg Band Hamstring Kick](#)
- [Hip Thrust Double leg OC](#)
- [Banded Abduction Glute](#)

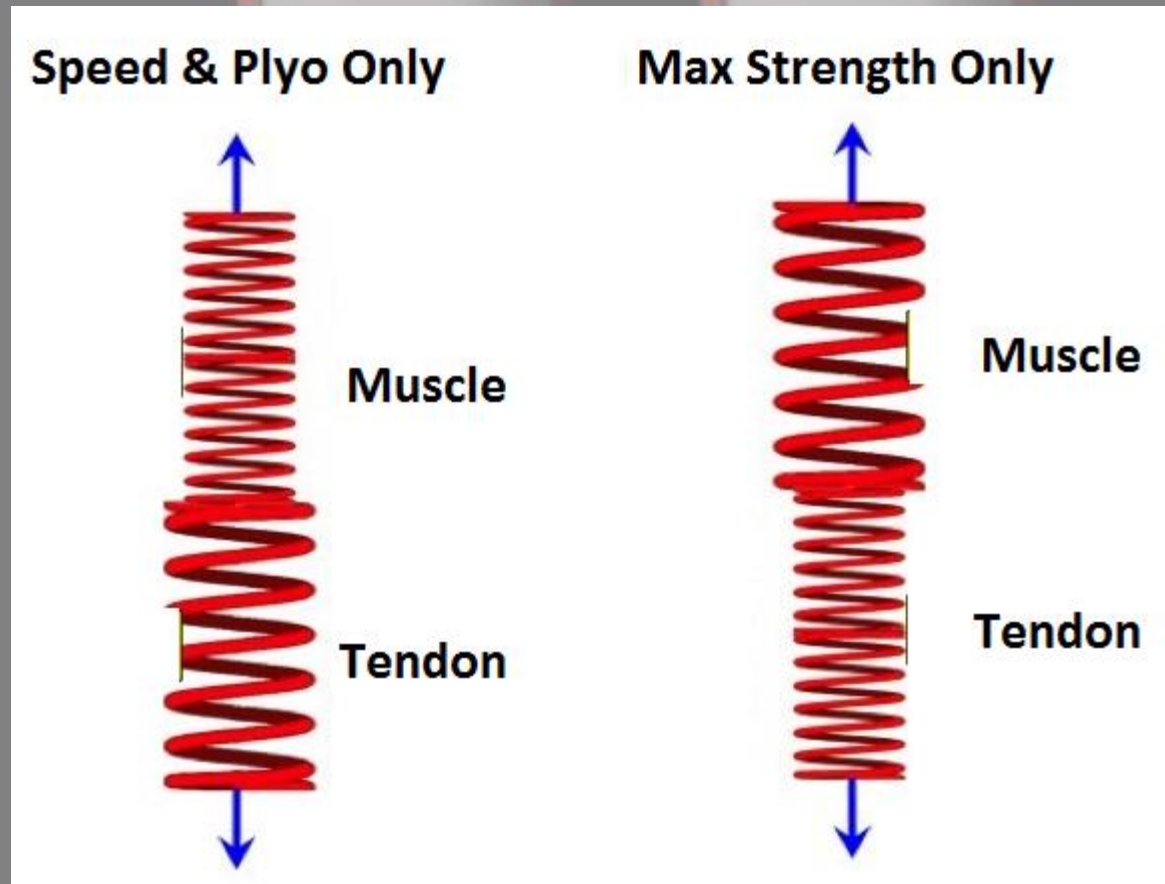
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**TENDON STIFFNESS, COLLAGEN
PRODUCTION, AND TRIPHASIC FOR
PERFORMANCE**

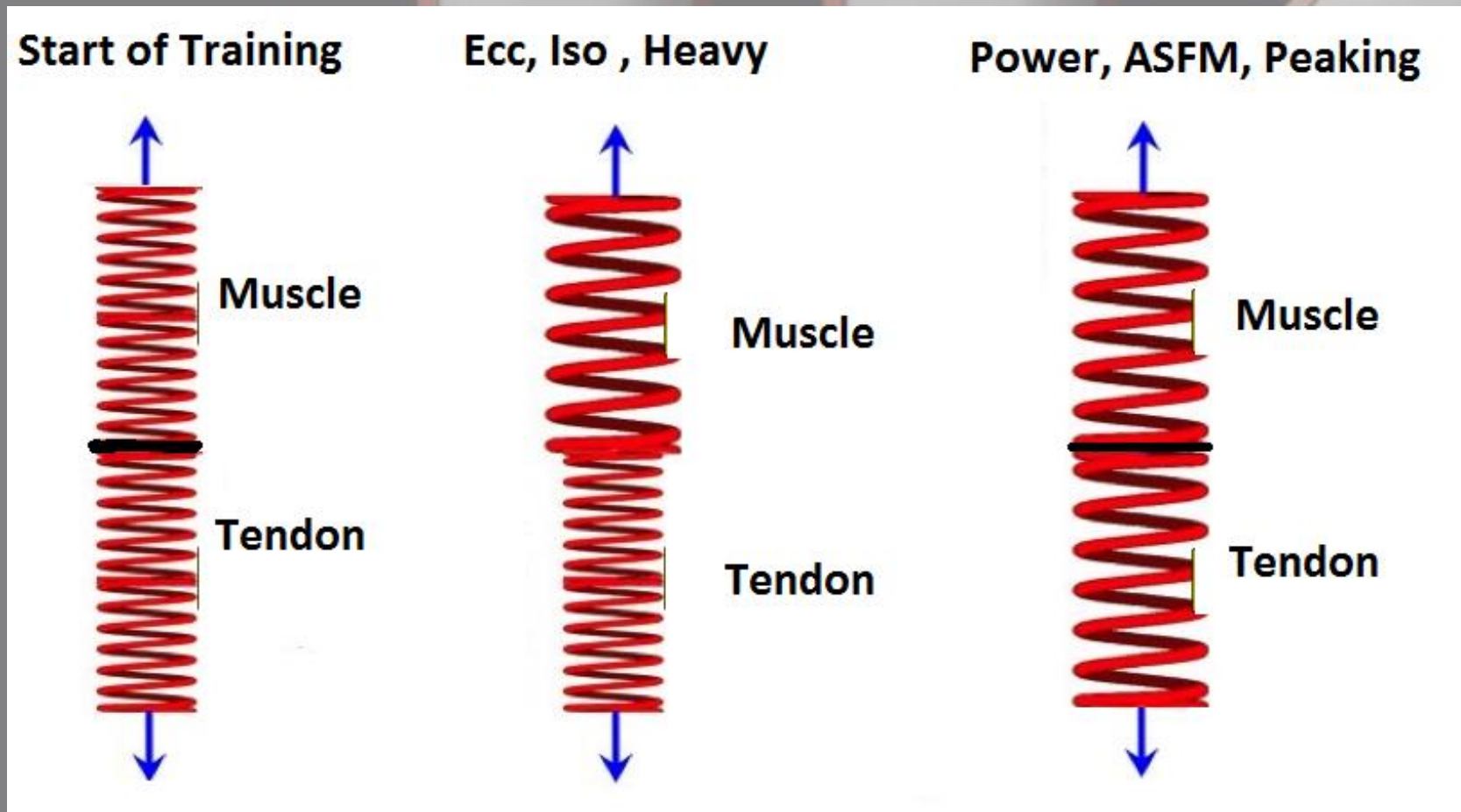
The Process Of Training Tissues



Flaws in Training Process



Benefits of Triphasic



Secret to Hypertrophy of Fast Fiber

- Skill is Key – Everything is a Skill
- Quality Reps – 3 Reps
- Fatigued Prevents Skill Development
- Clusters Training 1+1+1+1+1+1
- Potential Clusters

French Contrast

- Safety Single Leg Squat – 2 - 4 reps
- Hurdle hops – 4 Reps
- Loaded Squat Jump – 4 reps
- Accelerated Jumps – 4 reps

Potential Clusters

- Simple Contrast Model for high school - Acceleration
- Sport Back Squat - 1 rep 65-80% + Box Jump / 1 rep...15-20 seconds Rest
- Sport Back Squat - 1 rep 65-80% + Box Jump / 1 rep...15-20 seconds Rest
- Sport Back Squat - 1 rep 65-80% + Box Jump / 1 rep...15-20 seconds Rest
- Sport Back Squat - 1 rep 65-80% +Box Jump / 1 rep

- Rest 2-3 minutes, then repeat for a total of 2 to 4 sets

Potential Clusters

- **Top end Speed Running**
- **Hex Dead lift - 1 rep 65-80% + Hurdle Hop / 1 rep...15-20 seconds Rest**
- **Hex Dead lift - 1 rep 65-80% + Hurdle Hop / 1 rep...15-20 seconds Rest**
- **Hex Dead lift - 1 rep 65-80% + Hurdle Hop / 1 rep...15-20 seconds Rest**
- **Hex Dead lift - 1 rep 65-80% + Hurdle Hop / 1 rep**
- **Rest 2-3 minutes, then repeat for a total of 2 to 4 sets**

Potential Clusters

- **Peaking Focus for Team Sports, Basic Approach**
- **25-30% Load Squat jump 1 rep + Drop box Jump / 1 rep...15-20 seconds Rest**
- **25-30% Load Squat jump 1 rep + Drop box Jump /1 rep...15-20 seconds Rest**
- **25-30% Load Squat jump 1 rep + Drop box Jump / 1 rep...15-20 seconds Rest**
- **25-30% Load Squat jump 1 rep +Drop box Jump / 1 rep**
- **Rest 2-3 minutes, then repeat for a total of 1 to 3 sets**

Potential Clusters

- **Peaking Focus for Team Sports, Advanced Athletes**
- **25-30% Load Squat jump/1 rep + Drop box Jump/1 rep + Acc. Band Jump/1 rep...15-20 seconds Rest**
- **25-30% Load Squat jump/1 rep + Drop box Jump/1 rep + Acc. Band Jump/1 rep...15-20 seconds Rest**
- **25-30% Load Squat jump/1 rep + Drop box Jump/1 rep + Accelerated Band Jump/1 rep**
- **Rest 2-3 minutes, then repeat for a total of 2 to 4 sets**

What is Lactate Retention Method

It's the Utilization of Lactate for Adaptation purposes prior to optimal Training Preparation Yin/Yang

-When using Lactate Retention Training you're doing the opposite of the normal to Get adaption Results at the Cellular level.

What is Lactate Retention Method

What is the Normal - After completing a 20 to 120 Set - you flush out the Lactate that has formed.

-Walking or light movement

The Lactate Retention method - you don't move to Keep the Lactate (the Burn) in the muscle. You remain Still.

Lactate Retention Methods



30 -40 Seconds
of Squatting after
Lactate Set

Deep Relaxed - Rpr
Breathing

What is Lactate Retention Method

What method?

Running - Biking - Stadium Stairs , Squat jumps in place
- Leg Press - 300's - Suicides -

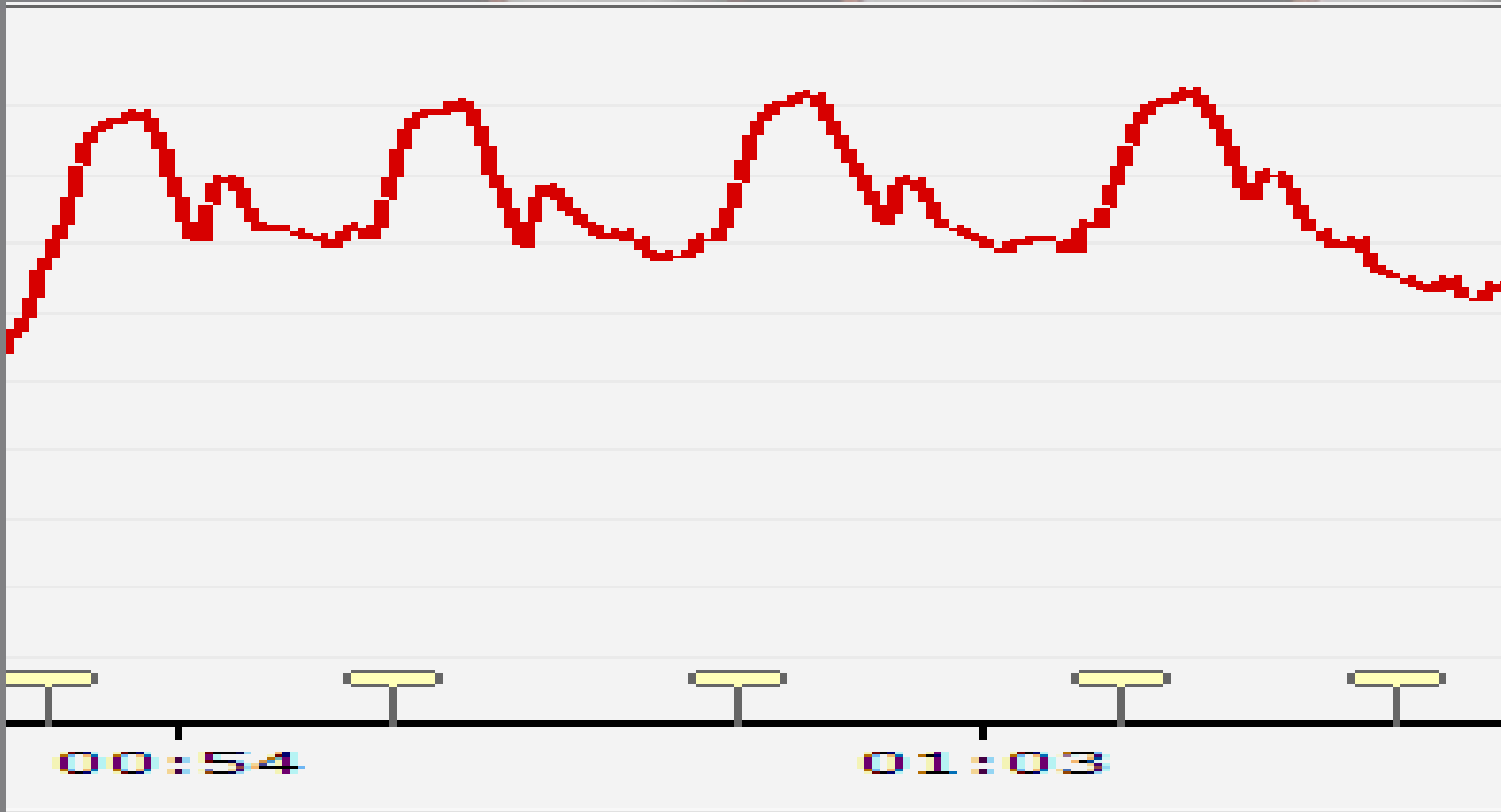
Bulgarian Lactate Jumping 3 Sets x 33 Sets - Rest in
between is - 110 Heart Rate

What is Lactate Retention Method

What Workout - any

- 1) Set 1 -Running a 300 shuttle - then Squatting for 30 second
- 2) Set 1 -Running a 300 shuttle - then Squatting for 30 second
- 3) Set 1 -Running a 300 shuttle - then Squatting for 30 second

Lactate Retention Methods



Lactate Retention Methods

- **Henk Kraaijenhof**
- **Adaptation over Performance**
- **What Phase/Block Two GPP – Triphasic Model**
- **Base Training last 2 to 3 weeks for Adaptation**
- **4 to 6 weeks for Performance**

Adaption Over Performance

Yin/Yang Performance

Adaptation Sequencing

Adaptation Phase 2 - 4 Weeks

Performance Phase - 3 to 8 Weeks - not for

