



# ***2022 NSCA PERSONAL TRAINERS VIRTUAL CONFERENCE***

**October 25 - 28, 2022 | ONLINE | 2.0 CEUs**



# CONFLICT OF INTEREST STATEMENT

I have no actual or potential conflict of interest in relation to this presentation.



# *Training the Tactical Population*

## Within a Personal or Commercial Gym

- Needs Analysis - Breakdown
- Tactical Athlete Assessments
- Programming Essentials
- Tactical Specificity



# ***Background***

27 years as an Infantryman (Marine Enlisted & Army Officer)

45 months deployed – Bosnia, Afghanistan, Kuwait, Yemen

**First-Ever Uniformed Strength Coach** for the Army: Assisted with development of the OPAT, ACFT, H2F Concept, Built 2x TAP-C (Fort Jackson & Fort Benning)

2016 Army Male Athlete of the Year

2017 NSCA TSAC - F Coach of the Year

2x World Powerlifting Champion (2015, 2016, and Bronze in 2019)

Current WR Holder in IPF & IPL

Certifications: NSCA CSCS, \*D, TSAC-F, \*D, RSCC, USAW 1, Kabuki PLM

Education: Currently pursuing a Ph.D. at the University of South Carolina

# ***MVMT to Contact Breakdown***

## **Goal Equals**

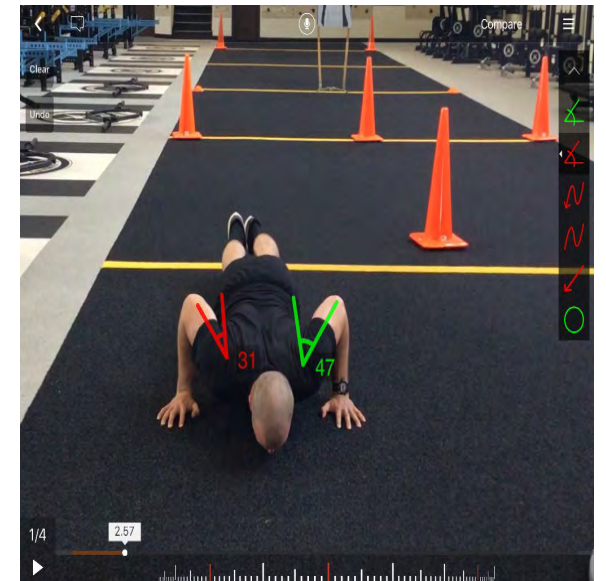
MVMT Pattern + Energy System + Fiber Type + Athletic Demand + Fitness Level

Training plan:

Goal, Initial assessment, program, end-state assessment

Assessment:

What will you test, specificity?



# Needs Analysis of the Warrior

Move Quickly  
Over, Under,  
Around,  
Trough  
Obstacles



Work for long  
periods of time



Lift, carry, drag  
heavy loads



Move for long  
distances  
over uneven  
terrain under  
load



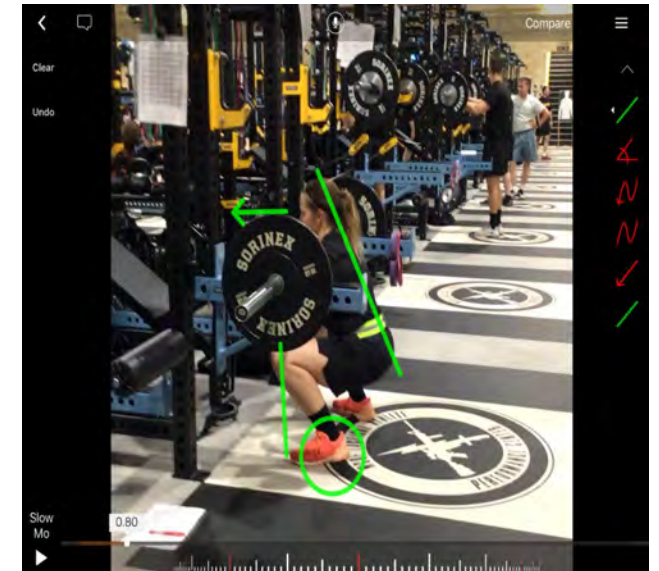
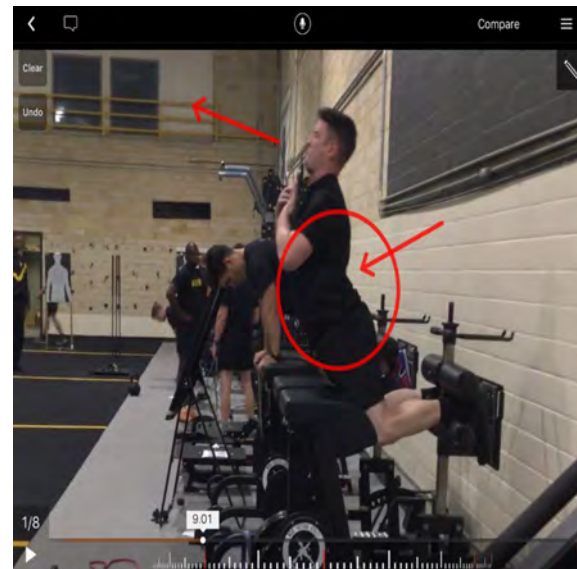
Generate and  
apply force



# Programming Essentials

**Personal Trainers** reflects a basic understanding of how to design a training program that incorporates strength (hypertrophy, strength, and power), endurance, and mobility to ensure the tactical athlete can improve their performance in any WTBD.

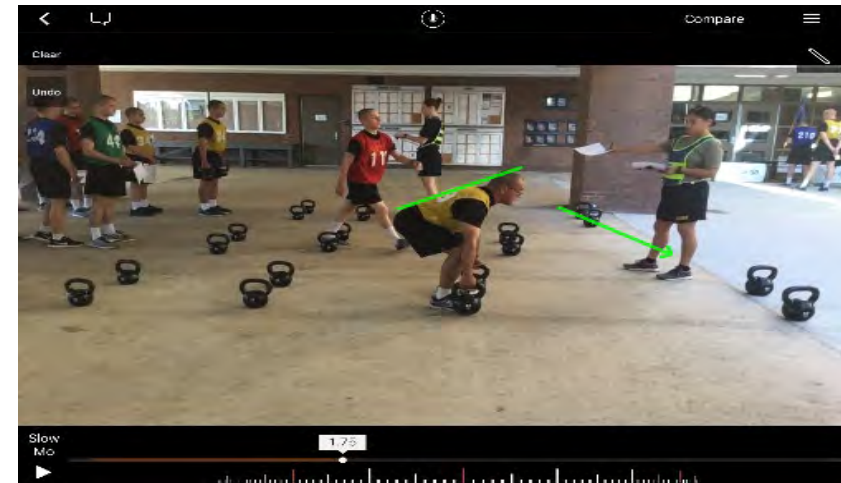
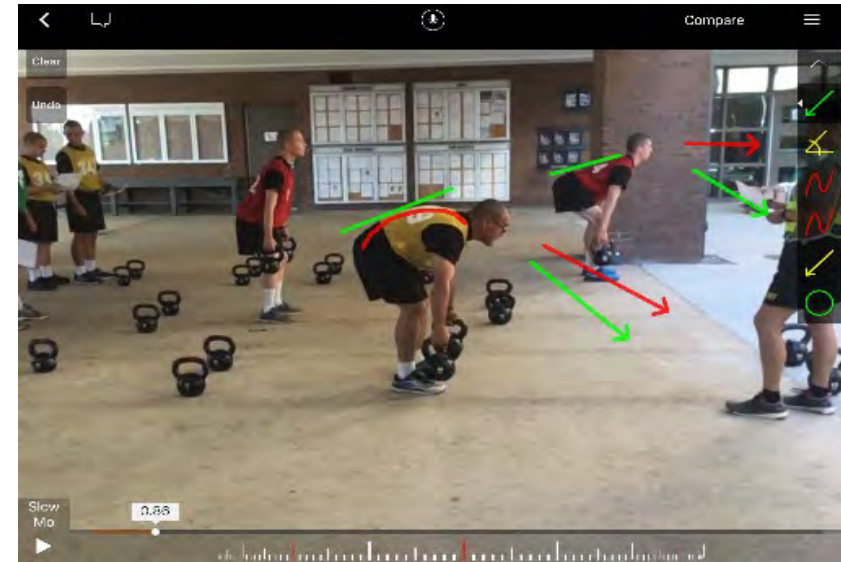
- Understand the nine basic steps that should be addressed when designing a program.



# Baseline Strength for the Warrior

**Soldiers move under loads > 30% of their BWT**

- Requires 1.5x BWT in Squat & 2.0x BWT in Deadlift
- Requires BWT + 60lbs for Grip Strength
- Requires Standing Long Jump to equal height of Soldier



# Tactical Athlete Planning

| Physical Fitness Training Program Planning Considerations |   |
|---|---|
| 1. Primary Energy System                                  | P/G/O (7/30/120) & MVMT Pattern                     |
| 2. Needs Analysis   | Evaluation & assessments (Tactical Athlete, 8 Wks)  |
| 3. Exercise Selection                                     | Hypertrophy, Strength, Power (Primary vs Assistant) |
| 4. Training Frequency                                     | 5 days per week                                     |
| 5. Exercise Order   | Complex vs Simple                                   |
| 6. Exercise Volume  | Intensity, Duration, Reps, Sets (w/in 10%)          |
| 7. Rest Periods   | Work to Rest Ratio                                  |
| 8. RPE Fatigue Level                                      | 1 – 10 Scale  |
| 9. Group by Ability (>25 PAX)                             | Assessment Driven                                   |

- Strength and Power (Squat, Dead Lift, Push Press, Pull-up, Long Jump, Grip)
- Aerobic Capacity (1-mile run)
- Anaerobic Capacity (300-yd Shuttle Run)
- Mobility (Functional Movement Screen or Variant)
- Muscular Endurance (Hand Release Push-up, Plank)

# *Training Frequency*

Each week should have the minimum training attributes

- 2x weekly Intervals (200m, 400m, Hill repeats) Ability Grouped with Tempo/RPE
- 2x weekly Strength Training (Squat, Deadlifts, Pull-ups) No more than 12 reps during any set (Overtraining w/ME)
- 1x weekly Cardio conditioning run (Ability Grouped) RPE and HR zone based w/tempo
- 1x weekly Active recovery (Pool/ Mobility rollers/balls/etc...)

**\*\*Tactical Specificity training Session 1-2x Monthly\*\***

# Exercise Volume

## Volume: (Reps x Sets x Load) (10% rule)

- 1) the total amount of weight lifted in a training session (total # of reps x weight lifted per rep)
- 2) total number of repetition completed in a training session (# of reps x sets).

## Set: a group of repetitions that are performed consecutively

- Muscular endurance
- Hypertrophy
- Muscular Strength
- Power

What about Volume for Running or Foot Contacts?

# RPE Based Training

| RPE | 12 REPS | 10 REPS | 8 REPS | 7 REPS | 6 REPS | 5 REPS | 4 REPS | 3 REPS | 2 REPS |
|-----|---------|---------|--------|--------|--------|--------|--------|--------|--------|
| 10  | 63%     | 65%     | 70%    | 73%    | 75%    | 80%    | 85%    | 90%    | 95%    |
| 9   | 60%     | 62%     | 68%    | 70%    | 73%    | 78%    | 82%    | 85%    | 90%    |
| 8   | 56%     | 60%     | 65%    | 68%    | 70%    | 75%    | 78%    | 80%    | 85%    |
| 7   | 54%     | 58%     | 62%    | 65%    | 68%    | 70%    | 70%    | 75%    | 80%    |

## RPE

10- Max (No reps left)

9- Last rep is tough, but still 1 left)

8- 2-3 reps left, too heavy to maintain decent bar speed

7- Good speed weight (5-6 reps left)

5/6- warm up or light speed weight

4- Recovery, excess of 25 reps at this weight

|                      |               |     |      |  |                    |     |      |      |  |
|----------------------|---------------|-----|------|--|--------------------|-----|------|------|--|
| MAX HR               | 165 estimated |     |      |  |                    |     |      |      |  |
| Resting HR           | 60            |     |      |  |                    |     |      |      |  |
| Foot Strikes/Min     | 162           |     |      |  |                    |     |      |      |  |
| Heart Rate RPE Chart |               |     |      |  | Interval RPE Chart |     |      |      |  |
| RPE                  | HR Zone       | Low | High |  | RPE                | 200 | 400  | 800  |  |
| 10                   | 5             | 154 | 165  |  | 10                 | 60s | 100s | 215s |  |
| 9                    | 4             | 147 | 153  |  | 9                  | 65s | 105s | 225s |  |
| 8                    | 3             | 138 | 146  |  | 8                  | 70s | 112s | 237s |  |
| 7                    | 2             | 124 | 137  |  | 7                  | 75s | 120s | 250s |  |
| 6                    | 1             | 103 | 123  |  | 6                  | 80s | 125s | 300s |  |

# Tactical Specificity

## Every Soldier ...

### Shoot (16-17 Tasks)

- Qualify w/ assigned weapon
- Correct malfunctions w/ assigned weapon
- Engage targets with M240B MG
- Engage targets with M60 or M249 MG
- Engage targets with M2 Cal. 50 MG
- Engage targets with MK-19 MG
- Correct malfunctions of a MG (M2, M240B, M249, MK-19)
- Employ mines (manned) and hand grenade:

### Communicate (4-5 Tasks)

- Perform voice communications (SITREP, SPOTREP, Call for Fire, & MEDEVAC)
- Use visual signaling techniques

### Joint Urban Operations (3 Tasks)

- Perform movements techniques during an urban operation (Close Quarter Battle)
- Engage targets during an urban operation
- Enter a building during an urban operation

## .. ~40 Warrior Tasks

### Move (7-8 Tasks)

- Determine location on ground (terrain association, map, & GPS)
- Navigate from one point to another (dismounted & mounted)
- Move over, through, or around obstacles (except minefields)

### Fight (15 Tasks)

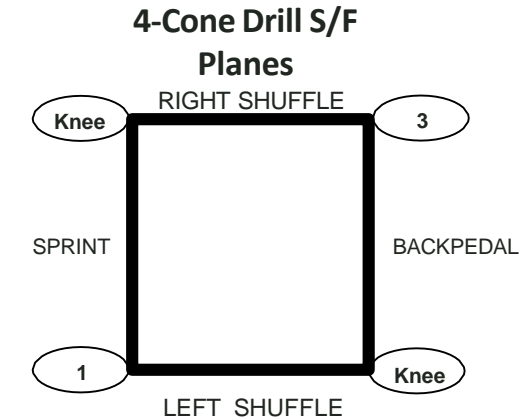
- Move under direct fire
- React to indirect fire (dismounted & mounted)
- React to direct fire (dismounted & mounted)
- React to unexploded ordnance hazard
- React to Soldier-to-Soldier contact (Combative)
- React to chemical or biological attack/hazard
- Decontaminate yourself & individual equipment using chemical decontaminating kits
- Maintain equipment
- Evaluate a casualty
- Perform first aid for open wound (abdominal, chest, & head)
- Perform first aid for bleeding of extremity
- Select temporary fighting position



# Tactical Specificity CQB- Prescription



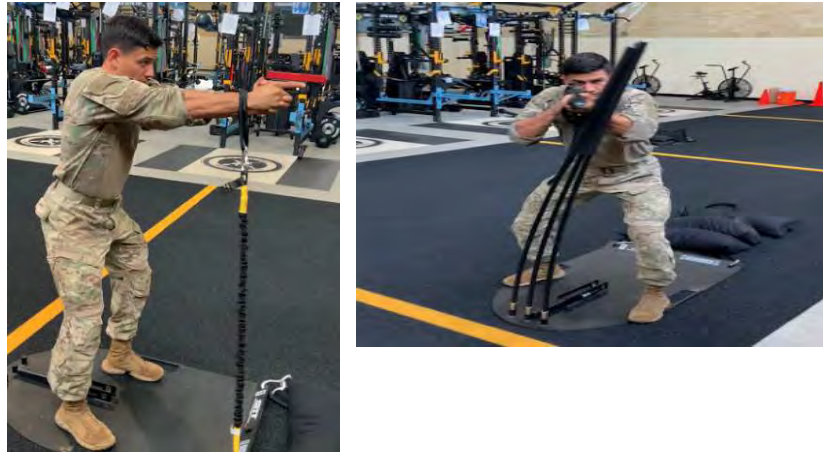
Sledge / War  
Hammer Swings  
(Breach a Door)



**“The physically demanding tasks of a soldier require a combination of strength, power, and aerobic capacity. Physical training and assessment of soldiers and recruits should include all of these fitness domains.”**

# Tactical Specificity CQB- Prescription Continued

SITT Sled – Rifle & Pistol



Sports Psychology



**“Soldiers performing resistance training with their unit at least once per week were at a lower risk of injury than were Soldiers in units that did not perform resistance training.”**

# Tactical APP Calendar

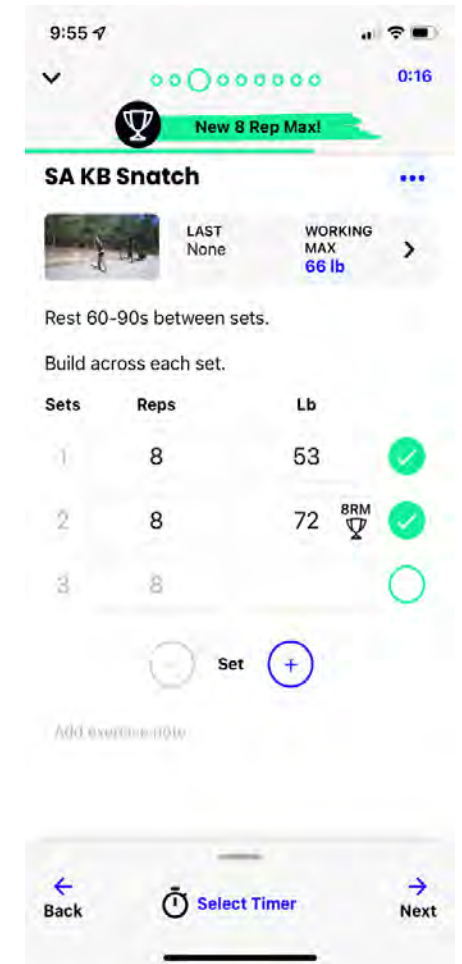
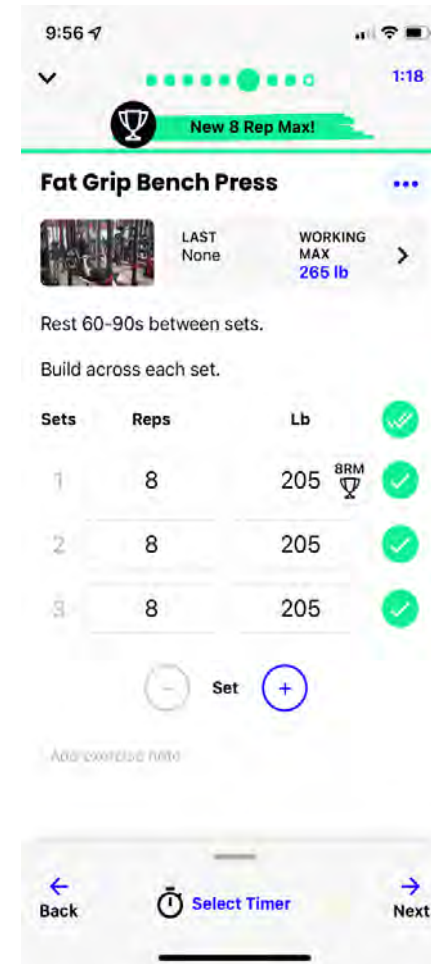
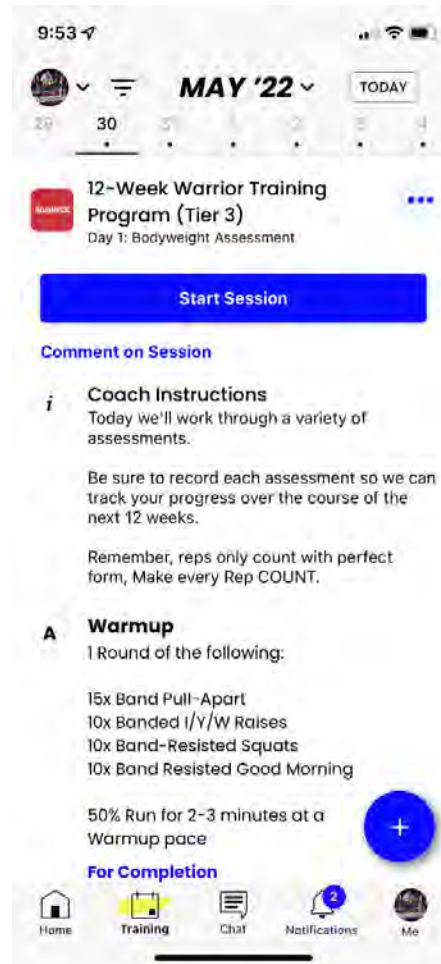
|  |   |   |   |  |  | SAT<br>18 JAN                                   |
|--|---|---|---|--|--|---|
| SUN<br>19 JAN                                | MON<br>20 JAN   | TUE<br>21 JAN   | WED<br>22 JAN                                       | THUR<br>23 JAN   | FRI<br>24 JAN  | SAT<br>25 JAN                                   |
|  | Day 1 Assessment  | Day 2 Assessment  | Day 3 Assessment                                    | Day 4 Assessment   | Day 5 Assessment   | Active Recovery – Pool or Yoga                  |
| SUN<br>26 JAN                                | MON<br>27 JAN   | TUE<br>28 JAN   | WED<br>29 JAN                                       | THUR<br>30 JAN   | FRI<br>31 JAN  | SAT<br>1 FEB                                    |
| Off  | AM: Intervals<br>PM: Strength<br>Barefoot (10 mins)     | AM: Aerobic COND<br>PM: Core/Grip<br>Tactical Specificity 1 | AM: Speed<br>PM: Strength<br>(Breathe Holds)        | AM: Non-Impact<br>PM: Mobility –<br>Breathe Belt<br>Barefoot (10 mins) | AM: Pool - Sprints<br>PM: Strength                               | 3 Mile FM<br>35lbs<br>3 x 30 Squats             |
| SUN<br>2 FEB                                 | MON<br>3 FEB  | TUE<br>4 FEB  | WED<br>5 FEB  | THUR<br>6 FEB  | FRI<br>7 FEB   | SAT<br>8 FEB                                    |
| 60 Minutes – Feet/LB Smash/Distract/St retch | AM: Intervals<br>PM: Strength<br>Tactical Specificity 2 | AM: Aerobic COND<br>PM: Core/Grip                           | AM: Speed<br>PM: Strength<br>Barefoot (12 mins)     | AM: Non-Impact<br>PM: Pool - Distance                                  | AM: Mobility-<br>Breathe Belt<br>PM: Strength<br>(Breathe Holds) | Long Terrain FM<br>Walk Only<br>6 miles (60lbs) |
| SUN<br>9 FEB                                 | MON<br>10 FEB   | TUE<br>11 FEB   | WED<br>12 FEB                                       | THUR<br>13 FEB   | FRI<br>14 FEB  | SAT<br>15 FEB                                   |
| 60 Minutes – UB Smash/Distract/St retch      | AM: Intervals<br>PM: Strength                           | AM: Aerobic COND<br>PM: Core/Grip                           | AM: Speed<br>PM: Strength<br>Tactical Specificity 3 | AM: LB Mobility –<br>Breathe Belt<br>PM: Pool - Sprints                | AM: Non-Impact<br>PM: Strength                                   | Mini-Comp (2hr session)                         |
| SUN<br>16 FEB                                | MON<br>17 FEB   |   |   |  |  |   |
| 90 minutes – Pool/Yoga                       | AM: Intervals<br>PM: Strength<br>Barefoot (12 mins)     |   |   |  |  |   |



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Training the Tactical Population within a Commercial Gym

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# Individualized Training Sessions w/APP



# ***Tactical APP Link and Contact Information***

**Sorinex Tactical Training APP:** [STATP – Sorinex Registration Link: Train Heroic Market Place](#)  
<https://marketplace.trainheroic.com/workout-plan/program/bigham-program-1644264270?attrib=544464-email>

[Instagram: @onetimepowerlifting](#)  
[Email: cptbigham@yahoo.com](mailto:cptbigham@yahoo.com)

# *Exercise Options*

## **Go to exercises:**

- Backward Walking on the Treadmills
- Bear Crawl with Sled (FWD, BWD, R & L Lateral)
- SA KB Bell UP Variation (Standing, Walking, Kneeling)
- Tempo Variations with Machines (ISO and ECC)
- Bracing (Band Variations for Plank, Pull of Press, Bird Dogs)
- Grip (Pinch all Plates, Fat Bar or Axial, Towel or Rope)
- Bare Foot (Tripod, Therapy Bands, Heel Elevation)

# Rules to Live By

- **Train Your Weaknesses**
  - Unexposed weaknesses can lead to performance plateaus and injuries.
  - Lower Back, Hamstrings, Shoulders, Grip
  - Not just what you see in the mirror
- **Lift Heavy**
  - “To get strong you have to lift heavy weights. Nothing beats it. Lifting at max effort also teaches better form at lighter loads because when stressed will “find” the most efficient path to do what the mind tells it”
- **Lift Fast**
  - “Lifting weight quickly also helps you get strong. Most people who practice Olympic lifts also have a big dead lift but the reverse is not true as often. Has to be mixed in with heavy lifting because doing nothing but speed reps at 20-30% 1RM will only get you so far.”
- **What to do at the Gym and Improve Anaerobic/Aerobic Capacity**
  - Day 1: Deadlift and Posterior chain Variations
  - Day 2: Squat and Core Variations
  - Day 3: OH Pressing and Bench Variations/ Tempo/<6 mile FM w/Squats/LSR
  - Day 4: Short and Middle Intervals/Sprints and Hill Sprints (Walk down backwards)
  - Day 5: Active Recovery Cold Therapy/Soft Tissue/Myofascial Release
  - Day 6: High Intensity WO Tactical/BWT Circuits

# Questions?

