



2022 NSCA *NATIONAL* CONFERENCE

July 6-9, 2022 | New Orleans & Online
#NSCACon22

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› *ADVANCEMENT*
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CONFLICT OF INTEREST STATEMENT

- **I have no actual or potential conflict of interest in relation to this presentation.**
- **These are my views and not the official views of the United States Navy (USN), Special Operations Command (SOCOM), or the Department of Defense (DOD).**
- **While I will present and show numerous commercial technology systems that I currently utilize, I am not in anyway being paid or compensated by these vendors and am only showing how I apply these systems in my unique setting. There are multiple other vendors that can supply similar technology to accomplish similar applications and this is not an endorsement of any particular product.**

Immediate and Actionable: Applying an Autoregulatory Training & Recovery System

Joseph C. Denk, MS, CSCS

- Show the need for autoregulatory training and recovery protocols within the tactical & sport communities and discuss practical applications that help to promote force and team readiness, performance, and long-term sustainment.
- Demonstrate how different pieces of commonly available commercial-off-the-shelf (COTS) technologies can be combined into a comprehensive system that provides data-driven immediate and actionable recommendations for training and augmented recovery.
- Discuss how this autoregulatory approach provides programming flexibility to coaches and empowers them with a fusion of objectively measured and subjectively qualified readiness and wellness indicators to inform real-time programming and training practices.

What is Data-Driven Autoregulatory Programming?

- Commonly referred to as “fluid,” “agile,” or “flexible” periodization or programming
 - Some examples: APRE, VBT, various load response kinetic monitoring techniques
- Making daily training & recovery decisions based upon an integrated data analysis
- This system’s approach:
 - A coach programs multiple training sessions ahead of time with varying intensity, volume, or movement complexity parameters that fit preestablished thresholds of readiness/wellness data
- An integrated analysis of data dictates which training session or recovery modality should be conducted
 - In this model there are **2 types of data** used in the analysis:
 - Subjective wellness data
 - Objective physiological readiness data

Not Training Hard Enough on Hard Days, Not Easy Enough on Easy Days



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The Goal: Push Hard When Primed, Back Off & Train Appropriately When Not

- Optimizes adaptational resources of the tactical service member or athlete
- Reduces the recovery costs of training while “in the hole” (rubbing a rope over a rock)
- Unique Tactical S&C Advantage: No true “peaking” period in tactical, long term-development & sustainment is the goal, plenty of time to train “hard” to the right

The Need For Autoregulatory Training Approaches

OBSTACLE	SOLUTION	AUTOREGULATORY VALUE
Unknown allostatic load & stress (travel, finals, playoffs, family), data paralysis by analysis.	STEN score quantification of markers of subjective & objective stress, wellness, and readiness	Automatically accounts for fluctuations in multiple holistic factors important for performance optimization.
Chronic under-recovery (routinely training too hard when not-prepared to do so)	Use combined readiness & wellness data to drive training volume/intensity	Optimize training stimulus to state of readiness to perform & adapt, reducing training injury likelihood.
Not enough recovery emphasis, only training emphasis	Incentivize solid recovery practice, use data to inform the recovery process	Higher recovery scores are rewarded with higher intensity training. Use modalities according to data trend.
Inflexible traditional programming approaches	Build a system with training options that creates more flexibility and athlete autonomy	Travel, congested schedule, & minimum equipment options can improve consistency, reduce gaps, & supplement primary training options.
Poor or unknown force/team physical readiness & sustainment	Undulate training intensity according to readiness & wellness trend	Appropriate training intensities/volumes should reduce nonfunctional over-reaching & over-training & preserve readiness/availability.



www.Smartabase.com



www.bridgeathletic.com



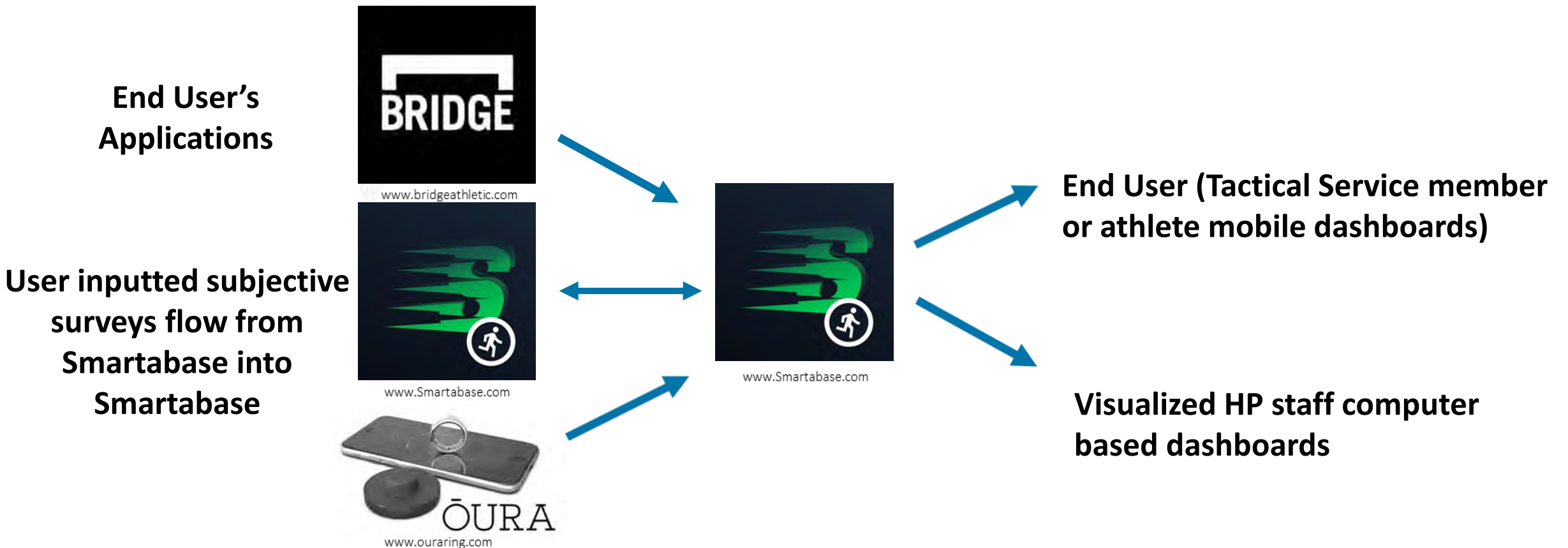
www.ouraring.com

Leveraging The Right Applicational Fit

Each piece of technology plays a role in the system, which allows the autoregulatory programming to function

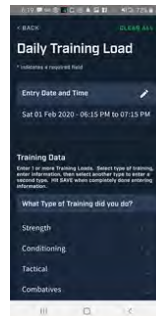
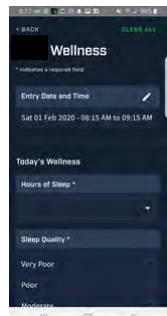
System Communication Architecture

MANAGING OUR MEASURES: Data from apps → Smartabase (Application Programming Interface API) → training & recovery recommendations, & data visualizations to tactical service member/athlete & HP staff



Wearable Tech Application

TECHNOLOGY NEED	COTS SYSTEM SOLUTION	APPLICATIONAL ROLE
Athlete Management System w/APIs	Smartabase	User Subjective Survey Feedback, Coach & Service Member Data Visualization, Automatic Data Integration, Statistical Analysis, & Feedback Recommendations
Mobile Strength & Conditioning App w/API	Bridge Athletic	Remote Delivery of Programming, Input of Training Analytics
Sleep & Physiological Sensor w/API	Oura Ring	Vital Objective Physiological & Sleep Data Collection



Readiness to Adapt To Training vs. Readiness To Train



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OBJECTIVE: OURA RING PHYSIOLOGICAL READINESS

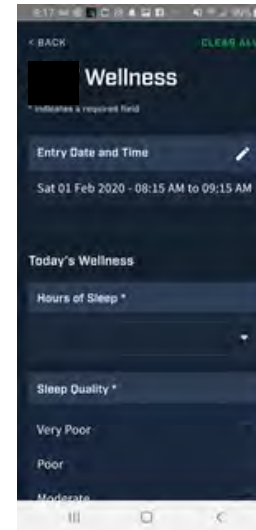
**Sleep Analysis
(Duration & Efficiency)**

Resting Heart Rate (RHR)

Respiration Rate (RR)

Skin Temperature

Heart Rate Variability (HRV-RMSSD)



SUBJECTIVE: SMARTABASE DAILY MORNING WELLNESS SURVEY (1-5, HIGHER SCORES BEING BETTER)

Sleep Duration

Sleep Quality

Stress

Motivation

Fatigue

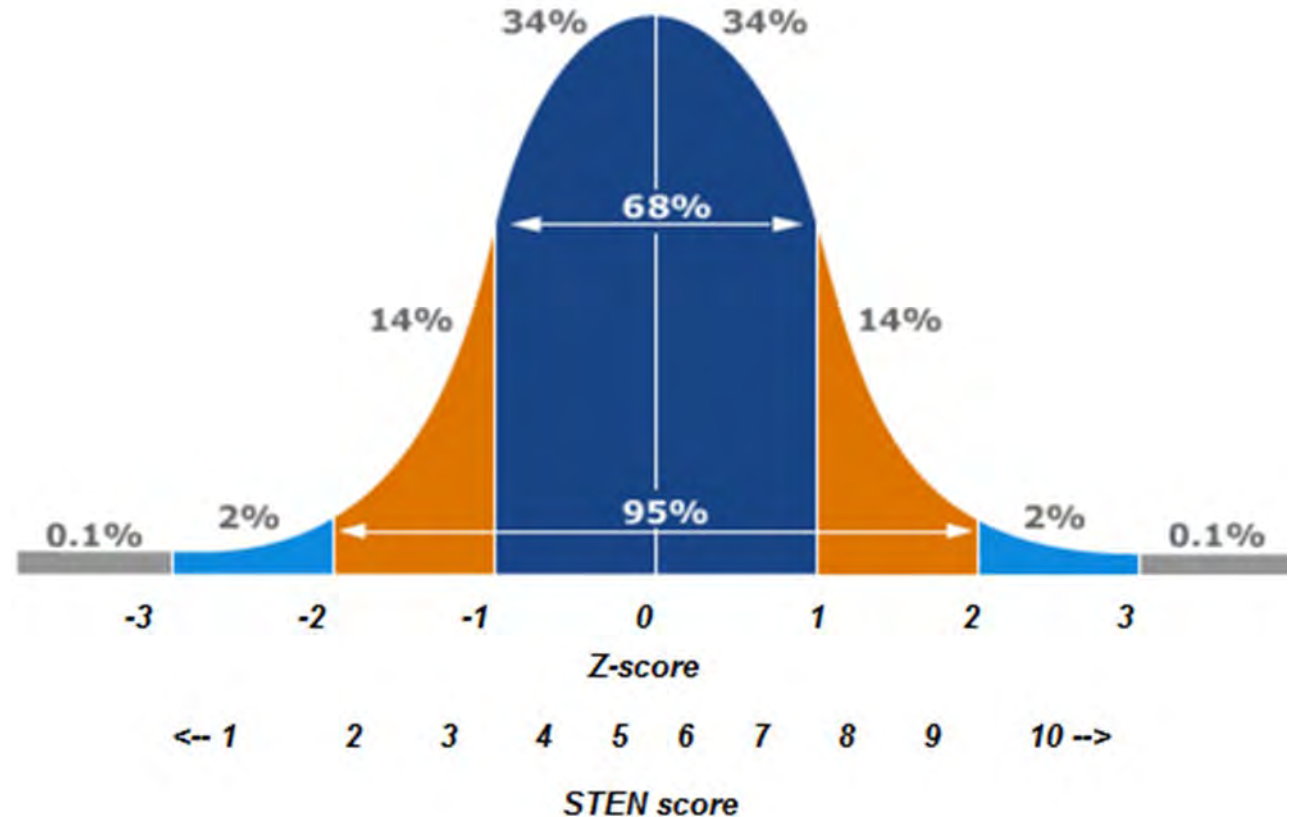
Soreness

Nutrition Quality

Hydration Status

STEN SCORES: DEFINING INTENSITY THRESHOLDS

- STEN scores (Standard Tens) are calculated from your Z-score ($2 \times z\text{-score} + 5.5$)
- They normalize your data into an intuitive 10 point scale
 - Your average is 5.5 (each 1.0 unit of STEN represents 0.5 SD)
 - Very high is 9-10
 - Very low is 1-2
- They help make raw data more meaningful and actionable
- Easier to mark thresholds & define practically significant change thresholds
- Calculated automatically in Smartabase



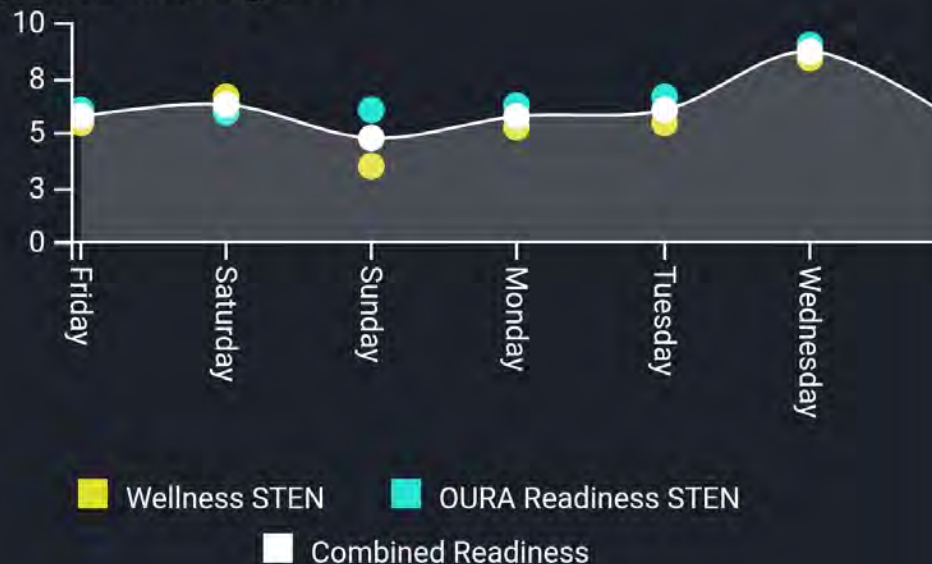
<https://www.statisticshowto.com/sten-score/>

Immediate & Actionable: Objectively Measured, & Subjectively Qualified Data-Driven Recommendations

COMBINED READINESS

Aggregate STEN Score for Oura Readiness and Wellness

The closer the dots, the more your subjective and objective data agrees



🔌 Today's Optimal Training Intensity

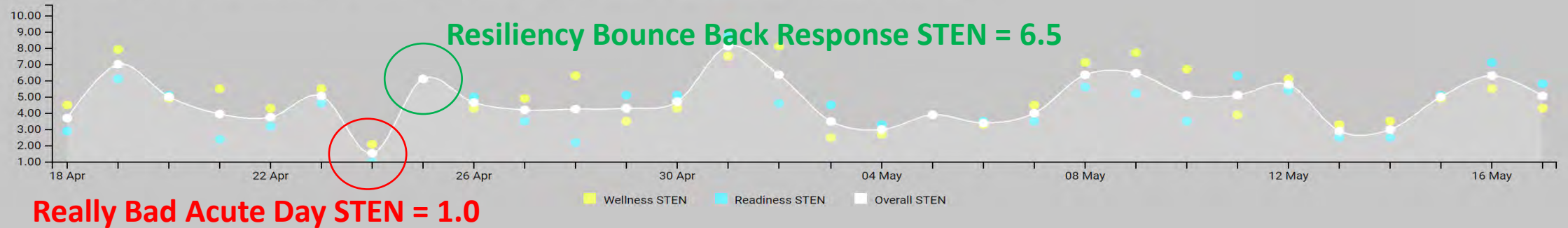
Based upon advanced analysis of your Oura and self reported wellness data the following workouts are ideally recommended for today. STEN Scores greater than 6.5 result in High Intensity Training, between 4.5 and 6.5 is Moderate Intensity, between 4.5 and 2.5 is Low Intensity, and below 2.5 is Active Recovery..

DAY ▲	READINESS STEN ▲	STRENGTH WORKOUT ▲	CARDIO WORKOUT ▲
23 Dec	5.9	Strength & Lean Mass	Moderate Intensity

Tracking Natural Variance Over-Time

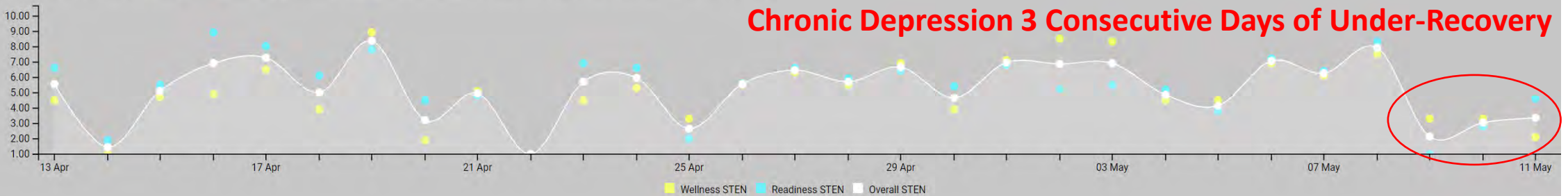
COMBINED READINESS

Aggregate STEN Score for Oura Readiness and Wellness. The closer the dots, the more the subjective and objective data agrees.



COMBINED READINESS

Aggregate STEN Score for Oura Readiness and Wellness. The closer the dots, the more the subjective and objective data agrees.

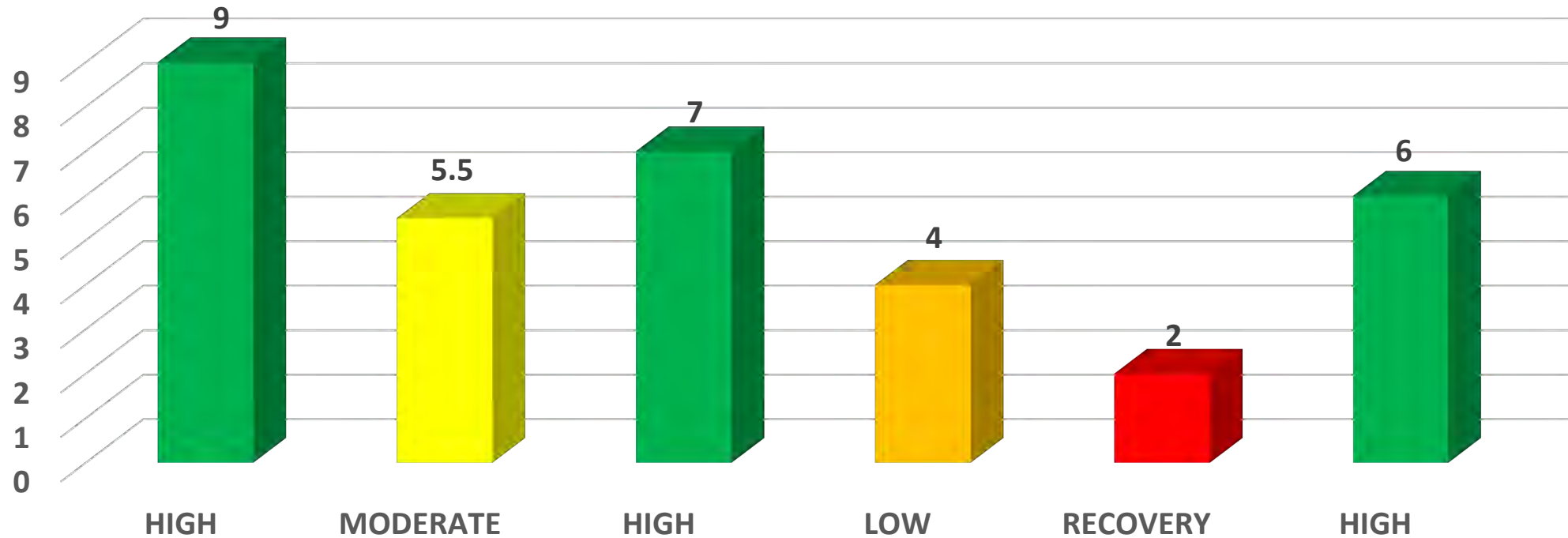


YELLOW DOT = WELLNESS STEN

BLUE DOT = OURA READINESS STEN

WHITE DOT = AVERAGE OF WELLNESS & READINESS STEN SCORE (used for autoreg calc)

SAMPLE DATA DRIVEN AUTOREGULATORY TRAINING WEEK INTEGRATED STEN SCORE VS TRAINING INTENSITY



INTEGRATED STEN SCORE INTENSITY KEY

10-6.6: *High Intensity (Power & Strength) Very good day*

6.5-4.6: *Moderate Intensity (Strength & Lean Mass) Average day*

4.5-2.5: *Low Intensity (Strength or Muscular Endurance & Work Capacity) Below avg day*

2.4-0: *Active Recovery & Mobility, Really below average day*

Daily Training Optimization

🔌 Today's Optimal Training Intensity

Based upon advanced analysis of your Oura and self reported wellness data the following workouts are ideally recommended for today. STEN Scores greater than 6.5 result in High Intensity Training, between 4.5 and 6.5 is Moderate Intensity, between 2.5 and 4.5 is Low Intensity, and below 2.5 is Active Recovery.∴

DAY ▲	READINESS STEN ▲▼	STRENGTH WORKOUT ▲▼	CARDIO WORKOUT ▲▼
07 Jan	6.7	Strength & Power	High Intensity

🔌 Today's Optimal Training Intensity

Based upon advanced analysis of your Oura and self reported wellness data the following workouts are ideally recommended for today:

DAY ▲	READINESS STEN ▲▼	STRENGTH WORKOUT ▲▼	CARDIO WORKOUT ▲▼
15 Nov	1.0	Recovery & Mobility Emphasis for Strength	Recovery Aerobic Flush

Empowering, NOT Replacing Coaching

- Data can be utilized by coaches to have more powerful, streamlined conversations with tactical service members and athletes
- Data helps to raise awareness & allow for better coaching, helps to inform but isn't the only determinant!
- Data allows for long-term tracking & trend analysis vs. conversation alone
- Coach designs & implements the training variations & sessions
 - The coach is still in complete control of the training process, just decides on the decision tree ahead of time (IE: if this happens, then that training will be executed)
- Technology and the coach's eye/experience should work together to help the tactical service member, not against one another

Program Organization In Bridge Athletic (5 Training Days)

MON: TBD STR PUSH AUTOREGULATORY OPTIONS

3 WEEKS 2 DAYS/WEEK



3 different intensity options, power & strength, strength & lean mass, and strength endurance & work capacity. Look at your Smartabase training recommendations on your Operator Insights Dashboard to determine which category to pick from then pick one of the two options. Emphasis is on core, squat, and horizontal pushing.

WED: TBD STR PULL AUTOREGULATORY OPTIONS

3 WEEKS 2 DAYS/WEEK



3 different intensity options, power & strength, strength & lean mass, and strength endurance & work capacity. Look at your Smartabase training recommendations on your Operator Insights Dashboard to determine which category to pick from then pick one of the two options. Emphasis on lower body hinging, horizontal upper body pulling and general core and posterior chain development.

FRI: TBD STR AUTOREGULATORY OPTIONS

3 WEEKS 2 DAYS/WEEK



3 different intensity options, power & strength, strength & lean mass, and strength endurance & work capacity. Look at your Smartabase training recommendations on your Operator Insights Dashboard to determine which category to pick from then pick one of the two options. Emphasis on rotational core, vertical pressing and pulling, lower body knee dom pull, load carry and neck.

TUESDAY & THURSDAY: AUTOREGULATORY COND OPTIONS

3 WEEKS 4 DAYS/WEEK



Multiple options for high, moderate, and low intensity aerobic conditioning. Look at your Smartabase Operator Insights Dashboard training recommendations for conditioning and then pick your option here according to its recommendation. Emphasis is on aerobic capacity development.

AUTOREGULATORY RECOVERY/MOBILITY OPTIONS

1 WEEK 2 DAYS/WEEK



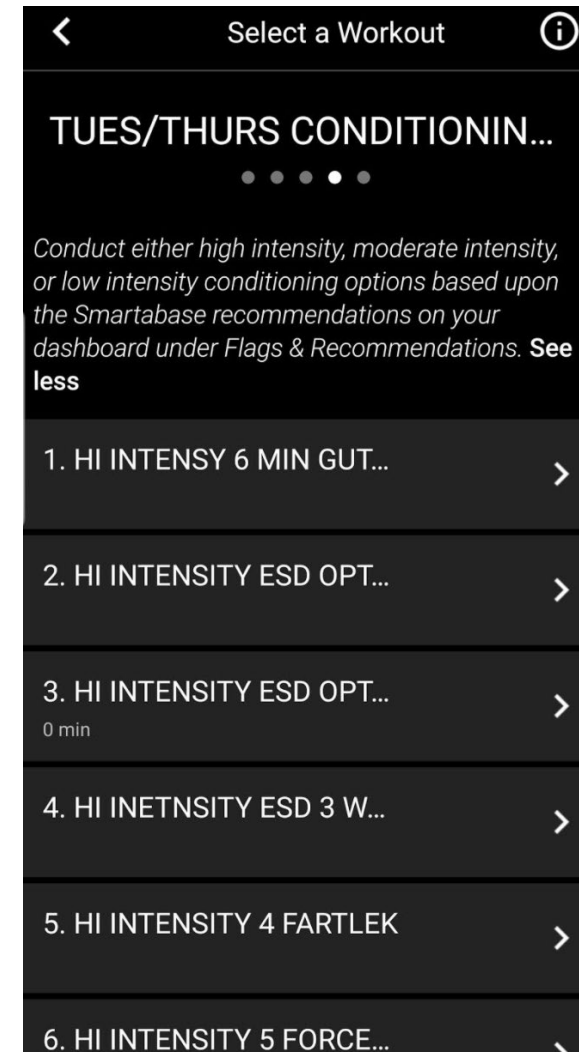
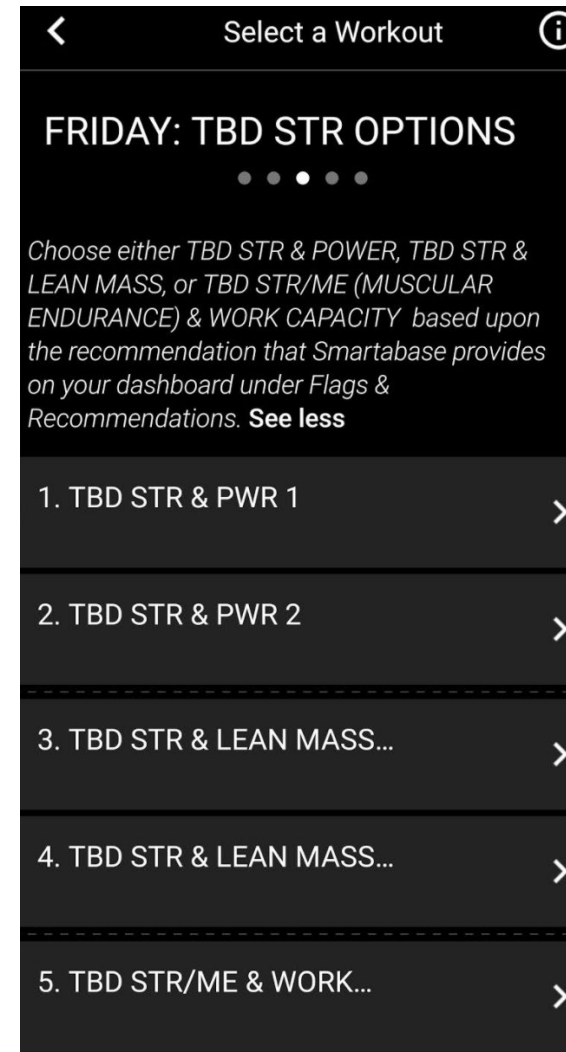
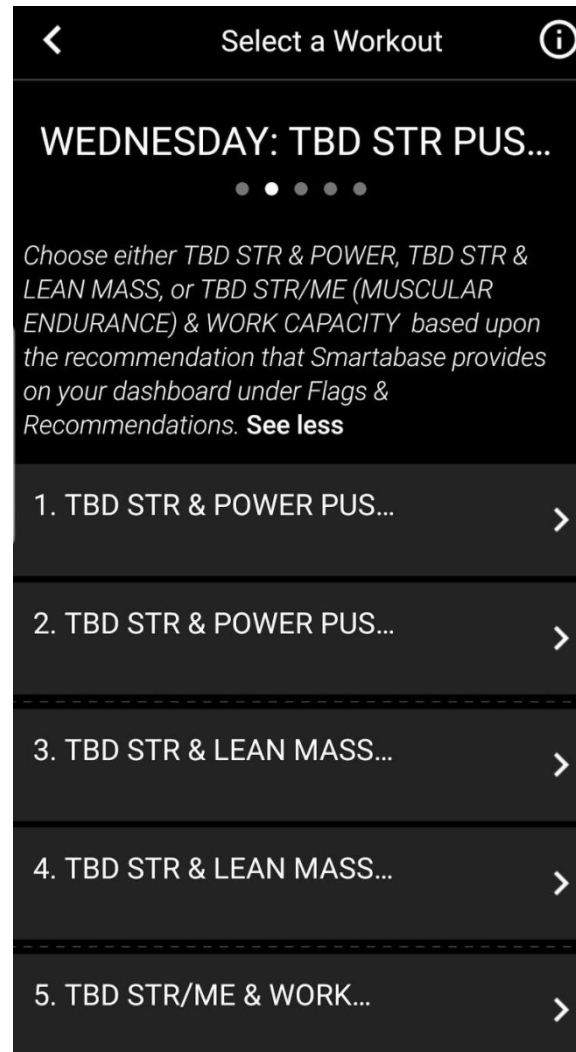
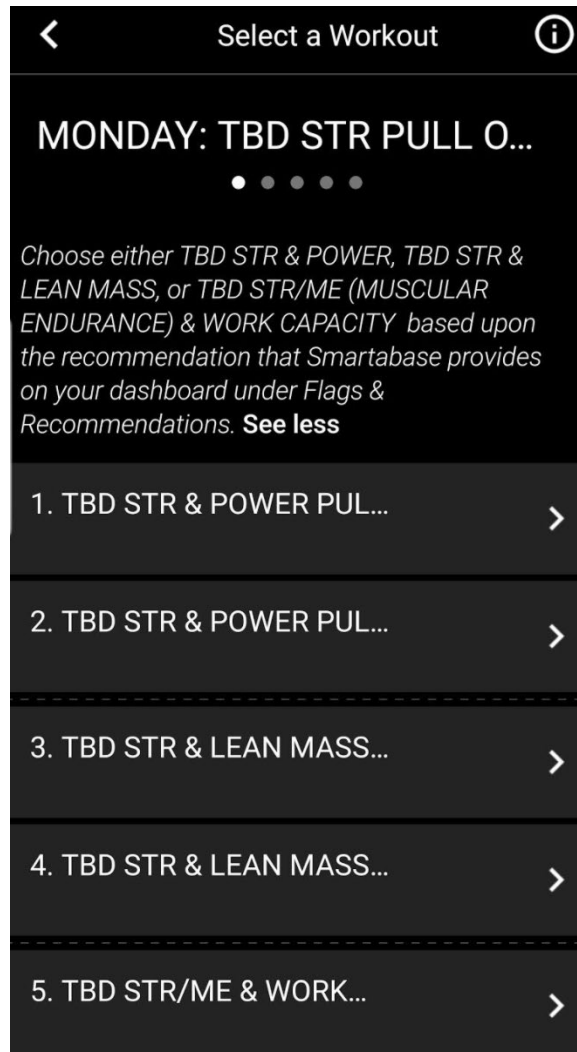
Conduct when Smartabase tells you to do a recovery or mobility workout on your Operator Insights Dashboard training recommendations.



Joseph C. Denk, MS, CSCS
*Immediate and Actionable: Applying an Autoregulatory
Training & Recovery System*



What The Tactical/Athlete User Sees



Three Different Strength Training Intensities

TBD PWR & STR	0 min
+ Total Body TRX W... ↻	
10 Exercises	
+ Plyo & Core 🗨️ ↻	
2 Exercises	
+ Explosive Strengt... 🗨️ ↻	
2 Exercises	
+ Strength Super-Set 🗨️ ↻	
2 Exercises	
+ Strength 3x6	
1 Exercise	
+ SLED PUSH 🗨️	
1 Exercise	
+ Total Body Soft Ti... ↻	
9 Exercises	

STR & LEAN MASS	0 min
+ BW TBD WARM-Up ↻	
13 Exercises	
+ 4x6 Strength with... 🗨️ ↻	
2 Exercises	
+ Strength 3x10 Su... 🗨️ ↻	
3 Exercises	
+ Load Carry 🗨️	
1 Exercise	
+ ARM BLAST FINIS... 🗨️	
2 Exercises	
+ 4 Way Neck Flexi... 🗨️	
2 Exercises	
+ Total Body Stretch ↻	
10 Exercises	

TBD STR END & WC	0 min
+ Total Body TRX W... ↻	
10 Exercises	
+ Strength & Core ... 🗨️ ↻	
3 Exercises	
+ TBD WORK CAPA... Ⓡ 🗨️	
4 Exercises	
+ 4 Way Neck Flexi... 🗨️	
2 Exercises	
+ TBD Mobility Wor... ↻	
5 Exercises	

Creating Flexibility & Autonomy With Training Options

OPT 1: TBD PWR & STR PU... 0 min	OPT 2: TBD PWR & STR PU... 0 min
+ Total Body TRX W... ↻	+ TBD Band Warm-... ↻
10 Exercises	9 Exercises
+ Plyo & Core ↻	+ Plyo & Core ↻
2 Exercises	2 Exercises
- Explosive Strengt... ↻	- Explosive Strengt... ↻
Landmine Push Pres... ↻	KB SA Push Press ↻
5reps 60 %	5reps 60 %
5reps 65 %	5reps 65 %
5reps 70 %	5reps 70 %
Mini Band Deadbug ↻	Side Plank w/ Leg Rai... ↻
6reps 1:30	6reps 1:30
8reps 1:30	8reps 1:30
10reps 1:30	10reps 1:30
Add Exercise	Add Exercise
- Strength Super-Set ↻	- Strength Super-Set ↻
Safety Squat Bar Hat... ↻	Barbell Bench Press ↻

- **Playlist Mode** allows a coach to program in multiple training options per training intensity allowing for more flexible training and greater athlete autonomy
- **Variation without change** allows for more optimized adaptation, reduction in staleness
- **Travel & minimal equipment options** promote training consistency & reduce training gaps

Autoregulating Conditioning Programming

OPT 1: HI 6 MIN MAX OUT... 0 min

+ Quick Pre-Conditioning 0 min

6 Exercises

+ OUTPUT TEST 0 min

1 Exercise

+ LWB SOFT TISSUE... 0 min

12 Exercises

+ Augmented Recovery 0 min

1 Exercise

OPT 2: MOD 3 MILE RUN 0 min

+ Quick Pre-Conditioning 0 min

6 Exercises

+ MODERATE 3 MILE RUN 0 min

1 Exercise

+ LWB SOFT TISSUE... 0 min

12 Exercises

+ Augmented Recovery 0 min

1 Exercise

OPT 3: LOW INTERVALS 0 min

+ Quick Pre-Conditioning 0 min

6 Exercises

+ Aerobic Intervals 0 min

1 Exercise

+ SWISS SWING LOW INTENSITY 0 min

7 Exercises

+ Augmented Recovery 0 min

1 Exercise

Other considerations for conditioning intensity prescription:

- 1): Energy system intensity continuum: alactic > anaerobic > aerobic
- 2): Ascending training duration
- 3): Work to rest ratio or heart rate zones

Autoregulatory Programming Considerations

- Consistent data entry compliance is key to obtaining the most optimal data analysis (autoreg helps with this!)
- Ensure adequate training age and preparedness for all the intensities, volumes, and complexities in the plan
- Focus intensity to the match the overall emphasis of the program (IE explosive strength development, GPP, aerobic and muscular endurance, etc → SAID principle!)
 - Could still have explosive strength or strength in each workout variant, to what degree is determined by readiness to train and programmatic emphasis (**concurrent emphasis**)
- Volume Manipulation: Higher relative volumes on higher preparedness days, easier volume on lower intensity days, lower volume high intensity of high days and high volume low intensity on low days (goal dependent)
- **Utilize Movement Complexity Continuum To Add Greater Intensity Variation Through Technical Development:**
 - Explosive Olympic Triple Extension: Hang Clean Pull → Hang Power Clean → Power Clean
 - Lower Body Push Strength: Goblet Squat → Front Squat → Back Squat

Tactical Psychology Considerations

- Tactical service members generally have high-motors and want to train hard and make progress and gains
- Potentially avoid “high, moderate, and low” intensity as the workout description name
- Some tactical service members ignored everything besides “high” intensity, defeating the purpose of autoregulation
- Changed to “strength & power, strength & lean mass, and strength endurance & work capacity” with the same intensity prescriptions as before and compliance sky-rocketed
- Coach a **recovery mindset** so tactical service members can make better life decisions and earn higher scores enabling higher-intensity training sessions, have them compete for high recovery scores



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Sport Considerations For Autoregulatory Application

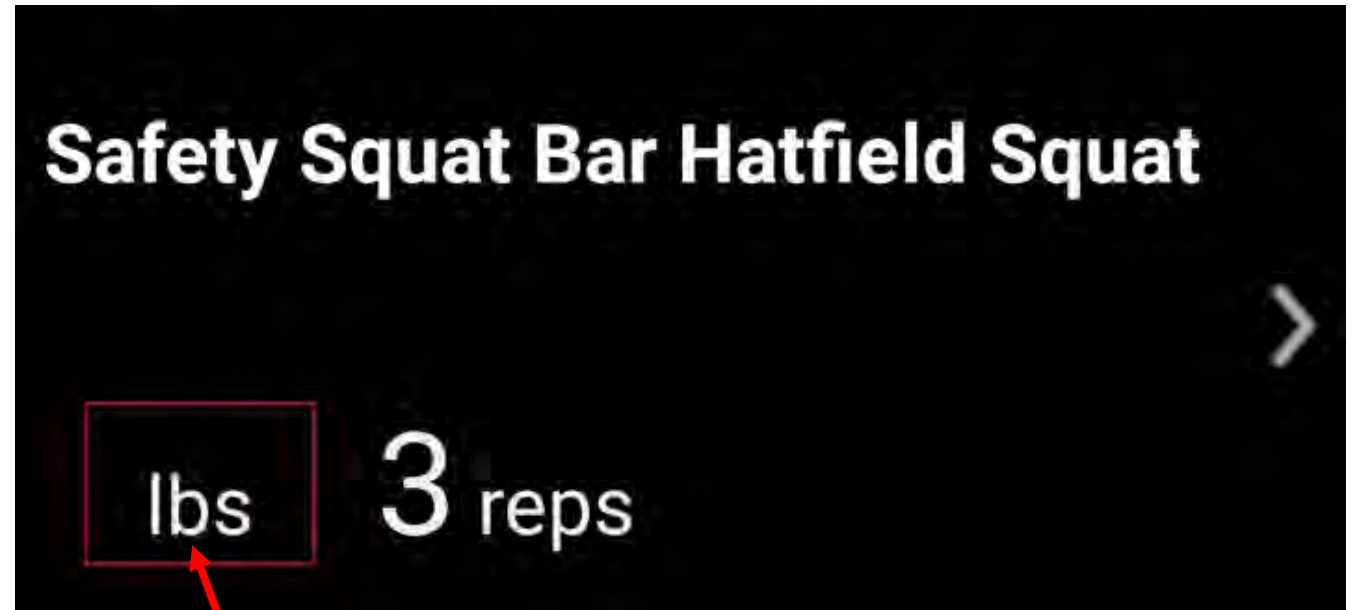
- **Individual vs. team sport**
 - Is it practical and scalable to the number of athletes involved?
- **Equipment availability, coach to athlete ratio**
 - Is it manageable, will the training flow right, athlete/coach buy-in?
- **In-season vs. off-season**
 - Does it align with that period's training/prep adaptation goals?
 - Can't change the competition date, can possibly modify training.
- **Travel and congested schedule**
 - Can it help maintain preparedness/readiness during these times?
- **Higher stress periods (during finals, playoffs)**
 - Can it help peak performance at the right time by reducing unwarranted training fatigue compounded by high allostatic loads & keep player availability higher?
- **Rehabilitation return to sport protocols**
 - Can it help optimize the return to play timeline?



<https://mongooseagency.com/news/why-fans-crave-return-sports/>

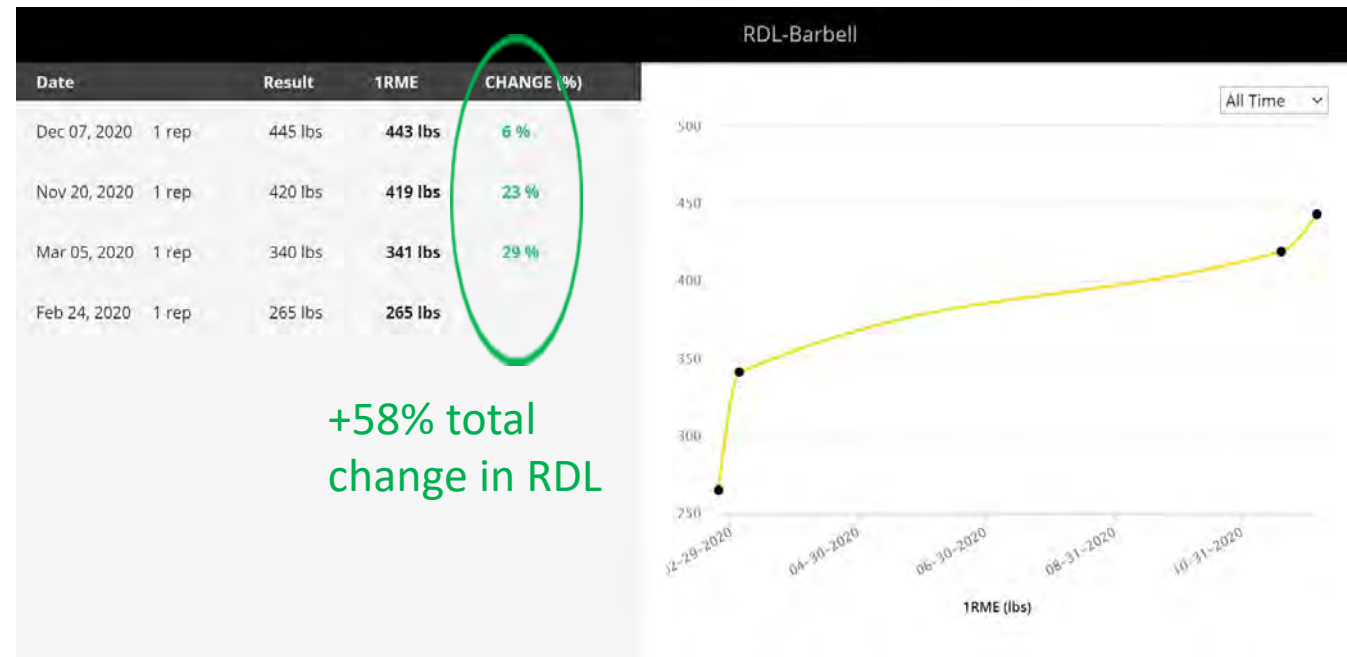
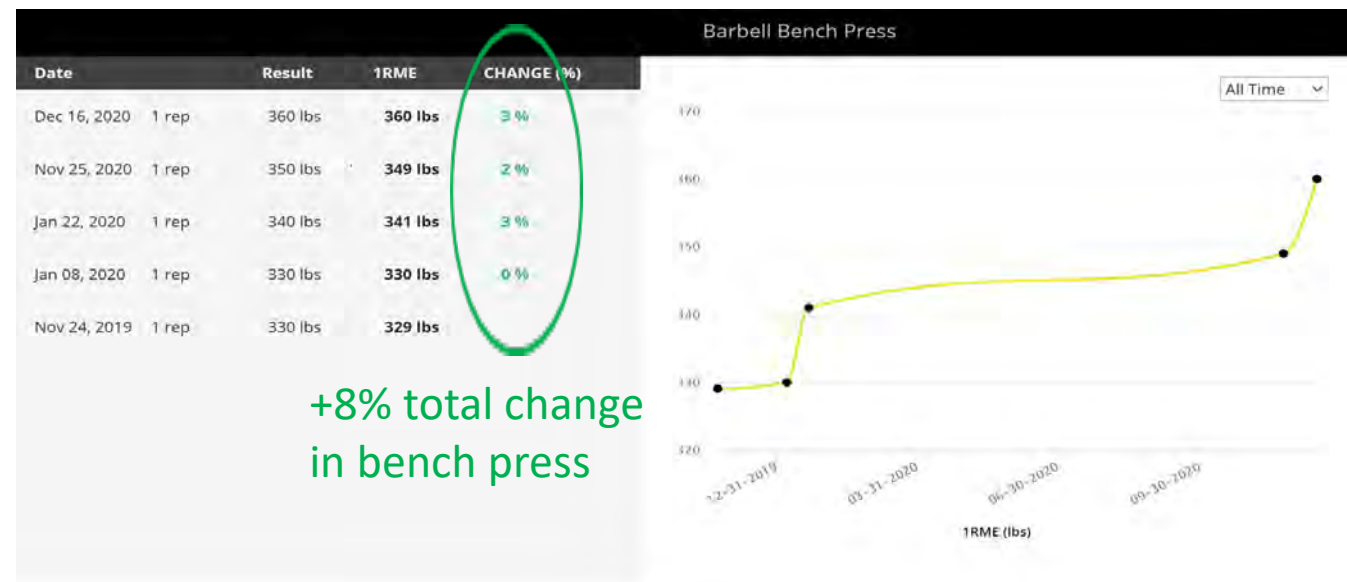
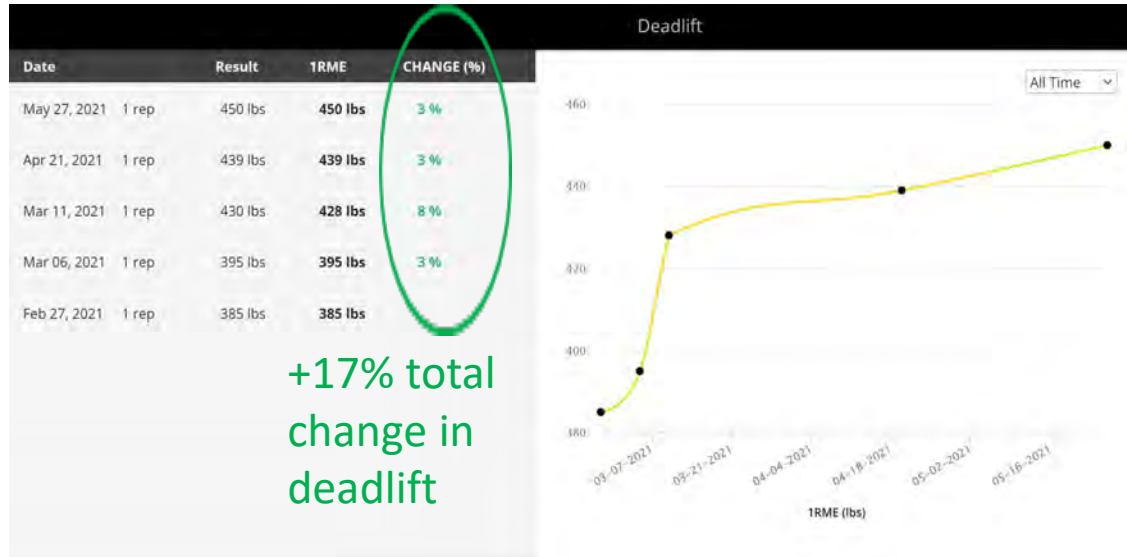
How To Track Strength Progress: Use Of Open Max Sets

- Use Bridge Athletic to place open “red box” max sets in for strength work or max aerobic output strategically on high intensity days
- That enables the tactical service member when primed for high intensity to build to a heavy final set, max reps, or cover max distance (IE 6 min aerobic output)
- Gives us a built in measure of progress that can be tracked over time



The red box indicates to the tactical service member to build to a heavy max set of the prescribed reps.

Consistent Strength Improvements Using This Autoregulatory System



Monitoring Autoregulatory Compliance & Load

Training Session Name	Overall STEN	AutoReg Strength Workout	Session Reps	Reps Z Score	Tonnage (lbs)	Tonnage Z Score	Strength TSB	Session RPE	Session Duration
STR & LEAN MASS	6.0	Strength & Lean Mass	242	0.39	18,916	0.94	128	5.0	45
POWER & STR	7.6	Strength & Power	233	0.10	13,660	-0.24	153	6.0	70
STR & LEAN MASS	5.3	Strength & Lean Mass	241	0.37	16,651	0.29	93	6.0	45
STR & LEAN MASS	4.9	Strength & Lean Mass	250	0.63	14,041	-0.24	92	6.0	52
POWER & STRENGTH KB	6.6	Strength & Power	173	-1.68	17,226	0.44	124	6.5	30
POWER & STR	5.0	Strength & Lean Mass	196	-1.77	14,072	-0.14	99	6.0	70
STR & LEAN MASS	5.8	Strength & Lean Mass	241	-0.57	16,652	0.30	113	5.0	45
MUSC END & WORK CAPACITY	3.0	Muscular Endurance & Work Capacity	263	0.78	5,700	-1.55	129	4.0	30
STR & LEAN MASS	5.8	Strength & Lean Mass	242	-0.60	18,916	0.27	113	5.0	60



www.hydroworx.com



www.rockmountaincryotherapy.com



www.novothor.com



www.floattank.net



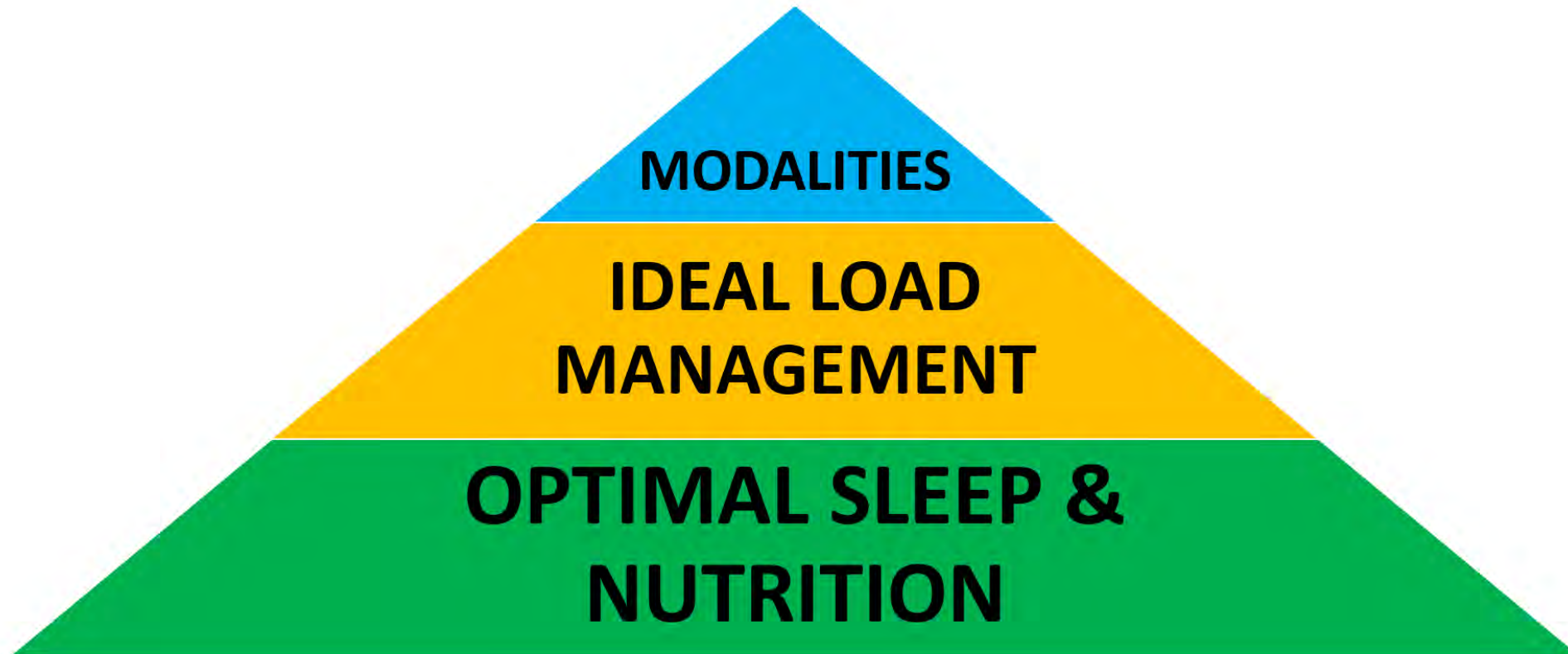
www.bicycling.com

DATA-DRIVEN AUGMENTED RECOVERY

Instant analysis of physio readiness, training, & wellness data will provide immediate & actionable information to guide recovery

PHYSIOLOGICAL PRESCRIPTIVE RECOVERY

Mastering Your Recovery Foundation: The Hierarchy



Applied Augmented Recovery Science Decision Tree



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HUMAN PERFORMANCE RECOVERY SCIENCE QUICK REFERENCE CHART

	High Soreness	High Fatigue	Low Motivation	High Stress	Achy Joints	Poor Sleep	Tissue Regeneration/Healing	Low-Readiness (Oura)	Low-HRV (RMSSD-Oura)	High-Resting Heart Rate (Oura)	Low Overall Subjective Wellness	Pre-Strength Training	Pre-Conditioning Training	Post-Strength Training	Post-Conditioning Training	High Training Load
Light Bed (PBM)	X	X			X	X	X	X	X		X	X	X			X
Cryostimulation (WBC)	X		X		X	X	X	X			X	X	X			X
Float Pod Session		X		X		X		X	X	X	X			X		X
Hot-Cold Tub Contrast	X								X						X	X
Cold Tub Plunge (CWI)	X				X				X							X
Hot Tub Plunge	X				X			X						X		X
Compression/Cooling	X	X			X		X	X	X					X	X	X
Sauna	X		X		X	X			X	X	X	X	X	X	X	X
Soft-Tissue/Mobility	X	X			X		X	X	X		X	X	X	X	X	X
Easy Aerobic Recovery	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X
Electrical Stim	X	X			X		X						X	X		
Cognitive Performance Strategies (meditation, breathing, mindset)		X	X	X		X			X	X	X					X
Reducing Training Load	X	X	X	X	X	X	X	X	X	X	X					X
Ideal Nutrition	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Optimized Sleep	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X

When To Use, When Not To Use? Situationally Dependent

- **Training Vs. Competition State (What is the priority at that time?)**
 - Consider the fitness-fatigue model and how that relates to performance/competition timing
 - Competition state may require higher levels of readiness with an increased utilization of recovery techniques
 - Training/preparation phases may require higher levels of induced fatigue to stimulate adaptation
 - Fatigue and inflammation are necessary to drive adaptation, excessively they can be maladaptive
- **Active vs. Passive Modality**
 - “Active” tools like whole body cryotherapy (WBC), cold-water immersion (CWI), & photobiomodulation (PBM) may blunt needed adaptational signaling due to reducing the acute inflammation response, “passive” tools like the float-pod, sauna, & soft-tissue work generally don’t interfere with training response
- **Use the data to drive the process, what awareness in trend is the data signaling?**
 - If there are signs of unwarranted under-recovery, utilize the recovery application decision tree
- **Too frequent use of any modality may have diminished returns**
- **Individual response may vary with each modality**

Immediate & Actionable Data: Augmenting Recovery

- **Z & STEN score thresholds** are programmed into Smartabase to detect minimum practically significant changes in data (flag) and trigger a recovery recommendation (alert)
- An alert message is sent directly to the tactical service member providing three recovery modality recommendations that will help to physiologically augment recovery based upon the symptom in the data
- Flags are often 3 or 5 consecutive day, but particularly significant acute data shifts may also trigger a one day alert
- Notifications may also be sent to HP staff
- Flags are displayed for HP staff on executive summary dashboards & for tactical service members/athletes on their Smartabase Athlete mobile app

Awareness for HP Staff & Tactical Service Member/Athlete

HP STAFF EXECUTIVE SUMMARY DASHBOARD

Total Flags Today	Total Flags Last 30 Days	Combined STEN	Autoregulatory Workout (Strength)	Autoregulatory Workout (Cardio)	Bridge Workout Completed	Oura Flags	Wellness Flags	Training Load Flags (RPE)	Bridge Flags
2	15	5.3	Strength & Lean Mass	Moderate Intensity	TBD STR 3	0	1	0	1
2	13	3.4	Muscular Endurance & Work Capacity	Low Intensity		2	0		
2	14	7.1	Strength & Power	High Intensity		0	2		
2	7	2.4	Recovery & Mobility Emphasis for Strength	Recovery Aerobic Flush		2			
1	6	6.0	Strength & Lean Mass	Moderate Intensity	TBD STR & ECHO EMOM	0	0		1

USER MOBILE DASHBOARD

OURA		
Day is when sleep started		
DAY	FLAGS	RECOMMENDATIONS
14 Nov	- (34) 3 Day Sleep Score Alert	- PRIMARY: Utilize Float Pod - SECONDARY: Prioritize increasing sleep, consider decreasing training volume 40% - TERTIARY: Utilize Photobiomodulation
WELLNESS		
DAY	FLAGS	RECOMMENDATIONS
15 Nov	- (49) Wellness Z Score Alert - (51) Sleep Quantity Z Score Alert	- PRIMARY: Utilize float-pod - SECONDARY: Utilize photobiomodulation - TERTIARY: Light aerobic activity Z1 20min, and/or increase sleep/time in bed



Joseph C. Denk, MS, CSCS
Immediate and Actionable: Applying an Autoregulatory Training & Recovery System



Data Driven Autoregulatory Training & Recovery Example



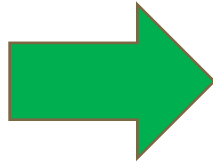
www.ouraring.com

**3 Day High Soreness Flag Detected,
Light Bed Alert Recommended**



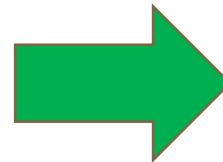
<https://www.smithhanley.com>

**Morning wellness
survey completed &
Oura Ring sync,
Integrated STEN
score = 7: Power &
Strength Training
Recommended**



www.novothor.com

**Augmented Recovery
Conducted Optimizing The
Tactical Service
Member/Athlete, HP Staff
Notified of The Soreness
Alert**



www.shutterstock.com



www.bridgeathletic.com



**Power & Strength Session Conducted,
logged in Bridge (objective) & Smartabase
(subjective)**

**Smartabase analyzes training loads and
recommends float pod session, sleep,
& nutrition to facilitate optimal recovery**



www.floattank.net



<https://www.dannyrees.com/>



<https://www.vectorstock.com/>

Lower Tech Option Considerations On A Budget

- Survey monkey wellness survey, program & create thresholds off total score
- Tap test apps are a cheap and easy way to assess objective Central Nervous System (CNS) readiness, FT:CT and JH metrics can also be used to define intensity thresholds
- Paper based system with different workout intensity types
- Soft tissue, flexibility/mobility aerobic recovery IE walking, cold bath, cognitive, breathing, & meditation techniques can all be programmed effectively to augment recovery
 - Really execute optimal sleep and nutrition fundamentals!

Acknowledgments and Questions?

Thanks to all of those who have helped me to test and formulate this system, develop the dashboards, and define the applied physiological augmented recovery science protocols.

QUESTIONS? Contact Email: denkjc@gmail.com