EFMB OPTIMIZATION GUIDE

H2F PERFORMANCE TIPS TO EARN YOUR BADGE

Presented by

EXPERT BADGES

DISTINGUISH YOURSELF

The Expert Field Medical Badge (EFMB) is the utmost challenge to the professional competence and physical endurance of the Soldier medic. It is the most sought after peacetime award in the AMEDD, and while the Combat Medical Badge is the "portrait of courage" in wartime, the EFMB is undoubtedly the "portrait of excellence" in the Army all of the time. Personnel eligible to earn the EFMB include all officers assigned or detailed to an AMEDD Corps, Army officers in training at USUHS, Army officers enrolled in the Health Professions Scholarship Program, Warrant Officers who have an AMEDD primary MOS, Aeromedical Evacuation Pilots assigned to an air ambulance unit, and Enlisted personnel who have an MOS in the 68- Career Management Field (CMF) as well as an AMEDD primary MOS, MOS18D, or 38BW4.

TABLE OF CONTENTS

H2F training covering the physical, mental, sleep, and nutrition domains of fitness gives Paratroopers the ***EDGE to WIN*** in combat or in challenging training such as competing for the coveted EFMB or ESB.

This guide is intended to help Paratroopers plan and prepare themselves in all domains of health and fitness. This guide is best used in conjunction with group and/or individualized in-person training from your H2F Performance Team.

Originally developed by: CPT Tara Troianello, DSc, OT, CSCS with CPT Megan Kwon, MS, RD, CSSD, CSCS and Ms. Christie Achenbach, MS, RD, CSSD, CSCS. AUGUST 2021 82nd CAB H2F

OVERALL TRAINING/PLANNING TIMELINE

Fill in the dates.

ESB/EFMB start: _____

Optimization Guide review/H2F face-to-face training: _____

Week Two check-in: _____

Week Four check-in: _____

Final check-in: _____

EFMB TASKS

- Written test
- EFMB Physical Fitness Assessment
- Day and Night Land Navigation
- Combat Testing Lanes
- 12 Mile Forced March and Final Event



Evacuation

Establish a Helicopter Landing Point
Load Casualties onto an HH-60 Helicopter
Load Casualties onto Air Evacuation Platform (HOIST)
Load Casualties onto Ground Evacuation Platform (M997, M996, M113)
Load Casualties onto Ground Evacuation Platform (Stryker MEV M1133)
Load Casualties onto Nonstandard Evacuation Vehicle (LMTV)
Load Casualties onto Nonstandard Evacuation Vehicle (2.5 or 5 Ton 6x6 Cargo Truck)
Load Casualties onto Nonstandard Evacuation Vehicle (1-1/4 Ton, 4x4, M998)
Extricate Casualties from a Vehicle
Evacuate Casualties Using a SKED Litter
Evacuate Casualties Using One-Person Carries or Drags
Evacuate Casualties Using Two-Person Carries or Drags
Evacuate Casualties Using Litter Carries

Communication

Assemble and Operate a SINCGARS (ASIP) or Assemble and Operate a SINCGARS
Load FH/COMSEC Data and Conduct Radio Check Using SINCGARS (ASIP) or Load FH/COMSEC Data and Conduct Radio Check Using SINCGARS
Prepare and Transmit a MEDEVAC Request (Using Secure Mode Radio) and MEDEVAC Request Card
Submit CBRN 1 Report and CBRN Warning and Reporting System
Submit Explosive Hazard SPOT Report and Unexploded Ordinance Procedures

Combat Casualty Care

Perform a TCCC Patient Assessment
Submit a TCCC Card
Control Bleeding Using a Tourniquet
Triage Casualties
Control Bleeding of a Junctional Wound Using a Hemostatic Device
Control Bleeding Using Dressings
Initiate a Saline Lock and IV Infusion
Initiate Treatment for Hypovolemic Shock and Prevent Hypothermia
Insert a Nasopharyngeal Airway
Treat a Penetrating Chest Wound
Perform Needle Chest Decompression
Treat an Open Abdominal Wound
Treat an Open Head Injury
Immobilize a Suspected Fracture of the Arm
Treat Lacerations, Contusions, and Extrusions of the Eye

Warrior Skills

Protect Yourself from Chemical/Biological Contamination Using Your Assigned Protective Mask
Decontaminate Yourself Using Reactive Skin Decontaminating Lotion (RSDL)
Protect Yourself from CBRN Injury/Contamination with JSLIST
Perform Self-Aid for Mild Nerve Agent Poisoning
Protect Yourself from Injury/Contamination when Removing JSLIST
Store Your Assigned Protective Mask
Disassemble, Assemble, and Perform a Functions Check on an M4 Series Carbine
Disassemble, Assemble, and Perform a Functions Check on an M9 Pistol
Correct Malfunction of an M4 Carbine or M16 Series Rifle
Move Under Direct Fire
React to Indirect Fire
Move Over, Through, or Around Obstacles
React to a UXO or Possible IED

EIGHT WEEK STRENGTH AND CONDITOINING PLAN

- Plan on a 10 week window ("Week 0 for testing, Week 9 for deload)
- Based on base ability of 4 mile ruck in 2 hours or less.
- For lifting technique instruction or any questions, please contact your H2F team.

"Week 0":

- Find your 5RM back squat, bench press, and deadlift.
  - Calculate your estimated 1RM: https://strengthlevel.com/one-rep-max-calculator.
- Find your 2 mile run time (or use your last record ACFT/APFT time).
  - Calculate your 400m and 800m pace: https://runsmartproject.com/calculator/

WEEK 1							
	SUN	MON	TUE	WED	THU	FRI	SAT
Focus:	AR	ME - LB	ME - UB	AC	ME - LB	ANC	AC
General Warm up		Jog 3 min 90-90 hip drill Box ankle stretch Pause air squats	Jog 3 min Plank to down dog 2x15 Bent over T's 2x15	MMD1&2	Jog 3 min Glute bridge 2x15 Band good mornings 2x15	MMD1&2	MMD1&2
Specific warm up		Squat	Bench Press		Deadlift	Push-up & Sit-up drill	
Main activity	Swim	Squat	Bench Press	Ruck	Deadlift	Interval Run	Long Distance Slow Run
Volume	30 min	3 x 15	3 x 15	4 miles, 35lb	3 x 15	6 x 400 m	4 miles
Load/Pace		50% est 1RM	50% est 1RM	12:00 - 13:00/mi	50% est 1RM	At interval pace (400 split minus 10sec) 1:2 work:rest	No faster than 9:00/mi
Accessories		Nordic curls 3x5 Split squats 4x8 KB swings 3x12 Suitcase carry 20m x 4	Eccentric pull ups 3x3 Tempo push-ups (3 down, 1 up) 5x5 Bent over row 3x12 Plank 2x90sec		Goblet squat 3x15 SL RDL 3x10 Walking lunges 20m x 4 Farmers carry 40m x 2		

WEEK 2							
	SUN	MON	TUE	WED	THU	FRI	SAT
Focus:	AR	ME - LB	ME - UB	AC	ME - LB	ANC	AC
General Warm up		Jog 3 min 90-90 hip drill Box ankle stretch Pause air squats	Jog 3 min Plank to down dog 2x15 Bent over T's 2x15	MMD1&2	Jog 3 min Glute bridge 2x15 Band good mornings 2x15	MMD1&2	MMD1&2
Specific warm up		Squat	Bench Press		Deadlift	Push-up & Sit-up drill	
Main activity	Bike	Squat	Bench Press	Ruck	Deadlift	Interval Run	Tempo/Pace Run
Volume	30 min	3 x 15	3 x 15	6 miles, 35lb	3 x 15	7 x 400 m	2 miles
Load/Pace		55% est 1RM	55% est 1RM	12:00 - 13:00/mi	55% est 1RM	At interval pace (400 split minus 10sec) 1:2 work:rest	"Race pace"
Accessories		Nordic curls 3x5 Split squats 4x8 KB swings 3x12 Suitcase carry 20m x 4	Eccentric pull ups 3x3 Tempo push-ups (3 down, 1 up) 5x5 Bent over row 3x12 Plank 2x90sec		Goblet squat 3x15 SL RDL 3x10 Walking lunges 20m x 4 Farmers carry 40m x 2		

UB: upper body, LB: lower body, ME: muscular endurance, MS: muscular strength, HT: hypertrophy, AC: aerobic capacity, ANC: anerobic capacity, AR: active recovery, SL: single leg, SA: single arm, KB: kettlebell, RDL: Romanian deadlift

EIGHT WEEK STRENGTH AND CONDITOINING PLAN

WEEK 3							
	SUN	MON	TUE	WED	THU	FRI	SAT
Focus:	AR	ME - LB	ME - UB	AC	ME - LB	ANC	AC
General Warm up		Jog 3 min 90-90 hip drill Box ankle stretch Pause air squats	Jog 3 min Plank to down dog 2x15 Bent over T's 2x15	MMD1&2	Jog 3 min Glute bridge 2x15 Band good mornings 2x15	MMD1&2	MMD1&2
Specific warm up		Squat	Bench Press		Deadlift	Push-up & Sit-up drill	
Main activity	Yoga	Squat	Bench Press	Ruck	Deadlift	Interval Run	Long Distance Slow Run
Volume	30 min	3 x 15	3 x 15	7 miles, 35lb	3 x 15	8 x 400 m	4 miles
Load/Pace		60% est 1RM	60% est 1RM	12:00 - 13:00/mi	60% est 1RM	At interval pace (400 split minus 10sec) 1:2 work:rest	No faster than 9:00/mi
Accessories		Nordic curls 3x5 Split squats 4x8 KB swings 3x12 Suitcase carry 20m x 4	Eccentric pull ups 3x3 Tempo push-ups (3 down, 1 up) 5x5 Bent over row 3x12 Plank 2x90sec		Goblet squat 3x15 SL RDL 3x10 Walking lunges 20m x 4 Farmers carry 40m x 2		

WEEK 4							
	SUN	MON	TUE	WED	THU	FRI	SAT
Focus:	AR	ME - LB	ME - UB	AC	ME - LB	ANC	AC
General Warm up		Jog 3 min 90-90 hip drill Box ankle stretch Pause air squats	Jog 3 min Plank to down dog 2x15 Bent over T's 2x15	MMD1&2	Jog 3 min Glute bridge 2x15 Band good mornings 2x15	MMD1&2	MMD1&2
Specific warm up		Squat	Bench Press		Deadlift	Push-up & Sit-up drill	
Main activity	Trail Walk	Squat	Bench Press	Ruck	Deadlift	Interval Run	Tempo/Pace Run
Volume	45 min	3 x 15	3 x 15	8 miles, 35lb	3 x 15	8 x 400 m	2 miles
Load/Pace		65% est 1RM	65% est 1RM	12:00 - 13:00/mi	65% est 1RM	At interval pace (400 split minus 15sec) 1:2 work:rest	"Race pace"
Accessories		Nordic curls 3x5 Split squats 4x8 KB swings 3x12 Suitcase carry 20m x 4	Eccentric pull ups 3x3 Tempo push-ups (3 down, 1 up) 5x5 Bent over row 3x12 Plank 2x90sec		Goblet squat 3x15 SL RDL 3x10 Walking lunges 20m x 4 Farmers carry 40m x 2		

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EIGHT WEEK STRENGTH AND CONDITOINING PLAN

WEEK 5							
	SUN	MON	TUE	WED	THU	FRI	SAT
Focus:	AR	HT - LB	HT - UB	AC	HT - LB	ANC	AC
General Warm up		Jog 3 min 90-90 hip drill Box ankle stretch Pause air squats	Jog 3 min Plank to down dog 2x15 Bent over T's 2x15	MMD1&2	Jog 3 min Glute bridge 2x15 Band good mornings 2x15	MMD1&2	MMD1&2
Specific warm up		Squat	Bench Press		Deadlift	Push-up & Sit-up drill	
Main activity	Swim	Squat	Bench Press	Ruck	Deadlift	Interval Run	Long Distance Slow Run
Volume	30 min	3 x 8	3 x 8	9 miles, 35lb	3 x 8	4 x 800 m	4 miles
Load/Pace		50% est 1RM	50% est 1RM	12:00 - 13:00/mi	50% est 1RM	At interval pace (800m split minus 19sec) 1:2 work:rest	No faster than 9:00/mi
Accessories		Nordic curls 3x5 Split squats 4x8 KB swings 3x12 Suitcase carry 20m x 4	Eccentric pull ups 3x3 Tempo push-ups (3 down, 1 up) 5x5 Bent over row 3x12 Plank 2x90sec		Goblet squat 3x15 SL RDL 3x10 Walking lunges 20m x 4 Farmers carry 40m x 2		

WEEK 6							
	SUN	MON	TUE	WED	THU	FRI	SAT
Focus:	AR	MS - LB	MS - UB	AC	MS - LB	ANC	AC
General Warm up		Jog 3 min 90-90 hip drill Box ankle stretch Pause air squats	Jog 3 min Plank to down dog 2x15 Bent over T's 2x15	MMD1&2	Jog 3 min Glute bridge 2x15 Band good mornings 2x15	MMD1&2	MMD1&2
Specific warm up		Squat	Bench Press		Deadlift	Push-up & Sit-up drill	
Main activity	Bike	Squat	Bench Press	Ruck	Deadlift	Interval Run	Tempo/Pace Run
Volume	30 min	5 x 5	5 x 5	10 miles, 35lb	5 x 5	4 x 800 m	2 miles
Load/Pace		75% est 1RM	75% est 1RM	12:00 - 13:00/mi	75% est 1RM	At interval pace (800m split minus 19sec) 1:2 work:rest	"Race pace"
Accessories		Nordic curls 3x5 Split squats 4x8 KB swings 3x12 Suitcase carry 20m x 4	Eccentric pull ups 3x3 Tempo push-ups (3 down, 1 up) 5x5 Bent over row 3x12 Plank 2x90sec		Goblet squat 3x15 SL RDL 3x10 Walking lunges 20m x 4 Farmers carry 40m x 2		

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EIGHT WEEK STRENGTH AND CONDITOINING PLAN

WEEK 7							
	SUN	MON	TUE	WED	THU	FRI	SAT
Focus:	AR	MS - LB	MS - UB	AC	MS - LB	ANC	AC
General Warm up		Jog 3 min 90-90 hip drill Box ankle stretch Pause air squats	Jog 3 min Plank to down dog 2x15 Bent over T's 2x15	MMD1&2	Jog 3 min Glute bridge 2x15 Band good mornings 2x15	MMD1&2	MMD1&2
Specific warm up		Squat	Bench Press		Deadlift	Push-up & Sit-up drill	
Main activity	Yoga	Squat	Bench Press	Ruck	Deadlift	Interval Run	Long Distance Slow Run
Volume	30 min	5 x 5	5 x 5	11 miles, 35lb	5 x 5	4 x 800 m	4 miles
Load/Pace		85% est 1RM	85% est 1RM	12:00 - 13:00/mi	85% est 1RM	At interval pace (800m split minus 24 sec) 1:2 work:rest	No faster than 9:00/mi
Accessories		Nordic curls 3x5 Split squats 4x8 KB swings 3x12 Suitcase carry 20m x 4	Eccentric pull ups 3x3 Tempo push-ups (3 down, 1 up) 5x5 Bent over row 3x12 Plank 2x90sec		Goblet squat 3x15 SL RDL 3x10 Walking lunges 20m x 4 Farmers carry 40m x 2		
WEEK 8							
	SUN	MON	TUE	WED	THU	FRI	SAT
Focus:	AR	MS - LB	MS - UB	AC	MS - LB	ANC	AC
General Warm up		Jog 3 min 90-90 hip drill Box ankle stretch Pause air squats	Jog 3 min Plank to down dog 2x15 Bent over T's 2x15	MMD1&2	Jog 3 min Glute bridge 2x15 Band good mornings 2x15	MMD1&2	MMD1&2
Specific warm up		Squat	Bench Press		Deadlift	Push-up & Sit-up drill	
Main activity	Trail Walk	Squat	Bench Press	Ruck	Deadlift	Interval Run	Tempo/Pace Run
Volume	45 min	3 x 3	3 x 3	12 miles, 35lb	3 x 3	4 x 800 m	2 miles
Load/Pace		90% est 1RM	90% est 1RM	12:00 - 13:00/mi	90% est 1RM	At interval pace (800m split minus 24 sec) 1:2 work:rest	"Race pace"
Accessories		Nordic curls 3x5 Split squats 4x8 KB swings 3x12 Suitcase carry 20m x 4	Eccentric pull ups 3x3 Tempo push-ups (3 down, 1 up) 5x5 Bent over row 3x12 Plank 2x90sec		Goblet squat 3x15 SL RDL 3x10 Walking lunges 20m x 4 Farmers carry 40m x 2		
WEEK 9 (DELOAD) - Week prior to EFMB/ESB start. Reverse PT schedule if possible to sleep bank.							
	SUN	MON	TUE	WED	THU	FRI	SAT
Focus:	AR	ME - LB	ME - UB	AC	ME - LB	AR	AR
General Warm up		Jog 3 min 90-90 hip drill Box ankle stretch Pause air squats	Jog 3 min Plank to down dog 2x15 Bent over T's 2x15	MMD1&2	Jog 3 min Glute bridge 2x15 Band good mornings 2x15		
Specific warm up		Squat	Bench Press		Deadlift		
Main activity	Off	Squat	Bench Press	Ruck	Deadlift	Swim	Yoga
Volume		3x5	3x5	4 miles, 35lb	3x5		
Load/Pace		50% est 1RM	50% est 1RM	12:00 - 13:00/mi	50% est 1RM		

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WRITTEN TEST & CTL PLANNING

Your unit should incorporate written test and combat testing lane (CTL) standards into a train up program or Leaders' Time Training.

If that is not available to you and/or you want to augment your preparation with independent study, here is a sample study plan for the **EFMB written test.**

You can make a similar **study plans for the CTL tasks**. The key is breaking down testable material into small, manageable blocks. You can access the tasks, conditions, standards on the test homepages (CAC access for some):
ESB: https://usacimt.tradoc.army.mil/ltb/esb/esb.html
EFMB: https://medcoe.army.mil/efmb

Week 1-2: STP 8-68W13-SM-TG: Soldier`s Manual and Trainer`s Guide, MOS 68W, Health Care Specialist

Week 3: ATP 4-25.12: Unit Field Sanitation Team

Week 4: ATP 4-02.46: Army Health System Support to Detainee Operations

Week 5-6: STP 21-1-SMCT: Soldier`s Manual of Common Tasks, Skill Level 1

Week 7: ATP 4-02.3 Army Health System Support to Maneuver Forces

Week 8: review key highlights/notes, areas of weakness from previously reviewed material

"If you fail to plan, you are planning to fail"

A full EFMB study guide is available here: https://ckapfwstor001.blob.core.usgovcloudapi.net/pfw-images/dbimages/WT%20Study%20Guide%202020.pdf

RUCK MARCHING OPTIMIZATION

Guidelines to optimize ruck training:

- Ruck at least once a week (no less than 2x a month)
- *Progressive increase* in intensity of load (weight)
- *Progressive increase* in duration or distance
- Rule of thumb: do not increase both at the same time
- Vary training conditions (ie high intensity, short distance; moderate intensity, uneven terrain or stairs)
- A balanced strength and conditioning program (see sample 8 week plan)

Reference: Alvar, Sell, & Deuster. 2017. NSCA Essentials of Tactical Strength and Conditioning.

Quick tips to optimize ruck efficiency and prevent injury:

- Set up ruck on your frame correctly
- When packing, concentrate heavier items higher in your ruck & closer to your body
- Use hip belt to transfer load to the hips & reduce stress on shoulders (secure above your pelvis)
- Adjust/tighten shoulder and chest straps
- Shorter, quicker strides

Figure C-2. Load placement inside pack

Reference: ATP 3-21.18, Appendix C and F

MENTAL PERFORMANCE SKILLS

ESB/EFMB are meant to test Soldiers physically and mentally, so we need to train for both. Just like working out at the gym, we can train skills to create the mental skills needed for EFMB/ESB.

•"Mental toughness is the ability to consistently perform towards the upper range of your talent and skill regardless of competitive circumstances. It is all about improving your mind so that it's always on your side; not sometimes helping you nor working against you as well all know it's quite capable of doing."

SKILL 1: AROUSAL CONTROL

ESB/EFMB testing is stressful! Lanes are meant to stress you - there are time limits, simulation rounds, gas, the pressure of being graded, etc. You are often being physically taxed while having to mentally recall multi-step tasks. On top of that, you are not getting your normal meals or sleep, it may be hot/cold/raining, etc.

Physical and mental stressors like those just mentioned create an *automatic* response in our physiology. Typically that responses turns things "UP" (increased heart rate, breathing rate, etc.). It represents an increase in our arousal level. This isn't necessarily a bad thing if we understand what's going on. We can use skills to manage arousal levels to meet the demands of the situation and optimize performance.

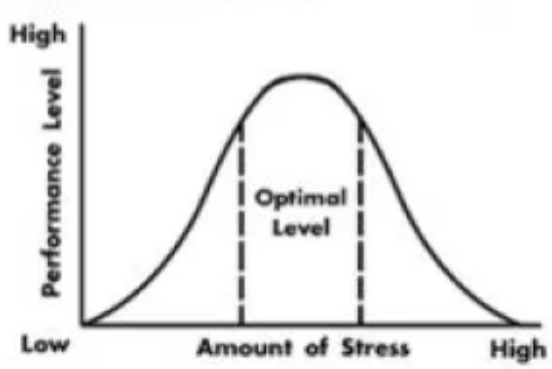
Step 1: Correctly Interpret Arousal

- Simply understanding the stress response and shifting our thoughts can improve performance (Kerr reversal theory)
- "Acute" or "short term" stress is good. It primes us for action / makes us READY (adrenaline).
- Reframe the "symptoms": Before starting a lane/station, you feel butterflies and your palms are sweating. You think "I'm anxious; maybe I'm not quite ready." As a result your confidence goes down and so does performance. Instead, think "I'm nervous but my body is ready. I trained and I'm excited for the challenge."

MENTAL PERFORMANCE SKILLS

Step 2: Determine Your Optimal Arousal Level

- Arousal facilitates performance up to an optimal level beyond which further increases in arousal are associated with reduced performance

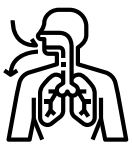


- Ideal performance not always at the “midpoint” rather a range depending on the person and the task

Step 3: Use Tools to Regulate Your Arousal for Your Optimal Level

- To bring arousal *up,* use *inhale*-focused breathing (breathe in longer than you breathe out)
  - E.g. inhale focused breaths right before starting push-ups on the fitness assessment
  - Typically there are not many cases where this is needed on a CTL since you are already under high physical demand/high arousal.

- To bring arousal *down*, use *exhale*-focused breathing (breathe out longer than you breathe in)
  - E.g. 2-3 exhale focused breaths before starting each ESB station or starting the "IV task" on the EFMB Medical CTL.
  - Physiological sigh: double inhale then exhale helps downregulate but also expel more CO2 when you are getting gassed. It is a great "real time" tool.
  - E.g. 1-2 physiological sighs during litter carry/casualty drag



MENTAL PERFORMANCE SKILLS

AROUSAL CONTROL- EXERCISES

Exercise 1: Develop awareness through reflecting on your thought processes and body reactions during stress. Once you are aware of your mindset, you can begin to retrain how you think & improve performance.

a. How does your body react when you get nervous?

_____

_____

_____

b. What thoughts go through your mind as you are preparing?

_____

_____

_____

c. What thoughts go through your mind the day of the test events?

_____

_____

_____

e. What thoughts go through your mind when you make a mistake?

_____

_____

_____

MENTAL PERFORMANCE SKILLS

AROUSAL CONTROL- EXERCISES

Exercise 2: Using your answers from Exercise 1, reflect on your mental and physical performance and identify the areas that need to be changed. Consider strategies for how to replace or reframe unproductive mindsets:

a. When I feel my body get nervous I will:

_____

_____

_____

b. As I prepare for EFMB/ESB I will tell myself:

_____

_____

_____

c. During the the CTLs I will:

_____

_____

_____

d. When I make a mistake I will:

_____

_____

_____

MENTAL PERFORMANCE SKILLS

SKILL 2: PERFORMANCE IMAGERY

- Mentally recreating or rehearsing an activity or experience AKA visualization.
- Studies have shown that using multi-faceted imagery improves outcomes, especially when learning new or unfamiliar skills.
- Imaging a movement/task activates the same neurological pathways that physical movement down.
- It is especially helpful in situations where repeated physical practice is not possible (i.e. you are only allowed so many opportunities to practice CTL tasks during standardization week). Reinforce your hands-on practice before test week using performance imagery.

How to Perform

- Eyes closed, relaxed, Quiet space if possible
- Create a multi-faceted image, not just visual
    - **Physical**: "mime" the task and image the physical components
    - **Environment**: image details of the environment the task will actually take place in
    - **Focus**: image the attention the task will require
    - **Timing**: image the task in real-time
    - **Emotion**: image the emotion that is best for the task

Navy psychologists have found that a majority of successful SEAL students experience a significant degree of anxiety and apprehension for the BUD/S underwater pool competency test given its difficulty. However, they also found that almost all of the students that successfully complete that evolution on the first attempt had utilized visualization as a technique to prepare. (Lambertsen, C. 2016)

MENTAL PERFORMANCE SKILLS

SKILL 4: SLEEP BANKING

- Most iterations of ESB/EFMB have candidates sleeping in the field or in barracks. Even if sleeping at home, hours will be early and long leading to decreased sleep. It is well known that performance will decline anytime you are in a "sleep debt" (sleeping less than the required ~7 hours/night).
- You can mitigate the performance deficits of sleep debt by **sleep banking**.
- Two weeks prior to the start of EFMB/ESB, get 8-10 hours (10 is optimal) of sleep per night.
- The extra sleep creates a bank of sleep you can use to sustain alertness and performance during the subsequent sleep loss when EFMB/ESB starts.
- The benefits of sleep banking have been shown to remain evident over days and weeks, and may last even longer.

SKILL 5: SELF TALK

- Self-talk refers to our internal thoughts
- We can tweak these internal conversations to be more *productive,* which in turn can enhance performance outcomes.
- This can also help us dial in focus to EFMB/ESB tasks

Instructional cues - focus on variables (e.g. technique) needed for successful performance

Motivational cues - focus on the emotional state needed for enhanced performance; can be a cue, mantra, quote

MENTAL PERFORMANCE SKILLS

SELF TALK EXERCISE

Exercise: Think about all the EFMB/ESB tasks and then different cues you can use during each. Try them out during your practice and train-up. It's hard to come up with cues on the fly when we're in the moment/under pressure. We need to know what works for us.

TASK	INSTRUCTIONAL CUES	MOTIVATIONAL CUES
Correct weapons malfunction	S.P.O.R.T.S	Slow is smooth, smooth is fast.
12 mile ruck	Quick feet; keep this pace	Focus and finish

DON'T WAIT UNTIL YOU NEED

MENTAL SKILLS

TO PRACTICE MENTAL SKILLS

PERFORMANCE NUTRITION

HEALTHY FUELING

CARBOHYDRATES = FUEL

- Carbohydrates are your body's main fuel source
  - Main source of energy in anaerobic and high intensity exercise (carbohydrates can be used for energy by the body without oxygen)
  - The amount of carbohydrates to consume should be determined by the type of activity
  - Less active you are, less "fuel" you need
  - More active you are, more "fuel" you need

- Choose Quality Carbohydrates
  - Non-starchy vegetables = asparagus, broccoli, zucchini, spinach
  - Starchy vegetables = sweet potatoes, beans, lentils, peas, corn, pumpkin, winter squash (acorn, butternut), plantains
  - Fruit
  - Whole grains = quinoa, brown rice, steel-cut oats, whole grain bread with > 3 grams of fiber per serving

PROTEINS = BUILD

- Protein is the building block of the body
- Protein is an essential part of every cell in your body. It helps build and repair tissues, transport nutrients, maintain a healthy immune system, and make hormones and enzymes
- Protein is essential for building and maintaining muscle mass
- Daily protein goal: 1.2–2.2 g/kg/day in doses of 0.25-0.4 g/kg bodyweight every 3-4 hours

Example: a 180 lb (81.8 kg) Soldier needs 98-180 g protein per day in doses of 20-33 grams every 3-4 hours

PERFORMANCE NUTRITION

- Healthy Sources of Protein
  - 1 cup cottage cheese has 28 grams protein
  - 10 oz. plain Greek yogurt has 28 grams protein
  - 4 oz. of chicken breast has 28 grams protein
  - 4 whole eggs has 28 grams protein
  - 24 oz. milk has 24 grams protein
  - 16 oz. Fairlife milk has 26 grams protein
  - 5 oz. tuna has 28 grams protein
  - 1 scoop of whey protein has about 24 grams protein

HEALTHY FATS = PROTECT

- 60% of brain is made up of fat (aids cognitive ability, mental clarity, memory retention)
- Needed for fat soluble vitamins (A, D, E, K) absorption and delivery
- Contains powerful nutrients and antioxidants for cellular repair of joints, organs, skin, and hair
- Healthy Sources of Fats
  - Fatty fish: salmon, mackerel, herring, lake trout, sardines, albacore tuna, anchovies
  - Nuts and nut butter
  - Seeds: chia seeds, flaxseeds, pumpkin
  - Avocado
  - Oils: avocado, olive, walnut, flaxseed
  - Hummus
- Omega-3 (DHA & EPA)
  - Essential because your body cannot make them; you must get them from food.
  - Sources of omega 3: Fatty fish such as salmon, mackerel, herring, lake trout, sardines, albacore tuna, anchovies.
  - If you don't eat fish, take a fish oil supplement

PERFORMANCE NUTRITION

FRUITS AND VEGETABLES = PREVENT

- Fruit and vegetables provide our body with a natural source of vitamins, minerals and antioxidants that help prevent diseases, help protect and improve the immune system and really helps create an environment that can handle the stress of the world.

- The colors that are in fruit and vegetables are representative of the antioxidants and phytonutrients that function in different parts of the body. Aim for 2-3+colors on every plate.

Red – increased heart & circulatory health
  - Cherries, strawberries, tomatoes, raspberries, watermelon

Yellow – optimal brain function, increased immunity
  - Yellow peppers, squash, sweet corn, pineapples

Green – rejuvenated musculature & bone, stronger teeth
  - Green peppers, broccoli, green leafy vegetables, asparagus

Orange – skin & eye health, increased immunity
  - Winter squash, cantaloupes, carrots, pumpkin, sweet potatoes

White – enhanced immune system, lymphatic system & cellular recovery
  - Bananas, garlic, ginger, apples, mushrooms, cauliflower, potatoes

Purple – improved circulation & microcirculation
  - Blackberries, blueberries, grapes, eggplants, plums

PERFORMANCE NUTRITION

BUILDING A PERFORMANCE PLATE

To succeed in building an energy-packed, nutritious meal, try to include all five of the following components:

- **Quality Carbohydrates**: Energy-Enhancing/Fuel: Fruit, starchy vegetables or whole grains (i.e., 100% whole-grain products, brown or wild rice, quinoa, oatmeal)

- **Complete Protein**: Recovery/Muscle-Building: Grilled/baked/broiled/roasted chicken, fish, pork, turkey, beef, eggs, cottage cheese, plain Greek yogurt, whey protein

- **Vegetables**: Antioxidant-Rich/Anti-Inflammatory: Broccoli, green beans, spinach, romaine lettuce, carrots, cauliflower, mushrooms, cucumbers, tomatoes and other non-starchy vegetables

- **Healthy Fats:** Immunity/Anti-Inflammatory: Salmon and other fatty fish, nuts/nut butters, seeds, olives, olive oil, avocado oil, avocado, oil-based salad dressings

- **Fluids**: Hydration-Promoting: Choose water most often or other low calorie drinks

PERFORMANCE NUTRITION

HYDRATION AND ELECTROLYTES

BEFORE

Goal: Start physical activity hydrated and with normal plasma electrolytes levels.
·Consume 16-24 oz. of fluid 2-3 hours before.
·Prehydrating with beverages should be initiated at least several hours before to enable fluid absorption and allow urine output to return to normal levels.
·Sodium consumed in fluids and/or foods may help with fluid retention.

DURING

Goal: Prevent excessive dehydration to <2% body weight and excessive change in electrolytes balance.

Work/Rest Times and Fluid Replacement Guide

Heat Category	WBGT Index (°F)	Easy Work: Walking on hard surface, 2.5 mph, <30 lb. load; weapon maintenance, marksmanship training.		Moderate Work: Patrolling, walking in sand, 2.5 mph, no load; calisthenics.		Hard Work: Walking in sand, 2.5 mph, with load; field assaults.	
		Work/Rest (minutes)	*Fluid Intake (quarts/hour)*	*Work/Rest (minutes)*	*Fluid Intake (quarts/hour)*	*Work/Rest (minutes)*	*Fluid Intake (quarts/hour)*
1	78° - 81.9°	NL	½	NL	¾	40/20 (70)*	¾ (1)*
2 (GREEN)	82° - 84.9°	NL	½	50/10 (150)*	¾ (1)*	30/30 (65)*	1 (1¼)*
3 (YELLOW)	85° - 87.9°	NL	¾	40/20 (100)*	¾ (1)*	30/30 (55)*	1 (1¼)*
4 (RED)	88° - 89.9°	NL	¾	30/30 (80)*	¾ (1¼)*	20/40 (50)*	1 (1¼)*
5 (BLACK)	> 90°	50/10 (180)*	1	20/40 (70)*	1 (1¼)*	10/50 (45)*	1 (1½)*

NL = No limit to work time per hour.

*Use the amounts in parentheses for continuous work when rest breaks are not possible. Leaders should ensure several hours of rest and rehydration time after continuous work.

This guidance will sustain performance and hydration for at least 4 hours of work in the specified heat category. Fluid needs can vary based on individual differences (± ¼ qt/hr) and exposure to full sun or full shade (± ¼ qt/hr).

Rest means minimal physical activity (sitting or standing) in the shade if possible.

Body Armor - Add 5°F to WBGT index in humid climates.

NBC (MOPP 4) - Add 10°F (Easy Work) or 20°F (Moderate or Hard Work) to WBGT Index.

CAUTION: Hourly fluid intake should not exceed 1½ qts. Daily fluid intake should not exceed 12 qts.

AFTER

Goal: To fully replace any fluid and electrolyte deficit.
·Rehydrate with 20-24 oz. for every 1 lb. of body weight lost as sweat (measure body weight before and after to replenish loses).
·Adding sodium (from foods or fluids) will help retain ingested fluids.

PERFORMANCE NUTRITION

FUELING A 12 MILE RUCK MARCH

	Timing	Hydration	Carbohydrates & Sodium
PRE-EVENT	***2-4 hours prior**	16-24 oz	**OPTIONS for meeting goal of ~100g Carbs:** 1. One bagel with nut butter, one banana & 4-8oz 100% juice 2. One cup oatmeal, 2-3 Tbsp dried fruit, 1oz nuts & 12oz Naked/Odwalla/Bolthouse 100% juice 3. One cup Greek yogurt, 1 cup fruit, ½ cup granola & 8-12 coffee with 2Tbsp sugar
	****30 min prior**	8-16 oz	**OPTIONS for meeting goal of 30g Carbs and 5-10oz Fluids:** 1. 20oz Gatorade (fluids & carbs met) 2. 3 fig newtons 3. 8-16 oz coffee & 2 Tbsp sugar (fluids & carbs met)
DURING EVENT	**Hour 1**	**OPTIONS for meeting goal of 30-60g Carbs, 32-48oz Fluids, and 400-800mg Sodium:** 1. 8-12oz every 15-20 min of Full Strength Gatorade (32-48oz/hr as tolerated) 2. 1-1.5L Drip Drop solution and 1-2 Gu gels or 1 pack Honey Stinger chews per hour 3. 1-1.5L CeraSport solution and 1-2 Gu gels or 1 pack Honey Stinger chews per hour 4. 1-1.5L CeraSport EX1 solution and 1 Zone Bar per hour 5. 1-1.5L Table Salt solution and 2-3 oz dried fruit per hour	
	Hour 2	**OPTIONS for meeting goal of 30-60g Carbs, 32-48oz Fluids, and 400-800mg Sodium:** 1. 8-12oz every 15-20 min of Full Strength Gatorade (32-48oz/hr as tolerated) 2. 1-1.5L Drip Drop solution and 1-2 Gu gels or 1 pack Honey Stinger chews per hour 3. 1-1.5L CeraSport solution and 1-2 Gu gels or 1 pack Honey Stinger chews per hour 4. 1-1.5L CeraSport EX1 solution and 1 Zone Bar per hour 5. 1-1.5L Table Salt solution and 2-3 oz dried fruit per hour	
	Hour 3	**OPTIONS for meeting goal of 30-60g Carbs, 32-48oz Fluids, and 400-800mg Sodium:** 1. 8-12oz every 15-20 min of Full Strength Gatorade (32-48oz/hr as tolerated) 2. 1-1.5L Drip Drop solution and 1-2 Gu gels or 1 pack Honey Stinger chews per hour 3. 1-1.5L CeraSport solution and 1-2 Gu gels or 1 pack Honey Stinger chews per hour 4. 1-1.5L CeraSport EX1 solution and 1 Zone Bar per hour 5. 1-1.5L Table Salt solution and 2-3 oz dried fruit per hour	
POST-EVENT RECOVERY	**Within 60 min Post-Event**	24oz fluids for every pound lost (consume in the 2 - 4 hrs immediately post-event)	**OPTIONS for meeting goal of 60-75g Carbs and 20-30g Protein** 1. 3-4oz lean meat, 1 cup rice or pasta, 1 cup fruit, 1 cup veggies & lightly salt your foods 2. 1 bagel w/ 3-4oz lean meat 3. 1 scoop (20-25g protein) whey protein shake, 1 Clif bar & 1 Banana 4. 1 scoop (20-25g protein) whey protein shake and 1 bagel 5. 20oz skim or 1% chocolate milk

* Only if able, no need to interrupt sleep for early start.
** Only when authorized for use, consider 1-2 pieces Stay Alert Caffeine gum (100-200mg anhydrous caffeine).

Drip Drop: 1 pack in 1L water = 670 mg sodium/L
CeraSport EX1: 1 pack in 1L water = 400 mg sodium/L
CeraSport: 2 packs in 1L water = 460 mg sodium/L
Table Salt Solution (by volume): ½ tsp in 2L water = 575mg sodium/L
Table Salt Solution (by weight): 4g sodium in 2L water = 800mg sodium/L
Conversion: 1 Liter (L) = 1 Quart (qt) = 32 Ounces (oz)