

Ranger - Athlete - Warrior

Assessments Brief OCT09















Components of RAW





- Strength
- Endurance
- Movement skill

Performance Nutrition

- Nutrient needs
- Ideal body composition
 - Supplements

RANGER ATHLETE WARRIOR

Op. HIGHNESS

- Sports Medicine
 - Prevention
 - Early intervention
 - Multi-disciplinary team

Mental Toughness

- Ideal Performance State
- Fatigue counter-measures
 - Endurance events



RAW Purpose & End State



Purpose

 The purpose of RAW is to provide education and training that optimize the physical/mental development and sustainment of the Regiment's most lethal weapon - the individual Ranger.

End State Objective

- The terminal objective of RAW is to field self-sustaining systems that ensure that all Rangers:
 - Achieve a level of physical fitness that is commensurate with the physical requirements of the Ranger mission.
 - Understand and choose sound nutritional practices.
 - Employ mental toughness skills to enhance personal and professional development.
 - Receive screening/education for injury prevention and prompt, effective, and thorough treatment/rehabilitation of injuries when they do occur.



RAW Functional Fitness End State



- Strength sufficient for load carriage, IMT, and CASEVAC without physical bulk that detracts from endurance or movement proficiency.
- Endurance sufficient for 1) long-range movement at a relatively low speed and 2) short, explosive movements followed by short rest and then repetition.
- Movement skills sufficient for the safe and effective execution of tasks that require power, agility, balance, and coordination.
- Assessments for each component will be conducted yearly at a minimum. Leaders will use these assessments to prioritize individual and group training requirements



Why RAW Physical Assessments are Needed



- Promotes competitive spirit
 - Individuals and elements from teams to companies can compare their scores to others within the battalion
- Identifies areas needing improvement
 - Guides subsequent physical training
- Determines if fitness is increasing or decreasing
 - Changes in fitness can be analyzed in relation to the PT program and/or recent missions



RAW Assessment Criteria



- Measures a broad range of physical attributes
- Allows leaders to ID specific areas that need improvement (agility, anaerobic endurance, etc)
 - Provides leaders with a tool to measure fitness
- Feasible to conduct given operational tempo and time/equipment constraints
 - Simple
 - Conducted during a PT session
- Assessments reinforce RAW principles



RAW Assessment Categories



- Athletic
 - Measures each component of fitness separately
 - This allows ID of strengths/weaknesses
 - Examples
 - Agility
 - Anaerobic endurance
 - Push/Pull strength

- Tactical
 - Measures ability to execute functional tasks that combine multiple components of fitness
 - Examples
 - RPAT
 - Footmarch



RAW Screening Assessments



- Functional Movement Screen
 - 7 movement tests designed to ID mobility/stability imbalances that predispose RGRs to injury
 - Each test scored 0-3
 - 3 for perfect execution
 - 2 for completion with movement error
 - 1 if RGR can't complete the movement
 - · 0 if attempt is painful
 - ROP average over last 6 months = 17
 - Total score below 16 or single event score "0" or "1" warrant visit to BN PT for Pre-hab
 - Conducted by BN PT and medics within a RGR's first six months in BN.



FMS Test #1 of 7
Deep Squat



RAW Screening Assessments



- Body Composition
 - The BodPod started being used in JAN 08 to accurately assess body composition
 - The objective is to define the ideal body composition by correlating it with injuries and performance on physical assessments
 - Studies may be performed pre/post for RGR School, deployment, etc.
 - One squad can be tested in about 1 hour



Bod Pod





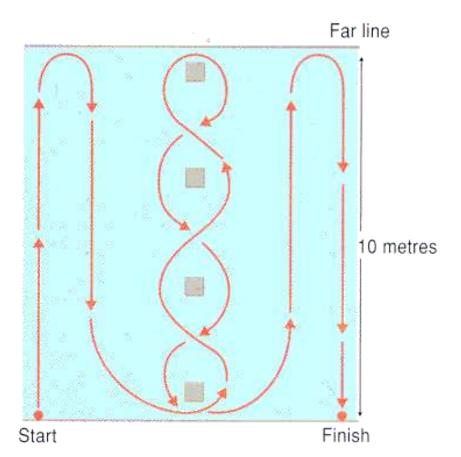
Agility Options

- Illinois Agility Test
 - Includes forward sprint, change of direction x3, and weaving in and out of cones
 - Well-established standards; see diagram on next slide
- NFL Combine Box Drill
 - Includes forward/backward run, lateral shuffle, and crossover step in each direction
- Triangle L/R
 - Compares sharp cuts to the left with sharp cuts to the right



Illinois Agility Test





Norms

Rating	Males	Females	
Excellent	< 15.2	2 < 17.0	
Good	15.2 to 16.1	17.0 to 17.9	
Average	16.2 to 18.1	18.0 to 21.7	
Fair	18.2 to 18.3	21.8 to 23.0	
Poor	> 18.3	> 23.0	





Strength Options

- Push
 - APFT pushup standards
 - Metronome PU
 - No rest position
 - 3-point push-up
 - Alternate stance leg every five reps
 - Option
 - metronome cadence
 - Max rep bench press at 185#**
 - *Recommended assessments in red.
 - **Gym-based test





Strength Options

- Pull
 - Current chin-up standard
 - Pull-ups (overhand grip)
 - Must extend elbows fully and pause to eliminate sway
 - No time limit
 - Options
 - metronome cadence
 - wear RBA





Strength Options

- Core
 - Hanging crunches
 - "Knees to elbows"
 - Heel clap
 - Alternating grip on pull-up bar with elbows staying at 90 deg.
 - Lift feet over the bar and tap the heels together
 - Lower to starting position and pause briefly to eliminate sway
 - No time limit
 - Option
 - metronome cadence for each of the above tests

*Recommended assessments in red.





Strength Options

- Legs/Total Body
 - Max-rep deadlift with barbell at 225#**
 - MedBall (4kg) Underhand Throw for Distance
 - Repeated Broad Jump
 - Executed exactly as for RAW PT...stick the landing on the first 3 jumps, then continuous jumps for a total of 10, measuring the total distance jumped for the score
 - Measure of power/endurance
 - Vertical Jump
 - Measure of power

^{*}Recommended assessments in red.





Endurance Options

- Aerobic
 - 2-mile run
 - 20-meter "BEEP" test
 - 5-mile run
 - APFT 2-mile to 5-mile run
- Anaerobic
 - 300-yard Shuttle
 - 300-yard Shuttle x2 with 1 minute rest between reps
 - Average the two scores

*Recommended assessments in red.



Physical Assessment Tactical*



- Current RPAT
- Modified RPAT
 - Break the 3-miles of running into a 2-mile "infil" and a 1-mile "exfil"
 - Add fireman's carry to the CASEVAC
 - Include agility within the 150 meter sprint
 - Option:
 - Set time standards for each component of the RPAT
 - Example: Conduct the RPAT with time incentives for platoon sized element, then set the future standard based on those test platoon scores.
- Footmarch
 - Utilization and standards at discretion of command based on mission requirements

*Recommended assessments in red.



Recommended Assessments and Sequence



- Field-Expedient Athletic
 - Illinois Agility Test
 - 4-kg Med Ball Throw
 - Metronome PU
 - Pull-ups
 - 300-yard ShuttleRepeats
 - Heel Clap
 - Beep Test

- Gym-based
 - Bench Press at 185#
 - Deadlift with barbell at 225#

- Tactical
 - Modified RPAT



Setting Standards



- Over time (1-2 full training/deployment cycles), we will have enough data to establish valid points scales based on percentiles of performance
 - Methodology used for the APFT
- Short-term recommendation is to compare RGR to his peers
 - Within and between squads, platoons, companies
 - Consider factors such as weather
 - Inter-BN comparisons probably not valid
 - See following slides for an example

Sample Assessment Scorecard

Ranger 1 F	MS: <u>17/21</u> BodPe	BodPod: <u>15%</u> Body Fat	
Performance	Raw Data Score	Squad Rank	
Assessments			
Illinois Agility Test	18.3 sec.	3	
4-kg MedBall Throw	45 ft.	3	
Metronome PU	37 reps	4	
Metronome Pull Up	10 reps	5	
300-Yard Shuttles	59 sec. avg.	4	
Heel Claps	14 reps	3	
Beep Test	Level 11	2	
RPAT	34 min.	3	
Deadlift (225-lbs)	15 reps	4	
Bench Press (185-lbs)	15 reps	3	
Lowest score repre	sents best overall fitness	AVG 3.4 within the squad.	

Sample Squad Data for a Single Event

300-Yard Shuttle Run (2 trials with 1-minute rest between)

	1 st Trial (s)	2 nd Trial (s)	Average	Squad Rank
Ranger 1	60	62	61	4
Ranger 2	61	64	62.5	6
Ranger 3	58	59	58.5	2
Ranger 4	64	67	65.5	10
Ranger 5	59	62	60.5	3
Ranger 6	60	62	61	4
Ranger 7	62	64	63	8
Ranger 8	63	65	64	9
Ranger 9	57	59	58	1
Ranger 10	61	64	62.5	6
Average	60.5	62.8	61.7*	

^{*} Can be used for comparison between squads.

Scheduling RAW Physical Assessment for Athletic/Tactical Components

- Athletic Assessments
 - Field expedient assessments can be conducted within one, 90-minute PT session
 - Perform gym-based assessments within 5 calendar days of field-expedient assessments.
 - Do not perform bench and deadlift assessments during same PT session as other events

- Tactical Assessments
 - RPAT
 - Once a year
 - Do not perform RPAT on same day as any of the athletic assessments
 - Footmarch
 - Current standard



Assessments Summary



- The RAW end state objectives will be enhanced by the addition of assessments.
- Both athletic and tactical physical assessments are needed for thoroughness.
- Assessments must evaluate broad-spectrum fitness without undue administrative and logistical burdens on the BNs.
 - All but two assessments (bench press and deadlift) can be performed during a 90-minute PT session without special equipment