



RANGER ATHLETE WARRIOR



A Systematic Approach to Conditioning

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Editor's Note: *The Ranger-Athlete-Warrior Program offers a means of improving Soldiers' conditioning well beyond anything we have tried up to now, and it deserves close examination. For this reason, the program will appear in three issues of Infantry. This introductory article focuses on functional fitness and the following two will deal with performance nutrition and mental toughness. We recognize that the program is targeted on training U.S. Army Rangers, but non-Ranger units can benefit as well from the experience of the 75th Ranger Regiment.*



The training of combative techniques — like most of the Soldier skills we train — begins with conditioning. Functional, mission-relevant conditioning is the foundation of a warrior's readiness, and in this article I want to provide an overview of one comprehensive and unique initiative that is now well into its second year of assessment here at Fort Benning.

The Ranger-Athlete-Warrior (RAW) program is an initiative which the 75th Ranger Regiment has planned and fielded over the past two years. It includes one of the most comprehensive approaches to physical conditioning ever undertaken by an Army unit, and has relevance to both Ranger and non-Ranger units. Fundamental to this program is its holistic approach to optimizing physical performance. More than just a fitness program, the RAW model also recognizes the importance of nutrition, mental preparation, and the prevention and care of injuries. The Ranger-Athlete-Warrior philosophy (Figure 1) is plainly stated and underlies the program.

RAW draws upon four components to achieve its intended outcomes: functional fitness, performance nutrition, sports medicine, and mental toughness (Figure 2). The first of these systematically addresses broad-spectrum strength, endurance, and movement skills. Strength enables a Soldier to overcome resistance, improves his performance, and reduces his chance of injury. The RAW program uses three discrete modes of training to improve strength:

- Muscle Endurance
- Moderate-Heavy Resistance
- Power

The Muscular Endurance workout is performed without external resistance. A variety of pull-ups, push-ups, lunges, and core exercises are performed with the emphasis on form rather than maximizing repetitions. The workout can be conducted anywhere pull-up bars or ropes are available.

As the name implies, the Moderate-Heavy Resistance workout gets Rangers in the gym to meet external resistance. Within this workout, Rangers will perform a variety of lifts but must balance pushing/pulling movements as well as upper and lower body work. By following this principle, they will avoid the muscle imbalances that are so prevalent among Soldiers that concentrate on "beach muscles."

We train the power component of strength primarily with machines that permit rapid, rotational movements from an athletic stance (Hammer Strength's Ground Base line of machines is an example). Correct form, and adequate recovery, are essential because power training is more demanding on the neuromuscular and skeletal systems.

Figure 1

- ### RAW Philosophy
- ❑ The individual Ranger is our most lethal weapon.
 - ❑ You don't know how tough your next enemy will be ... Assume he'll be very tough.
 - ❑ You don't know exactly what the physical requirement will be on your next mission... Assume it will be extremely demanding.
 - ❑ Ranger missions require strength, endurance, and movement skills. Excelling in only one or two leaves you vulnerable to poor performance and/or injuries.
 - ❑ Training hard is not enough; you have to train smart
 - ❑ As an individual/team/squad/platoon, you are only as strong as your weakest link. Don't have a weak link.
 - ❑ Form matters. Master the exercise techniques and demand proper execution from your men.
 - ❑ The body adapts to the stress you place upon it. This takes time. Be consistent, be patient, and think of improvement over weeks and months, not days.
 - ❑ Don't crush yourself every day. Respect the need for recovery. Leaders must be attuned to their men and modify the training stress appropriately.
 - ❑ Fuel the machine. Don't train well then blow it with a lousy diet. Have a plan for hydration and meals/snacks and stick to it.
 - ❑ Take care of your injuries before they become chronic. Playing hurt is necessary on occasion, but do it too long and there may not be a therapy or surgery fix.




Components of RAW

- **Functional Fitness**
 - Movement Skills
 - Strength
 - Endurance
- **Performance Nutrition**
 - Optimal Foods and Fluids
 - Body Composition Assessment
 - Supplement Guidance
- **Sports Medicine**
 - Injury Prevention
 - Early Intervention
 - Multi-disciplinary Team
- **Mental Toughness**
 - Ideal Performance State
 - Fatigue Counter-measures
 - Endurance Challenges

Figure 2

We cannot emphasize enough the importance of a systematic and comprehensive approach to strength training. Too often Soldiers assume that a high APFT score indicates adequate strength. In fact, the APFT does not even measure leg strength or pull strength, two potentially critical requirements for Soldiers. Ideally, strength training enhances a Soldier's ability to carry his combat load indefinitely, transport a wounded comrade, upload gear and ammunition, prepare fighting positions, and perform the many other Soldier tasks requiring broad-spectrum strength. In performance-oriented strength training, the emphasis is on the movement rather than the muscle. Unlike competitive bodybuilding, which emphasizes the appearance of the muscles, the focus in strength training is on the movements to be performed and the muscles that need to be developed to strengthen those movements.

The second element of functional fitness — endurance — is the ability to sustain physical activity, and includes both aerobic and anaerobic endurance. Aerobic endurance involves moderately intense tasks that require continuous, sustained movement such as road marches, while anaerobic endurance is needed to accomplish intense tasks that require quick,

powerful movements such as scaling a wall or the bursts of speed necessary in fire and maneuver against an enemy position. Several representative examples of these types of endurance and their demands on the body are shown in Figure 3. In the RAW program, aerobic endurance is trained primarily through running, foot marches, and swimming. Anaerobic endurance is trained primarily through interval running, agility/speed/plyometric drills, medicine ball drills, and ground based power training in the gym

The third element of functional fitness — movement skills — links the Soldier's strength and endurance to the actual task or challenge at hand. For example, negotiating obstacles requires not only strength and endurance, but movement skills that make execution of each obstacle safe and efficient. Movement skills can be grouped into three broad categories: agility, balance, coordination (ABCs). Agility is the ability to change direction, balance is maintaining your center of gravity in an effective position relative to your base of support, and coordination is the ability to effectively do more than one thing at a time. These skills are best developed in childhood, but improvements can be made through training at any age.

In the strength section, we talked about the type of strength a Ranger needs. For

Task	Strength	Muscular Endurance	Aerobic Endurance	Anaerobic Endurance	Flexibility	Motor Efficiency
Footmarch	X	XXX	XXX	X	x	X
Climbing	XXX	XX	X	XXX	XX	XXX
Sprints to Cover	XX	X	X	XX	XX	XXX
Crawl	XX	XXX	X	XXX	XX	XXX
Carrying	XXX	XX	X	XX	X	XX
Run	x	XX	XXX	X	X	X
Total	12	13	10	12	9	13

X = Low Demand
XX = Moderate Demand
XXX = High Demand

Figure 3 — Infantry Task/Physical Component Matrix

effective movement skill, strength means control of forces acting on the body. Muscles work either to move or prevent movement at the joints around which they live. Most often we focus on the movement that muscles create because that is what is most apparent. Less obvious though is the “braking” force that muscles apply to joint movement. This braking effect creates the stability that allows skillful movement. Without this braking effect, nearly all movement would be extremely sloppy and potentially dangerous. An astute observer has noted that attempting to manage heavy loads without a stable core is like firing a cannon from a canoe.

Around the body’s core, this braking action of the trunk muscles becomes extremely important for a couple reasons. First, the spine and pelvis are the base of attachment for many muscles that power the arms and legs. Secondly, the body’s center of gravity is within the core area. Keeping it there leads to balanced, skillful movement. This is the job of the core muscles and they do it primarily by putting on the brakes. For example, in agility training we create drills where momentum is taking the body in one direction, but the task requires change of direction. This requires a level of braking strength, but it also requires awareness of body position. This is very evident during cutting movements.

To turn a corner effectively, not only do you need braking strength to slow down your momentum, but you also need an

effective movement strategy. Generally, this means lowering the body, planting on the outside leg, and preventing the ankle and knee from rolling outward. You can be strong as an ox, but if your ankle and knee roll to the outside every time you try to cut, you won’t be very effective.

These movement strategies must eventually become subconscious. Think of them as your default settings. If your default settings aren’t appropriate, your movement will be inefficient. Some degree of conscious awareness of the correct movement, combined with repetitive, controlled drills will usually help. Such drills develop muscle memory, with the goal that the movement quickly becomes automatic — your default setting.

Keep in mind the following principles when training movement skills:

☐ Take time to learn the correct movement. When teaching, do the same. This means planning PT sessions to allow sufficient teaching time. You will have to sacrifice a conditioning effect on those days you teach new drills, but your men will be better in the long run.

☐ You need to be fresh to master complex movements. Don’t smoke your guys and then expect them to do well with agility/power drills or with obstacles. Within a given PT session, it’s best to place movement skills training right after movement prep.

If the schedule dictates agility/power drills after other activities, the men will be

somewhat fatigued. In such cases, the squad leader should take a little extra time before beginning agility/power drills and avoid pushing the intensity/duration of the session too hard.

Understanding Movement Prep and Recovery

Movement preparation and recovery are vital pieces of the RAW PT program. In the past, they’ve been known as warm-up and cooldown. In keeping with the terms used by most top trainers, the names have been changed to reflect the intent of the drills.

Movement preparation is a better term than warm-up. Preparing the body to move well is precisely the goal. Warming the body is part of movement prep, but it is no more important than the other two objectives of movement prep: loosening the joints/muscles, and priming the nerve to muscle messages. If warming were the only objective, you could sit in a sauna and call it warm-up. After movement prep, Rangers should be prepared to run, lift, negotiate obstacles, play a sport, execute a raid...

The movement prep recommended for Rangers is very similar to that used by top strength and conditioning coaches. It is somewhat different than the 5-step warm-up described in the Army’s Physical Fitness Training FM (circa 1980s). While that warm-up was based on sound principles at the time, in the past decade research has shown that static stretching during warm-up is not necessary for injury prevention or performance.

The term recovery is used instead of cooldown. Similar to the idea of warm-up as only a component of movement prep, cooling down is only a small part of recovery. The objectives of recovery are:

- 1) Safely decrease heart-rate, respiratory rate, and body temperature;
- 2) Improve functional flexibility;
- 3) Replace nutrients; and
- 4) Rest enough so that the body is ready for subsequent PT or missions.

Only the first two objectives are met on the PT field. This means that meeting objectives three and four are a personal responsibility. Leaders must educate and motivate their men to follow the nutritional and sleep guidelines put forth in the RAW classes.

It is clear that many individuals blow off cooldown and go straight to the shower without any obvious ill effects. Leaders should discourage this practice. Performing the functional flexibility exercises in the recovery drill will identify areas of tightness that might eventually lead to injury or limit performance. Those exercises were in fact designed to do just that. Obviously not everyone will need every stretch. However, those Rangers that do find areas of tightness or restriction during recovery stretches should be encouraged to repeat the stretches throughout the day.

Performing an organized recovery session offers squad leaders at least two other benefits:

- 1) The opportunity to provide the men with immediate feedback on the performance of the PT session, and
- 2) The opportunity to remind the men to rehydrate and get the proper nutrients at the proper time.

A Phased Approach to Training

RAW physical training uses a phased approach similar to that used by athletes. Over the years, researchers and trainers have learned that athletes maximize their potential by dedicating a given period of time to a particular aspect of physical development, then changing the focus at regular intervals. For example, runners might first develop an aerobic base through progressive distance runs, then later add hill training and interval workouts. Lifters might first focus on mass-producing workouts, then later emphasize power training.

This phased approach has been successful because regular changes to workouts force the body to continue adapting. If you stay with the same routine, the body becomes accustomed to it and development stops. Another benefit of phased training is the effect on recovery. Attempting to maintain maximal workouts for several months runs the risk of overtraining. By incorporating relatively less training intensity and volume during a portion of the training cycle, the body is much less likely to breakdown.

The RAW PT program uses four phases over a nine-month period:

Phase I - In the current operational cycle, this phase begins upon return from deployment and ends after six weeks of PT (block leave, etc. does not count). The emphasis is on recovery from deployment. Rangers should get therapy for any nagging injuries that linger from deployment. The physical training stress is relatively light during this phase. Squad leaders should use this phase to make sure their men achieve mastery of all the drills. The Functional Movement Screen (FMS), a battery of assessments that gauge the quality of functional movements (described further in a future article), is best conducted during this phase. Initial performance tests may be performed during this phase and repeated in phase three.

Phase II - This phase begins immediately after the first phase and runs for eight weeks. Leaders should gradually demand more of their men during this phase. More demanding workouts are added at this time on the assumption that phase one laid a good foundation of core strength, movement skills, and endurance.

Phase III - This phase links the second phase and deployment. It will generally be about 3-4 weeks in length.

During this time, leaders must ensure their men are ready for deployment. The RP AT and other performance tests should be done during this phase. While training should be tough and realistic, leaders must also take steps to reduce the risk of injury or overtraining.

Phase IV - In the current operational cycle, this is the deployed phase. While on deployment, the goal is to maintain peak physical performance without compromising mission readiness (for example, an exhaustive workout performed before a physically demanding mission). Depending on the location of deployment and the missions, Rangers might be able to use Phase IV as an opportunity to develop general strength through gym-based resistance training.

Other units will benefit from a phased approach to physical training, but might need to adjust the length of each phase based on their operational cycle, or to repeat the entire cycle between deployments. For example, a unit with 12-24 months to prepare for their next deployment could repeat Phase 1-3 once or even twice while in garrison. Another option is to add two to four weeks to Phase I and/or four to six weeks to Phase II.

The training of U.S. Army Rangers and those vast numbers of Soldiers who make up the majority of the Army — and who are sharing the burden of the global war on terrorism — cannot be left to chance. We owe it to them to ensure that they are completely prepared to take the fight to the enemy, deliver the decisive blow, and return home safely. Physical conditioning is the first step in that preparation, and the RAW program offers the opportunity and the methodology that we cannot afford to ignore.

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Courtesy photo

The RAW Program includes one of the most comprehensive approaches to physical conditioning ever undertaken by the Army, and has great deal of relevance because of its holistic nature and its contribution to the development of skills and toughness directly related to the demands of combat.