

## **Are CrossFit and Gym Jones compatible with RAW?**

In the last decade, physical training culture across the Regiment has changed. Distance running has decreased as hybrid workouts that incorporate a blend of resistance and endurance training have become increasingly popular. Across the country, this trend is also taking hold as evidenced by the popularity of CrossFit and programs similar to it. In this article, we will take an objective look at the hybrid training philosophies and the value they might hold for Rangers.

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In developing the RAW program, we consulted leaders in mainstream organizations such as the National Strength and Conditioning Association (NSCA) and Athletes' Performance Institute (API). We chose those models because of their proven results and their vested interest in long-term physical success. As we develop RAW's train-the-trainer program, we will continue to draw on the expertise of these organizations. For example, 12 NCOs from 1-75 recently (July '08) completed a week-long mentorship at API and were enthusiastic about the experience in their trip report.

This training represents one of three events in the train-the-trainer sequence: RAW SME week, API Mentorship Week, and Gym Jones training (pending a staff visit in November '08 to coordinate the details). We believe the Gym Jones experience will add value that can't be found anywhere else – specifically the chance to explore in-depth the means for meeting operator-specific physical training requirements. The staff there understands the primal need among warriors to challenge the limits of the body. While some may do this with ultra-distance events, some in the weight room, some in the octagon, the Gym Jones approach not only taps into the primal mind-body energy, it trains the physical skill set that best serves Rangers.

While we are encouraged by the variety of training modes seen across the Regiment, we need to ensure that Rangers avoid trendy workouts that don't meet their PT objectives and might even get them hurt. Among our concerns are the following:

### **Establishing and Maintaining Movement Skill**

Web-based trainers may believe in laying a solid movement skill foundation, but how to do so is not readily apparent on most websites. Rangers drawn to programs such as CrossFit's workout of the day (WOD) are often unaware that the preparatory training required to master lifts such as the snatch can take months, even years. Eastern bloc coaches trained their best lifters with such a timeline in mind. Staying with the snatch as an example, the majority of

Rangers we've tested cannot achieve the "3" score on the Deep Squat from the Functional Movement Screen. The mobility/stability required to score a 3 on that test should be a prerequisite for overhead training. Eliminating the mobility/stability imbalances that limit the Deep Squat can take weeks or months.

CrossFit and other web-based fitness trainers suffer no consequence when their followers injure themselves or do not improve performance because they were not prepared to train at a given level; but the NSCA-credentialed and API coaches won't last long if their training methods aren't sound. This is not to say that CrossFit training is inherently dangerous or ineffective, however, like all training, the risks/benefits must be matched to the objective.

Another movement skill deficit we've seen with several popular programs is the lack of agility and rotational training. Harold Hill, a former operator and the military liaison at API, noticed the same thing. Not surprisingly, when API works with operators they spend significant time working agility and rotational movement skills.

One reason we are drawn more to the Gym Jones approach is their philosophy of consistency before intensity. That principle gets to the heart of physical training – move well first, then ramp up the intensity. CrossFit trainers would likely agree with that point but add that occasionally we will encounter occupation stress that causes fatigue to the point that form breaks down. We must, they would say, train to prepare for those moments (Example: the "Fight Gone Bad" workout). While it is true that we will at times encounter a level of fatigue that breaks down form, the question is "How do we best train in preparation for those conditions?" There must be a risk/benefit analysis. We contend that power (cleans, jerks, snatches) and heavy resistance (dead lift, squat, free-weight pressing) lifts carry too great of a risk to be used as beyond-form-failure exercises.

## **Blending Strength and Endurance**

One trend in the fitness industry is the blurring of the line between strength and endurance training. A decade ago, guys had their cardio days and their strength days. Some would occasionally do one (lift), then the other (bike, run, etc.) as part of the same workout. Now, the strength and conditioning world is full of resistance training workouts that keep the heart rate high. There are several advantages to those workouts:

- Efficiency – time is often a factor for Rangers, and blended workouts kill two birds with one stone.
- Developing power-endurance – too many easy-paced long runs will rob the legs of power. When the same endurance effect can be achieved without compromising leg

power, the choice is clear. This is not to say we should never run long, only that we should not over-emphasize that mode of training.

- Mental toughness – most blended/hybrid workouts we've done have required a lot of focus to maintain form as fatigue sets in. Contrast that with mindlessly drifting through a 5-mile run or performing well-rested sets in the weight room.
- Neuro-endocrine stimulation - blending strength and endurance means you are pushing/pulling/lifting something when you are tired. This is hard work and a big stress to the entire body. The body responds by mobilizing a chemical response that gets you better prepared for the next smoke session. This is good, but it requires adequate recovery. Please read below, "Too Much Smoke, Too Often."

However, these hybrid workouts have drawbacks. In addition to the risk of over-stimulating the neuro-endocrine response, the restriction on rest intervals compromises muscular development. Insufficient rest intervals fail to restore creatine-phosphate levels and normal acid-base balances. Rangers wanting to get bigger or stronger must get adequate recovery between sets and, therefore, should limit the use of workouts that don't allow such recovery.

Our recommendation is to first define your objectives (both long-term and short-term) and then choose training modes accordingly. Most top athletes follow a periodized approach to training, changing their focus/workouts every few weeks, with a different objective for each period. The classic model trains hypertrophy, strength, power, and sport-specific needs in that order. In this model, hybrid power-endurance workouts fit best during the sport-specific (think Ranger missions) phase. More recently, an alternative training model called non-linear periodization has proven effective. In this model, different forms of strength training are scheduled within a 1-2 week period. Based on discussions with top strength and conditioning researchers, the RAW program recommends this method and includes one heavy-resistance workout, one power-endurance workout, and one body-weight workout per 7-10 day period. The power-endurance workout can be either Ground Base, hybrid, or a combination of the two.

The hybrid, power-endurance workouts certainly have value for Rangers, but should be used as one modality in a broad-ranging PT program rather than the primary mode of training across phases.

### **Strength-to-Weight Ratio**

A high strength-to-weight ratio is acclaimed by the CrossFit and Gym Jones approaches. Because high strength-to-weight ratios improve efficiency for most tasks, including climbing, gymnastics, and running, we tend to agree. However, a high strength-to-weight ratio is really

only valuable to the degree it improves performance on specific tasks. Some Ranger tasks will not benefit from a high strength-to-weight ratio. Loaded movement on foot might suffer if a Ranger overly pursues upper body strength and a very low percentage of body fat. Such individuals will likely perform well on climbing or gymnastics tasks (pull-ups, monkey bars, muscle-ups), but a long, heavy foot march could force that Ranger to operate at a greater percentage of his physical capacity than a “thicker” man, leading to earlier fatigue. We’ve all known guys that weren’t light or ripped or very successful on running events but could road march everyone else into the ground. There is no simple, definitive guidance on this topic. Our general recommendation is to maximize strength without compromising occupationally-specific endurance and movement skills.

### **Too Much Smoke, Too Often**

By nature, Rangers tend to set lofty fitness goals and push hard to accomplish them. Though most of our guys understand the principle of recovery, in practice, they often violate it. When inadequate recovery becomes the rule rather than the exception, injuries and decreasing performance usually follow. If you are in your twenties and biomechanically sound, the process may take longer, but you are still vulnerable to overtraining.

Though a complete discussion of the science behind overtraining is beyond the scope of this article, the process can be viewed as both a muscle/tendon/bone overuse problem, and a multi-system physiological problem. The muscle/tendon/bone overuse problems appear as stress fractures, tendon breakdown, and chronic muscle soreness. The physiological problem is more complicated and involves neurological and endocrine (hormones) systems. Simply put, overtraining overtaxes those systems. As a result, the whole body is affected, with symptoms such as increased resting heart rate, fatigue, unexpected weight gain/loss, low motivation, and susceptibility to illness.

Over the past year, we’ve talked with or heard lectures on this topic from several of the elite trainers in the country. As a result, our guidance is to have no more than two “crushing” workouts per week. By crushing, we’re not suggesting that blood or puke is required, just that you place the workout in the “that was no joke” category. Of course this is individual-specific. For example, running 10 x 400M at a 75-second pace might be easy for some Rangers and a crushing workout for others.

The problem with many web-based programs is that they take a one-size fits all approach, potentially creating three or four “crushing” workouts per week. Even a single workout with arbitrarily high volume and/or intensity can be so far beyond an individual’s readiness for the workout that rhabdomyolysis\* occurs. We are not here to dampen the enthusiasm/passion

that accompanies these programs, only to say that such programs should be exposed to the same risk/benefit analysis that accompanies any serious training.

\*A potentially dangerous condition in which muscle breakdown compromises the kidneys.

### **The Variety/Specificity Continuum**

Variety and specificity are commonly cited as essential principles of exercise. Clearly they are somewhat contradictory, yet you seldom hear discussion of how to balance this contradiction to suite particular training needs. CrossFit is at the variety end of the spectrum. They are intentionally training the generalist, and therefore provide a wide variety of training stimuli. Rangers, being generalists, need exposure to many modes of training. However, we also have some very specific physical requirements that must be trained regularly enough for mastery and task-specific endurance. Constantly changing workouts could mean we don't fully stimulate the specific adaptations necessary for optimal foot marching, climbing, agility, etc.

When variety is overemphasized, there is the risk that important movement skills will never receive enough repetition to establish sound movement patterns. Similarly, some individuals will have a relative training need (improved upper body pull strength, for example) that is not adequately emphasized by following a generic, web-based program aimed at the masses.

Our guidance is to identify key workouts and stay with those for several weeks. Then, especially if performance plateaus, change workouts or modify existing ones. For example, the muscular endurance workout described in the strength chapter should be performed for the six weeks of phase 1, but could then be replaced by the stamina drill in phase 2. Through our forced requirement to train movement skills and the strength and endurance continuums, variety in the program pretty much takes care of itself.

### **Summary**

There are lots of ways to succeed and a number of ways to fail. There is no cookie-cutter program that works for everyone. As the RAW PT program has evolved, we have sought to broaden the guidance and incorporate other methodologies. We encourage all Rangers to maximize their PT education. Following a program like CrossFit is easy because it's web-based, generally pretty fun, and usually quite challenging. But serious students of fitness need to also study and borrow from our own physical training history (previous Army PT manuals), other cultures, and mainstream organizations such as the NSCA. Each of these will have something to offer.

Bottom line: Learn from all; blindly follow no one!