

COMPONENTS OF THE TACTICAL ATHLETE MODEL

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Abstract: Sport is a basic pillar in the training of any military, be it NCO or officer. Primarily, tactical fitness refers to the type of fitness required to assist active duty military, police, firefighters, and other professions who must be the first at the scene in the case of an emergency. It also applies to those who want to serve in the military or other similar professions. Last but not least, it also applies to everyone who wants to be in better physical condition to survive a potentially dangerous situation, such as a natural disaster or saving someone from a burning house until the fire department and the paramedics arrives. Tactical fitness is the difference between life and death in these circumstances. Sometimes the question must be asked if we are prepared enough to save ourselves or save someone from a disaster. Many people working in these fields need to know how to properly prepare their workouts to fit the needs of demanding schedules and jobs. For those who do not work in these fields, just being able to save themselves or a family member from situations that require endurance, strength and physical discipline is reason enough to train in a certain way, at a certain standard.

Keywords: tactical athlete, tactical fitness, component, longevity

1. Introduction

The concept of harmony, from the point of view of the human body and psyche, has been a permanent preoccupation in our society. Practicing physical exercises has had as its goal, since ancient times, the development of young people's motor capacities, most of the time with a view to transforming them into soldiers.

2. Tactical athlete

The relatively new term tactical athlete first appeared in the United States military. For decades, troop training personnel have aimed to create a mindset in which each military member thinks of himself as an athlete. Longevity is the ultimate goal any tactical athlete should aim for. For the tactical operator, the motric elements have not changed.

They must be above average in all

elements: strength, power, speed, agility, cardiovascular conditioning, endurance, mobility and flexibility, which can only be possible through exercise. The physical goal is to be able to perform all the necessary work skills and be in better physical condition than the opponent(s).

“Tactical fitness is a new kind of fitness defined as the ability to perform jobs such as: military, police or firefighting and survival skills such as: running, marching, swimming, climbing, jumping and carrying equipment or the injured, which requires full body strength, muscular coordination, muscular stamina, speed, agility and cardiovascular conditioning” [1].

The elements of tactical fitness are arranged into sub-groups, which together make up the longevity of the tactical athlete: durability, work capacity, physical stability and stress mitigation. The ability to relieve

stress, sleep less, eat poorly will be reduced with age, along with metabolism. Actively tracking recovery, maintaining motor elements throughout the year (periodization/cycling) will improve the ability to produce longevity in a career as a tactical athlete.

One of the most important mental processes that new members of the military, (...) can do for their own health and well-being is to treat themselves as athletes [2].

There are three main phases in the career of any tactical athlete. The first encompasses all the preliminary work; the body must be trained and prepared for the trials that will help one work for the institution of one's dreams. The second phase comprises the training to help the body get through the long days of drill period. Finally, the training will need to be adjusted again so that the serviceman will be fit throughout the year to continue to meet all the demands of the job at the highest level.

Recovery from stress is the key. There needs to be downtime in your training cycles, even if those are moments of deep breathing and relaxation before sleep. Soldiers need to learn how to adjust their training to the seasonal demands of the profession; how to create their own break in training, by means of a schedule in which peaking and recovery fit logically into the annual or six-month schedule of the unit they belong to. Learning how to actively pursue recovery is critical to the longevity of the tactical athlete.

3. Psychological training

The starting point for all achievements is motivation. Without sufficient motivation, you will not take that crucial first step towards success. Motivation is simply the desire to do something. It is the difference between wanting to get out of bed at first light because you cannot wait to start your workout or work and wanting to stay in bed all morning. Motivation requires excitement. Knowing something is not

enough to cause a change. You have to feel something emotionally, mentally and physically, something that makes you want and need the result you are looking for. The term "motivation" describes why a person does something.

"Motivation is what makes us act, whether it's drinking a glass of water to quench our thirst or reading a book to gain knowledge" [3].

Motivation, willpower, focus and self-confidence can be dramatically reduced in the midst of a very difficult challenge or against a much stronger enemy or opponent.

"Athlete leadership has been predominantly measured using assessment tools that were originally developed within other fields of leadership research (e.g., coach leadership, military leadership)" [4].

Many studies have shown a strong link between mental toughness, emotional control, coping skills and an athlete's or leader's ability to perform at a higher level than their competition or peers. "There are many ways that athletes can be leaders" [5].

4. Durability

Durability is the combination of strength, power, speed and agility that every tactical athlete needs to perform at their best in their profession and to stay as injury-free as possible.

It is the absolute foundation of tactical fitness upon which all other elements of fitness thrive. However, without endurance and muscular stamina built on the foundation of durability, the term tactical athlete would not exist.

In the table below one can see the ranges of test scores for durability that are more likely to enable an individual to pass difficult military training programs (statistical analysis by the US Army).

Sustainability exercises	Number of repetitions
Weight pulling (min.10-max 12 kg.)	10-15+

Bench press (body weight)	10-15+
Adjustments	2x body weight – 1-5 repeats
300m. shuttle (cones)	60 seconds or less
Standing long jump	10-12x (≥ 2 m.)

Additional exercises	Number of repetitions
Squats	1-1,5x body weight – 5 repetitions
Lunges	400m. with the weight on the chest (20 kg.)
Lifting the bars off the ground at chest level	0.5x body weight - 5-10 repetitions

The first table presents scores in strength and power that are good enough to enable one to function well enough and to complete difficult training programs, and also for the tactical athlete to be able to carry out missions in any type of terrain. In the second table there are additional exercises and recommendations that focus on durability as well as on muscular endurance. Many selection programs will require the military to do a strength exercise, which will need to be converted into an endurance exercise for teamwork (e.g. log training).

Hypertrophy refers to the enlargement of muscle tissue, its development. There are many reasons to use a hypertrophy programme. The main reason would be to increase muscle tissue, another would be to repair muscle tissue. A well-structured hypertrophy programme can be used to repair tissue after a long and tiring season

(in the sports world) or after a deployment or deployment to a theatre of operations; the aim is to repair that tissue after the trauma of the season in order to prepare for the next one. This is the purpose of the break between seasons for athletes [6].

In the tactical area does not always exist that lull between deployments, missions, applications, exercises, the tactical population must be ready for action at all times, which is why a hypertrophy program can be used as a tissue repair. Aesthetically, both hypertrophy and hyperplasia can result in larger muscles. However, the difference is that while hypertrophy increases the size of muscle cells in response to stress, hyperplasia develops new cells in response to a stimulus [7].

A typical and beneficial workout for this stage of hypertrophy is the classic Push, Pull, Legs.

“Hypertrophy training has a number of valuable benefits for an individual's strength, physique and health. Some of these can be found in the list below:

1. Improves anaerobic endurance: as muscles are built and developed, more strength can be maintained for longer, with more explosive energy available for use.
2. Improves joint health: isolation exercises can improve the health of joints, tendons and ligaments.
3. Increased caloric consumption: after a high-volume hypertrophy workout, the body will continue to burn calories at a high metabolic rate for up to 48 hours after the workout” [8].

Strength is the stage that immediately follows hypertrophy and is just as crucial in creating the tactical athlete. Coming immediately after an increase in muscle tissue, the goal is to teach the body to produce greater force with that new muscle mass. To develop strength, one must first understand the neural coding process.

“The force exerted by a muscle during a voluntary contraction depends on the number of motor units recruited for action

and the rates at which they discharge their action potentials. Over most of a muscle's operating range, the nervous system controls muscle force by varying both motor unit recruitment and neural coding. However, except for relatively low forces, control of muscle force depends primarily on neural coding, especially during rapid contractions” [9].

In order to better and easily understand the difference between the two stages, hypertrophy and strength, the table below will cover all the main differences that need to be considered when working on a periodization of training.

Strength training	Hypertrophy training
Objective Efficient movement of a large weight undertension	Objective Increase in muscle tissue
Volume 2-6 sets 6 reps or fewer	Volume 3 or more sets 8-15 reps
Percentage 85% of full capacity or more	Percentage 75-85% of full capacity
Rest time between sets 2 minutes or more	Rest time between sets 1 minute or less

“The military ethos despises anything less than a 100% effort. In contrast, athletes know that a normal day in the gym does not equal the Olympics and ration their efforts accordingly. Do yourself a favor and learn to drive in more gears. This will provide much greater physical performance and allow athletes to stay in the fight much longer” [10]. Muscular stamina, for a tactical athlete, should mean how long they can hold out under continuous stress

without having to stop or slow down.

5. Ability to work

Work capacity is the body's ability to tolerate and recover intelligently from a high workload. In order for an athlete to improve, he or she must reach a certain threshold (this threshold depends on each individual's training). The athlete must work at a level that provides sufficient stress to achieve an optimal adaptive response [11].

Therefore, the aim of the individual is to build a base of work capacity specific to the requirements of the sport they play. Since the tactical athlete is not a conventional athlete playing a particular sport, the demands will be higher, therefore the work capacity base must include all the elements of fitness.

6. Stress relief

Workplace stress is a worldwide problem [12]. The military environment can also often be quite stressful. Stress mitigation is not just about mental stress but also about the stress that the body is subjected to in the many physical activities of daily life.

Stress is intense, complex and lasting psychological reactions of an individual facing new and difficult situations [13].

Maintaining a strong body and a strong, resilient mind to cope with the stresses of life in the tactical world requires work and an understanding of stress physiology. These are the main goals of tactical fitness.

In the following lines we will present a method of stress mitigation, BASE-R. This is a competency-based approach to stress self-regulation and performance improvement, with fifteen years of application in several high performance and stressful professions.

“Breath - The importance and learning HOW to breathe to slow down your nervous system. Simply lengthen the inhalation and exhalation with a short pause in between, in through the nose/out through the mouth. Take a few minutes and try box breathing for starters (4 seconds IN, 4 seconds hold, 4

seconds out, 4 seconds hold). Then advance to lengthening the exhalation with each breath cycle - inhaling by using the full capacity of the lungs (top and bottom).

Attention – Observe your situation internally (inside your body) and externally. Focus on breathing, transform obtrusive thoughts to constructive thoughts. Observe the amount of energy in your body or lack thereof.

Simulation - Create an optimal performance state and mindset. Focus on the goal and simulate the process of achieving that goal visualizing each step of the journey.

Energy – Assess your energy state and use skills to shift it as desired. Workout (fight stress with fitness) but also use recovery exercises (stretches, poses, dynamic stretches) as a cool down.

Recovery - All the above can help you recover along with hydration, nutrition, rest and sleep” [14].

7. Longevity

Longevity is about more than just lifespan. It is a combination of all the above information, training techniques, followed by appropriate recovery and then a logical arrangement of training (periodization). Longevity means resilience, durability, endurance, survival, vitality, long life, continuity and functionality, and for the tactical athlete it means that he/she is still operational.

Living many years is remarkable indeed, but living those years in the tactical world, spending a lot of time on the field and in the gym is exceptional and requires a much better understanding of what exactly recovery and logical arrangement of training on cycles means.

So longevity is created over time, with the

help of all the elements that help the tactical athlete: sleep (7 to 8 hours a night), nutrition, hydration, training, breathing and relaxation, flexibility and mobility, positive thinking. All these will help the tactical athlete to be active as long as possible as well as to give up certain addictions.

8. Conclusion

The end result of all the steps outlined above is to build a healthy, long-lived tactical athlete who has not suffered serious physical injury during his or her career in the armed forces in particular, but the same can apply to firefighters or police.

However, maintaining reasonable fitness standards so that the job itself does not cause career-ending injuries requires smart training guidance and an understanding that on hard, stressful days, less is more for the tactical athlete. It is not really advisable to execute an equally difficult workout or long run after a stressful and physically demanding day. This may be possible for military personnel who are not yet over 30 and who can recover much more quickly than older tactical athletes who do not have such a quick recovery time. Often, a day of light cardio with a focus on deep breathing is enough to metabolize the stress of the day on the job. Thus, durability, psychological preparation and physical training combined, are the essential elements that the tactical athlete needs in order to operate without injury, with high morale and with an advantage over the enemy.

If the training part is perfectly combined with the recovery part then the tactical has all the conditions to develop in such a way so as to achieve every objective.

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