



ARMY COMBAT FITNESS TEST (ACFT)

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Servicemen's capabilities and skills represent the basis of the increasing professional level required to plan and carry out military actions within a multinational framework, under various circumstances pertaining to geopolitics, relief and climate, tradition and civilization. The overall vision of an army must be centered on servicemen's mental and physical training that could be, at a certain moment, the key to success on any military operation they conduct.

Servicemen deploying on NATO missions have to cope with a complex, lethal, competitive, dynamic operational environment, which has evolved over the past years, with the opponents resorting to a combination of asymmetric hybrid conventional and unconventional strategies. Thus, servicemen's physical training programs need constant improvement in order to keep up with the requirements consistent with modern warfare. Moreover, the regular assessment aimed at checking the military personnel's physical fitness must evolve accordingly to validate their combat readiness.

Keywords: physical training; military physical education; physical exercise; kinetic ability; kinetic skills.

By the end of this calendar year, the new army physical training trial (*Army Combat Fitness Test – ACFT*) aimed at testing the military personnel in the United States of America will completely replace the former test (*Army Physical Fitness Test – APFT*) which was made up of three trials (push-ups, sit-ups, and 2 mile running) which was implemented as such in the early '80s.

The newly-designed test is the result of the studies conducted to identify the tasks specific to combatants on military operations, as well as the ways that enable servicemen to keep fit in order to fulfil their duties and commitments.

At the beginning, specialists worked out a list (which was extended in time as a consequence of the lessons learned in the battlefield) with the skills needed by the military to conduct any military action. Furthermore, there was this misconception that these skills must be developed only by the military within operational or placement training bases. The other servicemen were meant to be trained only for a limited period of time, before deployment.

Currently, the philosophy beyond this updated list lies in the fact that all military personnel (irrespective of their rank, position and military specialty) need specific skills to develop abilities and competences complying with their job description, base mission and environment by

reinforcing that servicemen fill in appropriate positions in accordance with their training.

Army Combat Fitness Test (ACFT)

In the USA Army, over the last four decades, military servicemen were tested in terms of how many push-ups and sit-ups they could do within a given interval of time (2 minutes) and how fast they could run on a 2 mile distance. It took 6 years to conduct experiments on the implementation of a newly-worked out test that features kinetic abilities; starting this year, the American Army is poised to step forward in a new decade, with a new approach to evaluate servicemen's kinetic qualities. As obviously shown, this test is similar to the one currently adopted by the Romanian Army nowadays. The implementation of a newly-designed test (called *Army Combat Fitness Test-henceforth ACFT*¹) to check servicemen's fitness is a fact.

This new test was conceived as a result of specialist scientific research conducted over a couple of years, being aimed at assessing those kinetic skills and abilities servicemen need in combat, irrespective of their arm of service within the Army. Specialists in military physical education claim that this test was also brought about by sports science evolution over the last twenty years, mainly by research conducted on the human factor (on servicemen in this particular case), which reduced the number of injury recorded on missions. "Physical training as professional activity required by the military, must be directed towards kinetic

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tasks that combatants come across in real combat environment, not only towards mere training as such”².

ACFT test implementation cost the USA Army over 80 million dollars, amount which was considered investment in servicemen training (even if more and more jobs within the Army are becoming less challenging from a physical point of view), since the way they will fight must be tightly correlated with the physical training they benefit from and the assessment they will be subject to³. Irrespective of one’s position in the Army, one may suddenly be asked to join a military operation. Hence, not only should one master one’s specialty, but also keep fit in order to cope with the requirements needed in combat. Although the newly-designed ACFT test is more difficult than the former one (including more trials and less time to rest among them), the American Army lays emphasis on quality not on quantity when it comes to military enlistment. The

- Trial no. 1: hexagon bar iron strengthening (also called the trapeze bar or trap bar);
- Trial no. 2: throwing the medical ball aback;
- Trial no. 3: push-ups (an altered version of the type "dead-stop-press-up");
- Trial no. 4: joint exercise of running and material hand manoeuvre;
- Trial no. 5: horizontal bar exercise;
- Trial no. 6: resistance running on a two-mile distance (around 3.22 kms).

Hexagon bar iron strengthening stands for a compound exercise, being a joint exercise between weight squat and bell strengthening. The hexagon bar iron is a type of bell that features a hexangle in the middle with two inside handlers/ holders attached that enable the exercise performance once the player is located inside the hexagon. This exercise is recommended to beginners as the pressure put on spine and knees is by far lower than olympic bell classic strengthening, and the physical



Figure 1 Hexagon bar iron strengthening (trial no. 1)

results obtained in ACFT classify the military into categories based on performance, not on age or gender.

Army Combat Fitness Test (ACFT) is an assessment test made up of 6 trials that must be regulated in a given order, within an interval of maximum 70 minutes (from the moment the first trial starts until the the moment the last trial ends). Before starting the test as such, the military have 10 minutes to warm up in order to get their bodies prepared for overall effort, and 10 more minutes to warm up strictly for the first trial (including hereby accommodation to the hexagon bar iron and the establishment of the first weight). Currently, alternative versions have been worked out only for the last test trial and no exception applicable to some servicemen has been considered. The test trials come as follows⁴:

movement carried out is closer to regular body movement. Furthermore, for those servicemen suffering from lumbar pains, this kind of exercise is a more complex approach since the load is equally carried out by the body joints.

The trial performance consists in its carriage three times in a row by using the same weight (the latter being established by each serviceman after warming up for this particular trial at the beginning of the test). If the serviceman fails to carry out the three goes, he should be reexamined by using a lighter weight, after a 2 minute break. If the player successfully completes the three goes at first attempt, he should carry out the trial one more time by using (up to the player) a heavier weight after a 2 minute break.

The military should have maximum two attempts for this trial, and the heaviest weight

successfully lifted three times in a row is the performance recorded in the player's individual assessment report.

Trial assessment will consist in turning the players' performance into points, as follows:

- for 60 points (at least) one must lift 140 pounds (approximately 64 kilos);
- for 100 points (the maximum to be assigned) one must lift 340 pounds (approximately 154 kilos)

There is tight correlation between the physical effort within this trial with various typical tasks combatants get on military operations, i.e. picking up and transporting heavy loads (military personnel or equipment) or evacuating the injured/ the wounded by means of a stretcher.



Figure 2 *Throwing the medical ball aback (trial no. 2)*

Throwing the medical ball aback stands for the second trial within ACFT and should be carried out after a 2 minute break, counted down against the clock the very moment the first trial is completed. Among all the test trials, this one involves the acquisition of more complicated performance techniques by coordinating the movement of lower and upper limbs.

The exercise is carried out with a 10 pound (around 4.5 kilo) ball which must be thrown backwards with both arms, feet kept apart, the

player's back facing the throwing direction. The military should have a warming-up go (for mere practice) which should not be recorded and two attempts on the record that will feature in their individual assessment report, with the longest being officially considered when calculating points. Before throwing as such, players may have some preparatory attempts consisting in simulating the act of throwing. During the trial, the military participants must stay behind the throwing line. If the latter is surpassed or stepped over during trial, that particular throwing will stand for a mistake, and by making such two mistakes in a row, the attempt under consideration will be recorded as 0.0 metres⁵.

Trial assessment consists in turning the players' performance into points, as follows:

- for 60 points (at least) the player must throw the medical ball at a 4.50 metre distance;
- for 100 points (the maximum players may score) the player must throw the medical ball at a 12,50 metre distance.

The bursting power, to be assessed during this trial, contributes to the acquisition of typical skills combatants need on military operations that require fast, explosive movements, in order to manipulate various pieces of equipment and personnel. Such kinetic skills may be correlated with the transportation of an injured serviceman (on either one or both shoulders) on limited distance up to safe location, equipment/material throwing on or over an obstacle, precise hand grenade throwing on short distance, providing assistance to a companion-in-arms to overcome an obstacle (wall), material manipulation (lifting, transportation, loading) and bursting power development required in various technical procedures in close combat.



Figure 3 *Push-up of the type "dead-stop-push-up" (trial no. 3)*

Altered push-ups (of the type *dead-stop-press-up*) is a trial aimed at testing upper body resistance through repetitive and constant push (an extension movement of forearms on arms), which is used for particular combat tasks. Altered push-ups stand for the third trial within ACFT being carried out after a three-minute break, counted down against the clock the very moment final throwing of the medical ball is completed.

The trial is carried out this way: from initial position for push-ups, the torso is lowered until it reaches the facial prostrate position without hold, palms kept on ground. During this time interval, servicemen must take constant effort, since any stoppage exceeding 5 seconds is prohibited. The trial may be interrupted by the evaluator if the serviceman adopts another body position during performance; if he cannot make continuous effort; if he lifts one of his legs up from the ground, or if he keeps one of his knees on ground. The aggregate of the successful carried out push-ups within 2 minutes will be recorded in the individual progress report. During this trial, the assessor must stay or kneel down three metres aside, above the serviceman's head in order to observe the performance better ⁶.

Trial assessment consists in turning the player's performance into points, as follows:



Figure 4 Performance aspects featuring joint exercise of running and material hand manoeuvre (trial no. 4)

- for 60 points (at least) the player must perform 10 accurate push-up in a row;
- for 100 points (the maximum assigned to the player) the participant must perform 60 accurate push-ups in a row.

The exercise involved during such trial is required so that the military would carry out particular tasks on various military operations, i.e. unbalancing an opponent in close combat, surpassing various obstacles, pushing a military vehicle (stuck in mud, sand or snow) or subject to puncture, taking prostrate position for combat to shoot or after throwing hand grenades, or deploying

forward in battlefield (jumping, crawling, elbowing, kneeling, side crawling), etc.

Joint exercise of running and material hand manoeuvre stands for the fourth trial within ACFT and is carried out after a three-minute break, counted down against the clock once the third trial has been completed. Such exercise is aimed at testing various forms of kinetic quality, required to fulfil numerous intense combat duties that may take from a few seconds up to a couple of minutes.

To perform this trial, each military participant needs a flat field (of 25 meters x 2 meters in size), a sledge with weights (90 pounds overall – around 41 kilos) with slings and two kettlebell dumbbells (each weighing 40 pounds – approximately 18 kilos). The trial is consistent with the following procedure:

- beyond the starting line, from facial prostrate position, when hearing the audio signal, the player should sprint on a 25 metre distance up to *the returning line* (parallel to the starting line), which must be stepped over with one leg at least and touched with one hand at least; afterwards the player should sprint back to the starting line;
- once surpassing the starting line, the player should hold the handles of the slings attached to the weight sledge and pull the latter aback, until the entire sledge has crossed the returning line. A

180° turn should be performed by the player who must continue to pull the sledge back until the latter would fully cross the starting line;

• once leaving the sledge slings aside, the player should run round (on the same 25 m distance), laterally, one step added (bent-elbowed arms, kept slightly apart from his body, his palms ahead, placed at shoulder level), stepping over the returning line with one of his feet at least and touching it with one hand at least, without changing the front or crossing his legs;

• once surpassing the starting line, the player should grab the handlers of the two kettlebell

drumbells by running round fast (on the same 25 m distance); he should step over the returning line with one foot at least;

- after deliberately placing the dumbbells on the ground, the player should sprint round (identically to their performance at the beginning of the exercise), and once the finishing line surpassed (identical to the starting line in this particular case), the trial stops being counted down.

The exercise starts at the assessor's order, who is designated to count down the performance, which is assigned 2 minute timing. Starting from the stay-seated position, the military participant should hold the bar by jumping (with or without partner assistance), by using joint grip (one in supine and one in pronation). It is advisable for the player to keep his or her hands close, so that he or she would perform better, with the hand



Figure 5 Iron bar exercise (trial no. 5)

Trial assessment consists in turning the players' performance into points, as follows:

- for 60 points (at least) the player must run the entire 250 m distance within 30 minutes;
- for 100 points (the maximum the participant can get) within 1h 33 mins.

Such joint exercise contributes to the serviceman's capacity to have immediate reaction to both the enemy's direct and indirect fire, to set up an individual haven to shoot from prostrate position, or evacuate an injured serviceman from a military vehicle and transport him in a safe place.

Horizontal bar exercise stands for the fifth trial within ACFT (turning out to be the most difficult trial of the newly-designed test, especially for military women) and must be carried out after a four-minute break, counted down the very moment the fourth trial is completed. This type of exercise is professionally very relevant, being aimed at testing the military participants' strength under resistance, evaluating mainly upper muscularity.

The carried out movements will enable the military to fulfil all procedures in order to climb or jump over obstacles (such as a vertical wall, fence, etc.), to go up a latter/ rope or to transport a bergen aback on march. This exercise is aimed at maintaining vertical position of torso as long as possible, while shoulders and knees keep moving (up and down), without overbalancing the body vertically or horizontally.

grip in supination being more strained, hence it should be brought closer to the head. The player's body weight is carried by his or her arms which should be kept stretched from the elbow. In fact, the participant's entire body should be stretched and slightly curved, his or her legs kept close to each other, and toes kept straight and compact, without crossing them or bringing them in contact with the ground. At the beginning, the body will be perpendicular to the bar, but, once the performance starts, the alternative grip will determine the body to slightly rotate outwards.

The accurate exercise consists in the participant's pulling his or her knees up to the chest until they reach the elbows and then coming back to the initial position (both elbows must reach both knees or both thighs). If the participant's elbows are bent at the beginning of the attempt or if there is deliberate balance of the torso and legs to help any knee pulling up, the go will be off the record. The trial will stop when the military participant stops deliberately (getting off the iron bar), when his or her legs touch the ground on purpose, or when the two minutes are up. Any ground, line poll or iron bar contact by chance will not get penalized if the evaluator considers that the military participant takes no advantage of such manoeuvre.

Trial assessment consists in turning the participant's performance into points, as follows:



- for 60 points (at least) the player should carry out a go;
- for 100 points (the maximum the player can get) an aggregate of 20 goes is needed.

Resistance running on a 2 mile distance stands for the last trial within ACFT and is carried out after a five-minute break, counted down against the clock the very moment the iron bar exercise is completed. Running is aerobic assessment resistance and should be performed on (indoor or outdoor) athletics track or on a given track with artificial flat (macadam or concrete-made) surface, with precise establishment of starting and finishing lines, as close as possible to each other, if possible.

Intense aerobic effort capacity enables the body to recover fast in order to get ready and carry out various physically challenging tasks that may occur on military ground operations that involve immediate reaction: in close contact with the opponent, to get out of an ambush, to conduct amphibious assault or raid on foe's territory, etc. Resistance is an essential requirement so that the military would cope with regular tasks in modern battlefield, such as military actions that involve landing, patrolling or getting infiltrated in the foe's area, or any representative march.

Trial assessment consists in turning the participant's performance into points, as follows:

- for 60 points (at least) the player must perform within a 21 minute interval of time;
- for 100 points (the maximum the player can get), the player must perform in 13.30 min due time.

Three alternative versions have been established for the last trial, also aimed at evaluating the military participant's aerobic resistance that suffer from permanent health disorders, or various pathologic states that prevent them from running a 2 mile distance. Such alternative trials must be completed within a 25 minute interval, with the participant having the possibility to choose among 5 km fitness rowing, 15 kms fitness bike paddling, or 1km swimming in a pool (having minimal 25 metres length and minimal 1 metre water depth).

In order to pass ACFT successfully, the military must obtain 60 points at least in every trial among the 6 ones it includes (henceforth an aggregate of 360 points), with a maximal 600 point score a military participant can get within ACFT, since there is no extended scale to record any performance exceeding 100 points. Any potential

individual recommendation, the points and the results obtained will be recorded in an individual progress report which will be worked out in two copies, one assigned to the military participant, and the other copy to be attached to the military participant's portfolio.

"One of the main duties specialists in military physical education have (officers, NCOs, professors, trainers, instructors) is to work out physical education programs in accordance with the military personnel's kinetic development level and the missions he or she has to fulfil"⁷.

In this sense, specialists from the USA Army stated that the military must be trained not only to get familiar with the test tasks, but also to get trained to pass the test (with or without any equipment or material specific to the trials)⁸.

Thus, a training guide has already been launched⁹ to help the military to successfully get physically trained for the test. A unique program of physical education and a neutral process to measure the performance obtained by the military is the only physical education relevant measure in all military branches, since, inherently, the combat itself is neutral, irrespective of the combatants' age or gender. Within the larger framework, ACFT stands for cultural change that each Army must prepare for the upcoming combat. Committed leaders will be needed to understand and promote new physical standards, to instill the military a holistic life style (physical exercise being capable of improving health state and body harmony), which the Army desperately needs.

The USA Army released the information needed to apply ACFT two years before its implementation and constantly provided the military with on-line assistance with respect to how to get trained with and without specific equipment. Even if two years is more than enough for units to get prepared in order to pass ACFT, still, there were reports that say not all units got appropriate equipment to carry out training. This is the reason why similar improvised equipment was issued, which led to accidents among the military personnel.

This fact is at least strange since the iron bar exercise (to which all failures were assigned) is one that challenges mainly ventral muscularity (one accurate go being enough to meet minimal requirements), and the sit-up assessment trial within the former APFT was the only one to have



the same requirements common to both men and women (differentiated only by age; with minimal requirements in between 26-53 goes).

After close research, unofficial findings obtained by the military (and posted on-line) within the accommodation period with ACFT, have shown that 30% men and 84% women did not meet the requirements in at least one trial (particularly in iron bar exercise), which generated controversies regarding genre discriminations among women promoted by ACFT¹⁰.

In fact, ACFT is not aimed at setting up a tournament for the military participants, but determining all candidates to meet the minimal requirements and standards needed for the military to survive in battlefield (irrespective of circumstances) and join challenging military operations from a physical point of view. However, "women can make up for any physical disorder with more intense involvement, more attention and keener psychological sense"¹¹.

ACFT contributes to the Army turning the mere form into a state, changing a test with fewer requirements from women and elder military into a test focused on combat with minimal requirements, standardized on small scale. This unique standard represents the most effective way to measure physical fitness in combat and train subunits for the upcoming decisive operations, either independently or together with the allies, in any area and direction.

ACFT is aimed at testing all kinetic abilities (speed, strength, skillfulness, mobility and versatility), and the fact that the whole subunit must meet the same standard (irrespective of age and gender) is essential for group cohesion and physical endurance needed in fighting and winning in modern battlefield.

Conclusions

Military personnel's physical fitness consists in their ability to promptly meet the physical requirements for any combat or work duty to fulfil the mission and subsequently continue to cope with the modern battlefield circumstances in order to win final victory.

The newly-designed test to check fitness among the military personnel within the USA Army might be a huge step in the appropriate direction and it is interesting to see when a similar counterpart could be implemented in the Romanian

Army. Undoubtedly there is a better version with further research to be conducted, but this test is by far more effective to measure the kinetic ability level of the military (the capacity needed to join military operations), than the former one. Bearing in mind that contemporary military operations are not carried out with the military dressed in sports tracksuit, three years ago, the Canadian Armed Forces implemented an assessment test (called *FORCE Evaluation*) that states more exactly which is the individual's capacity of meeting/ surpassing minimal physical requirements typical of military service.

Thus, I concur that more and more armed forces within NATO should start a gradual process of substitution (the Romanian Army hereby included) of the current physical education system, mainly centred on kinetic ability development, with one based on a new mind-set regarding physical education, designed for the military to develop and reinforce their kinetic skills.

NOTES:

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