

THE IMPORTANCE OF PHYSICAL TRAINING IN THE MILITARY USING THE SANDBAG FOR FITNESS

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Functional training initially applied only in rehabilitation centers for war veterans has become very popular lately in the fitness community. You need to be able to perform physically, not just look good. Training using the sandbag for fitness forces the body to become stronger and more agile in different postures, it trains you to move more efficiently and to carry out daily activities more easily and efficiently. By means of physical exercises, you are forced to overcome any situation that you encounter in the military environment and, in order to improve this capacity, you must use training programs that imitate the activities of daily living.

Keywords: sandbag, fitness; physical exercises; fitness; training; education.

When we talk about maintaining our fitness, we can all be found guilty of the fact that, from time to time, we complicate ourselves and use training exercises that later prove to be less effective for the physical training of the military. Given the variety of options available in this regard, it is difficult not to be overwhelmed by something that is not suitable for meeting the objectives of military physical education through which the model of the fighter is achieved. The sandbag is a simple fitness accessory used for performing multifunctional exercises that

was not until the beginning of the last century that it was recognized as a legitimate form of physical training. There is ample evidence that the sandbag was used as a sports material, which capitalized on physical exercises in well-structured training, especially by Indian wrestlers who practiced Pehlwani¹ (a form of sports competition that arose through the combination of two established ancient melee styles: Malla-yuddha² and Varzesh-e Bastani³). Pehlwani comes from South Asia and is considered a complete form of fighting in India.



Figure 1 Different models of sandbags

Source: <https://www.ultimatebodypress.com>; <https://gymbox.de>; <https://www.menshealth.com>

help you tone all your muscles. When you see the benefits of sandbag training sessions and what it can do for your body, this training process may become your new preferred method of training.

Undoubtedly, physical training using sand-filled bags has been practiced since ancient times, but it

Fitness sandbags are still used today by athletes who practice a martial art or a contact sport, but more and more people in the field of physical education recognize that they are a very good tool for increasing fitness and performance sports, regardless of the motor activity performed.

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The Fitness Sandbag

When you want to replace dumbbells and dumbbells, the sandbag for fitness (sandbag) is the



most effective alternative. Similar to a cylindrical boxing bag, it has different grip and support options that help you work in turn the muscles you want to train and can be perfectly adapted to all types of training. This way, it offers diversity to the training and allows the performance of a varied number of exercises (lifting, throwing, gripping or balancing). Made of a quality vinyl material and filled with sand, the sandbag can have different sizes and weights, depending on the manufacturer. It is easy to use and helps you increase the intensity of classic exercises, being able to gradually develop fitness in the military (as you progress in training, you can choose heavier weights).

No matter what type of sandbag you use, bought from the store (probably more durable, may have extra features such as handles, needed for some exercises that involve them) or made by you (pay attention to the type of sand used in order to produce as little dust as possible), you should not let your budget influence any positive results, as the advantages and benefits of using a sandbag remain the same:

1. The load can be changed constantly because the weight is adjustable by adding or removing so-called filling bags. Performing exercises with a constantly changing load poses a serious challenge even for servicemen with a high level of physical training. Over time, by practicing this type of physical activity systematically and repeatedly, you will certainly acquire or improve a more efficient style of lifting materials, but attention must be paid to execution, because the sandbag will always punish a poorly executed technique;

2. Exercises performed during training sessions that use the sandbag for fitness have their applicability in real life. They can be used as a representation of another person, which is perfect for anyone involved in contact sports or for those who are part of public institutions of defense, public order and national security (army, police, fire, etc.).

3. Constantly, when you lift a sandbag, you improve your grip (of the whole hand) and work your forearms, because almost every exercise you perform requires you to grab and hold the sandbag. This is especially noticeable by the military who begin such training by the appearance, in the first days, of muscle fever in the muscles of the hands and forearms.

4. Sandbag training develops mental endurance as well as physical strength in the military. There are some sandbag exercises that can exhaust an athlete as quickly as an athletics-specific training session. In fact, just putting the sandbag in position or transitioning between exercises is a challenge in itself. All these things create a serious mental resistance, an ability of the mind to withstand any pressure constructively and to find quick solutions or to elaborate brilliant ideas.

5. All motor qualities will be developed with the help of exercises through which the body moves unrestrictedly (without limits) in all three plans of movement (sagittal, frontal and transverse). The sandbag allows evolution in all these plans, involves the whole body, and the demands take place both physically and mentally. This is an important aspect of sports training or the ability to perform daily tasks, but also a means of preventing injuries (or rehabilitation after certain injuries) and maintaining general structural health.

While body shape (there are three general typologies: ectomorphic, endomorphic, and mesomorphic), diet, and a number of other factors will dictate what an individual looks like, there are a number of defining elements (key competencies) that trainers present using sandbags:

1. Holding a sandbag for fitness develops amazing psychomotor skills (general grabbing and grabbing objects), especially if you use one without handles. And the tightening action is not only attributed to the muscles of the hands and forearms or wrists, but also to the shoulder joints (scapulo-humeral) and elbows which also stimulate a whole range of "tightening" muscles ("bear hug"). If the sport you practice or your daily activities involve performing strong grips (manual handling of materials – frequent physical activity in military operations⁴), then you need to train with sandbags.

The grip force is something that tends to decrease with age, and most military personnel do not attach importance to it, despite the fact that it is essential for everyday life. Physically preparing using the sandbag, you have no choice. Using the handles or sticking your fingers in the bag to catch it and get a good grip needed to handle it, will definitely increase your ability to hold and lift other objects in everyday life.

"Manual handling of materials can be defined as any situation involving the movement of objects



(vertically or horizontally) from one location to another using the body, especially the hands. This is done by lifting, transporting, supporting, lowering, pushing and pulling objects with your hands or body. Manual material handling is the most common physically demanding activity, common to most non-sedentary occupations, both military and civilian"⁵;

2. Once you get into a constant rhythm of training, work hard and respect the correct execution of exercises, the inevitable result of maneuvering the sandbag for fitness is an increase in muscle mass and strength (brute force). Look at this type of strength training, in which the muscles of the whole body develop, as a possible way of working and do not seek to limit yourself only to working out in the gym. It is possible to develop an efficient style of sandbag handling, but it will never be a technique to present yourself at an official strength competition (power lifting or strongman), because the sandbag does not allow you to apply the same biomechanical principles.

3. When performing an exercise in which you use regular dumbbells, you only need a few repetitions to catch the movement, which is not possible when using a sandbag for fitness, because its center of gravity will change permanently, due to the fact that the sand moves from side to side. Thus, every movement you will try during the training will come with its own challenges, an aspect that will attract you to the physical exercises with the sandbag. Every time you try to handle the sandbag, it will behave differently, forcing your body to be vigilant and react to challenges.

Lifting a sandbag that is in constant motion requires a constant balance of the body, which develops, like few other things, your stabilizing muscles. It should be noted that the human body does not have stabilizing muscles; this name comes from the description of what these muscles do. They act to stabilize a joint so that the movement we want to perform can be performed in a similar shape. Usually, these muscles are not directly involved in a movement, but they work to keep you balanced so that the primary muscles can do their job. You just cannot underestimate the balance and control needed to lift a heavy sandbag. Regular lifting of the fitness sandbag builds a strong and stable musculoskeletal system.

Many servicemen overlook the functionality and intensity that sandbags offer to training. Only

if you consider the different types and training options available to you, will you see clearly how beneficial such training can be. In this regard, we have listed just a few of the many benefits you will get using this form of training.

The basics of training, using sandbags for fitness

Just as you use most gym equipment or fitness equipment, you can use the sandbag as a weight that replaces traditional strength training options (dumbbells, discs, etc.). Using the sandbag, you can start training with the execution of standard strength programs (such as "Start Strength"⁶ or "Wendler 5-3-1"⁷), because it can be used perfectly for performing classic exercises, such as: kneeling, straightening, pushing from the chest to the supine position and "Clean and Press" (dumbbell style). But if you use the sandbag for fitness only in these two strength programs, then you will not benefit from the most important advantages that this training method can offer.

The sandbag is a variable and awkward load with "built-in instability". The farther this load is from your center of gravity, the harder you will have to work to stabilize it. Therefore, exercises such as sandbag straightening do not have that inherent factor of instability. Therefore, it is much better to focus more on performing "unique exercises", which will be much more effective than using traditional means to develop strength. This means a lot of work with the sandbag over your head and the use of working positions and sockets as diverse as possible.

The basic physical exercises using the fitness sandbag to be included in any military training program are:

- *Shouldering* is a relatively simple exercise in which you have to lift (using both hands) the sandbag from the ground (it is positioned between your legs) and place it on one shoulder. But you should not be fooled by the simplicity of the exercise because, if you do not focus on the execution technique to be correct and you will try to lift the bag using any means, then you may have medical problems;

- The style of dumbbells (*Clean and Press*) is a combination of two exercises that are performed one after the other and consists of lifting the bag from the bottom to the chest (at shoulder level),

then raising it above the head by stretching the arms up (pushing from the chest). The sandbag is one of the best tools to safely learn this complex movement and is the perfect tool to prepare any serviceman who wants to progress to execution with an Olympic bar;

- The military press (*Overhead Press*) is a physical action similar to the second part of the previous exercise with the difference that, this time, the grip on the bag is made from the side, and the legs must always be stretched, and consists in lifting the bag to the chest above the head, until the arms are in maximum extension;

- Moving *Bear Hug Load Carry* is the type of exercise for which the sandbag was designed for fitness. It consists in taking the bag in his arms, grasping it with his hands and transporting it on the determined distance/established itinerary.

to the basic motor qualities, and the handling skills of sandbags. These are:

- *Overhead Walking Lunge* with the bag over the head with the arms outstretched, and when stepping, the knee of the hind leg touches the ground. As variants, the bag can be positioned on the shoulders behind the neck or held tightly to the chest;

- *Rational Lunge* is an exercise performed from the standing position in which forward / backward (backward) bending is performed, while twisting the torso to the left / right (or alternately), holding the bag from the side with both hands;

- *Press-Out Lateral Lunge* performed simultaneously with bringing the bag from the chest forward, until the arms are stretched horizontally;

- *Windmill* consists of lifting the bag from the ground, with one hand, from the position sitting



Figure 2 Basic exercise using the sandbag for fitness
(a. Shouldering, b. Clean and Press, c. Overhead Press, d. Bear Hug Load Carry)

Source: <https://www.ultimatebodypress.com/>; <https://gymbox.de/>; <https://www.menshealth.com>

Lifting and transport, two of the tasks that involve the manual handling of materials, are among the most common physically demanding activities performed by the military.

For each of these exercises, you need to adjust your sandbag to a weight that is somewhat challenging, but at the same time allow you to perform the movements correctly from a technical point of view (it is very simple to remove/add a weight from/inside the bag). As you gain weight, you will notice that some muscles develop that you did not even know existed. These fundamental movements will provide you with a strong basis for the further development of resistance strength.

For the military with more experience in handling sandbags, I will list below some of the many exercises that can develop them, in addition

away, with the opposite arm raised vertically (and held in this position throughout the execution). The exercise can also be performed in the difficult version, in which the bag is held in the hand raised vertically above the head, and the movement is to touch with the other hand, without bending the legs, the tip of the opposite foot;

- Lifting from the ground (*Get Up*) is performed from the supine position, with the bag positioned on one shoulder and held only by hand on the same side, the movement consisting in lifting in the sitting position with the bag (all the time) on the shoulder and without touch it with the opposite hand;

- *Bear Hug Squat*. As variants, the bag can be positioned on one shoulder, above the head or on both shoulders at the nape of the neck;

• *Staggered Row* is done as follows: from a sitting position take a step forward with one foot, bend your torso at 45°, grab the bag of handles (which is on the ground in front of you) and lift until it touches the chest. When performing lifts

the elbows (flexion of the forearms on the arms) lift the bag to the chin, describing a semicircular arch, without move (as far as possible) the initial position of the elbows.

”Practicing physical exercises, regularly,

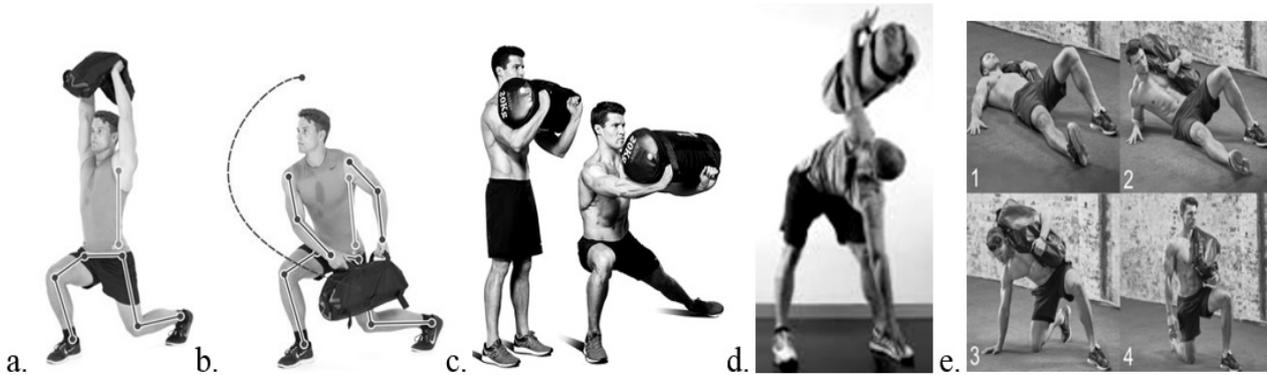


Figure 3 Exercise using the sandbag (a. Overhead Walking Lunge, b. Rational Lunge, c. Press-Out Lateral Lunge, d. Windmill, e. Get Up)

Source: <https://www.ultimatebodypress.com/>; <https://gymbox.de/>; <https://www.menshealth.com>

(repetitions), the torso and legs remain (as far as possible) motionless;

• *Front Loaded Good Morning* with the bag positioned on the chest and held with the arms wrapped around it underneath;

systematized and rational, translates into high physical performance, confidence in physical, intellectual and mental abilities, a quality level of life. Participation in physical training programs involves, on the part of practitioners, the display

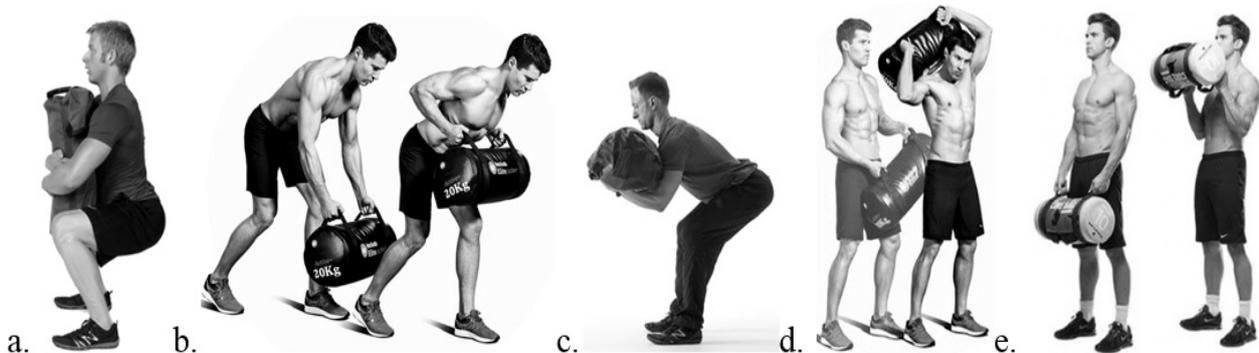


Figure 4 Exercise using the sandbag (a. Bear Hug Squat, b. Staggered Row, c. Front Loaded Good Morning, d. Around the World, e. Biceps Curl)

Source: <https://www.ultimatebodypress.com/>; <https://gymbox.de/>; <https://www.menshealth.com>

• Rotating the bag around the body (*Around the World*), which is held with both hands. The exercise can be performed from the sitting, kneeling or sitting positions;

• Bending with the sandbag (*Biceps Curl*) is performed as follows: from the sitting position, holding a sandbag in front of the thighs, by bending

of moral-volitional qualities (will, courage, etc.), consumption of material and human, physical and spiritual resources, combining the precision of actions with discipline in organizing a correct way of life and rational”⁸.

Training in which the military uses sandbags for fitness may not be the most advanced training



methodology, especially from a technological point of view, but it is certainly effective. It is these characteristics of sandbags (unstable center of gravity, changing shape, etc.) which are considered by many servicemen to be inefficient and problematic, that are the qualities that make sandbags so beneficial for training. In addition, you can exercise anywhere and anytime using the fitness sandbag (at home, in a gym, outdoors on top of the mountain or at sea, inside the container when you are on a mission, on a military ship or on a military transport plane, etc.), as long as you have it with you.

Nowadays, when time is so precious, we have to adapt our workouts where they can be done, and the sandbag is an excellent solution. It requires the entire muscles of the body, reducing the time devoted to the training session, and its small size is perfect for easy storage between workouts or transport to another location. And because you do not need special equipment or a sports instructor, it is definitely cost effective.

Unless the bag is full of sand, every time the serviceman tries to handle it, there will be an uneven weight distribution inside it that will create instability. This will cause activation of the abdominal and lumbar muscles in particular to stabilize and control the movement of the bag. Restoring balance through various muscle contractions will not only lead to a stronger body but will teach the serviceman to perfect his perception of himself (proprioception).

The most obvious benefit of training in which sandbags are used seems to be simplicity. You do not have to invest money to benefit from the services of a sports instructor or read dozens of pages of methodology or biomechanics books to understand the basics. Of course, you have to pay attention to the correctness of the execution technique and the posture of your body during the repetitions, but half of the fun of training is to figure out for yourself how to handle the bag.

When it comes to training with sandbags for fitness, there is a great diversity of motor actions designed and programmed in order to achieve the objectives of military physical education, which is why it is difficult to get bored of this type of training. Not only are there many different exercises you can try, but when they start to get boring, you can change the position of your hands when

gripping the bag (grips) or you can adopt other body positions (or parts of the body) to increase difficulty. Indeed, you will be limited only by your imagination.

Conclusions

The fitness sandbag is often seen as a "poor man's choice" for strength development, which is why there is a clear-cut distinction between the military who use it and those who train with traditional sports equipment. For some reason, we rarely find people constantly working on both ends of the spectrum. In conclusion, I would like to suggest that you should not give up the classic workouts carried out in a gym and live a sports life dedicated exclusively to the sandbag. Certainly, you can use exercise with the sandbag as the main form of strength training, if this suits your lifestyle. But I think that using the sandbag during training sessions to complete your traditional strength training (in which you use dumbbells, Olympic bars, kettle bells, etc.) will increase the body's ability to make long efforts.

The sandbag can be used to mimic a series of movements that we usually perform, developing both large and small muscle groups, preventing injuries and encouraging maximum physical performance. In part, these are the reasons why the sandbag is such a dynamic training tool. With a single sandbag, you can get a great full workout for the whole body when it is used properly. So get your hands on a fitness sandbag and start making progress in increasing your fitness level, improving strength and functional movements, as well as gradually increasing mental endurance (to get out of the comfort zone easily, to see pain as a reward for overcoming limits, to embrace challenge, to face opponents with serenity, etc.).

NOTES:

1 <https://masterfighting.com/pehlwani>, accessed on 21.04.2020.

2 <https://healthahoy.com/ancient-sports/malla-yuddha>, accessed on 21.04.2020.

3 <http://www.ferdowsihotel.com/Blog/PostDetails/33/Varzesh-e-Bastani-Iranian-ancient-sport>, accessed on 21.04.2020.

4 G.F. Băițan, *Romanian Army servicemen's physical training in the framework of NATO integration*, "Carol I" National Defence University Publishing House, Bucharest, 2019, p. 175.

5 [SHARP, M.A. & Co.], A database of physically demanding tasks performed by US Army soldiers, Natick,



MA: US Army Research Institute of Environmental Medicine, 1998, p. 106.

6 <https://startingstrength.com/get-started/programs>, accessed on 23.04.2020.

7 <https://www.lift.net/workout-routines/wendler-5-3-1>, accessed on 23.04.2020.

8 G.C. Ciapa, *Romanian Army servicemen's physical training in modern conflict*, "Carol I" National Defence University Publishing House, Bucharest, 2018, p. 80.

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