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## Chapter **1**

# Army Physical Fitness: The Cornerstone of Combat Readiness

**T**he United States Army needs high-speed, low-drag soldiers manning its ranks, and until 2020, it measured physical fitness by using the Army Physical Fitness Test, or APFT. But change is inevitable in the Army, and the Army Combat Fitness Test (ACFT) is now the standard by which all soldiers, male and female, are judged. Your ACFT score can determine whether you qualify for continued service in the military, and, like the APFT, it's administered at the unit level.

So why the change?

The Army recognized the need to measure overall fitness rather than a soldier's ability to do push-ups, sit-ups, and a two-mile run. Although those exercises are good for measuring chest strength, arm strength, and cardiovascular endurance, they're not necessarily indicators of how well a soldier can perform on the battlefield. (And don't get your hopes up. That two-mile run didn't go anywhere. It's the last event on the ACFT.)

The ACFT uses six events to measure a soldier's functional fitness. Each event is linked to common warfighting tasks, such as carrying other soldiers out of harm's way and climbing out of sticky situations. The ACFT standards are outlined in a "living document," which means they can (and most likely will) change as the Army identifies new challenges and comes up with better solutions.

## Saying Goodbye to the Old APFT

Fitness training has been on the Army's radar for years — but not from the very beginning. Seven decades after General Friedrich Von Steuben's Blue Book laid out the drill and ceremony the Army uses today, West Point implemented the first physical fitness program for its cadets. The program included gymnastics, calisthenics, swimming, and fencing. Six years later, cadets were assessed for their performance on a 15-foot wall climb, a 5-foot horse vault, a 10-foot ditch leap, an 8-minute mile run (or an 18-minute two-mile run), a 4.5-mile walk that a cadet had to complete in an hour, and a 3-mile ruck with 20 pounds of gear, arms, and equipment in under an hour.

The Army scrapped the whole physical training (PT) program in 1861 when the Civil War started, but in 1885, the Army hired a new Master of the Sword, Lt. Col. Herman John Koehler. Koehler's *Manual of Calisthenic Exercises* became the first Army-wide physical training manual. In 1920, the Army re-implemented its testing requirement. Soldiers had to successfully perform a 14-second 100-yard sprint, an 8-foot wall climb, a 12-foot running jump, and a 30-yard grenade throw as well as complete an obstacle course.

The test continued to evolve with the publication of Field Manual 21-20 in 1941. It's the same FM in use today, but the events (and the test's name) changed every few years until 1980, when the APFT you know and love became the standard.

Now that the creators of the last evolution have retired, the APFT has gone into retirement, too. (No word yet on whether it's buying a red sports car, though.) Its replacement: the ACFT. Like many past evolutions of Army physical fitness testing, the ACFT includes multiple events designed to represent how well you can perform on the battlefield.

## Sculpting a Fit and Lethal Force

The Army knows that military operations have become more complex. You're not riding a horse into battle with your sword drawn. You're up, they see you, you're down. You're wearing and carrying 80-plus pounds of gear through rugged

mountain terrain, setting up OE-254s, performing HAZMAT operations in Level A, or emptying truck after truck full of supplies on a remote operating base.

Push-ups, sit-ups, and a two-mile run just couldn't tell the military that you could perform under those rigorous conditions. In fact, *all* the APFT told the Army was that you could do push-ups, sit-ups, and a two-mile run. The APFT was designed to have 40 percent predictive power for performance in combat. But today, it's all about functional fitness — and assessments indicate the ACFT has 80 percent predictive power for battlefield performance.

Training servicemembers for the ACFT (and requiring the test itself) is the Army's way of improving soldiers' physical fitness, reducing preventable injuries, enhancing stamina, and contributing to enhanced unit readiness.

The ACFT is required for every soldier. Age and gender don't matter. Like my drill sergeant at "Relaxin'" Jackson told me, "You're an infantryman first." That means the Army wants assurance, whether you're an 18-year-old male private or a 55-year-old female four-star, that you have muscular strength and endurance, power, speed, agility, cardiovascular endurance, balance, flexibility, coordination, and high-speed reaction time.

Is the ACFT harder to pass for some soldiers than it is for others? Yes. Does that mean you may need to work harder than your battle buddy? Absolutely. But that's what this book is for. I can't go to the gym with you, but I can show you what you need to do to meet the Army's vision: "To deploy, fight, and win our nation's wars by providing ready, prompt, and sustained land dominance by Army forces."

The bottom line is that the Army is a standards-based institution, and those standards are in place to meet the requirements of combat operations.

## HOW MUCH HOMEWORK DID THE ARMY DO?

The Army developed the ACFT over 20 years — it wasn't a fly-by-night decision. After creating physical readiness requirements for all soldiers and conducting a specific study on physical demands, the Army zeroed in on ten components of physical fitness necessary for warfighting. The military brass consulted with military fitness leaders from the United Kingdom, Canada, Australia, France, and the Netherlands, as well as fitness experts from universities and reps from government agencies to put together its latest evolution of physical fitness testing.

# Picking Up Performance Basics

The ACFT challenges you to complete six events, each designed to test one or more fitness components. You need to prepare for these events to max out your ACFT score; I go into details on the fitness components in the following sections:

» **3 Repetition Maximum Deadlift:** The 3 Repetition Maximum Deadlift (MDL) represents your ability to safely and effectively lift heavy loads from the ground, bound, jump, and land. This event tests how well-conditioned your back and legs are; the better-conditioned those muscles are, the less likely you are to become injured when you have to move long distances under heavy load.

*Fitness components: Muscular strength, balance, and flexibility*

» **Standing Power Throw:** The Standing Power Throw (SPT) represents your ability to throw equipment on or over obstacles, lift up your battle buddies, jump over obstacles, and employ progressive levels of force in hand-to-hand combat. It tests how well you can execute quick, explosive movements.

*Fitness components: Explosive power, balance, range of motion, and flexibility*

» **Hand Release Push-Up – Arm Extension:** The Hand Release Push-Up – Arm Extension (HRP) represents your ability to withstand repetitive and sustained pushing that's often necessary in combat tasks (like when your driver gets the HMMWV stuck in the mud and every vehicle in the convoy is mysteriously missing a tow bar). This modified push-up event tests your chest and core strength.

*Fitness component: Muscular endurance*

» **Sprint-Drag-Carry:** The Sprint-Drag-Carry (SDC) represents your ability to accomplish high-intensity combat tasks that last between a few seconds and a few minutes, such as building a hasty fighting position, reacting quickly in a firefight, carrying ammo from one place to another, or extracting a casualty and carrying him or her to safety. The Sprint-Drag-Carry tests your strength, endurance, and anaerobic capacity.

*Fitness components: Agility, anaerobic endurance, muscular endurance, and muscular strength*

» **Leg Tuck:** The Leg Tuck (LTK) represents your ability to carry heavy loads, climb over walls and other obstacles, and climb or descend ropes. The strength required for this event can help soldiers avoid back injuries. (**Note:** Throughout this book, I often refer to this event by its abbreviation, LTK, to help distinguish it from the plain old exercise known as the leg tuck.)

*Fitness components: Muscular strength and endurance*

» **Two-Mile Run:** The Two-Mile Run (2MR) represents your ability to conduct continuous operations and ground movements on foot, as well as your ability to recover quickly in preparation for other physically demanding tasks, like reacting to enemy contact or carrying ammo from Point A to Point B.

*Fitness component: Aerobic endurance*



TIP

The ACFT doesn't offer age brackets for scoring like the APFT did. That means whether you're 18 and fresh out of Basic Combat Training or you're a seasoned soldier with plenty of combat experience, you're held to the same standard. The aim of this book is to get you to meet or exceed the standard so you can enjoy a full and illustrious (and injury-free) military career.

## Range of motion and flexibility

The Army uses the ACFT to test soldiers' range of motion and flexibility. Because both these things are an indicator of combat fitness — and because the Army needs combat-ready warriors on the battlefield — these test events can help determine a soldier's overall fitness. The fitness gurus behind the scenes know that having a good range of motion also helps prevent injury, so the Army wins twice: It gets the combat-ready soldiers it needs *and* keeps servicemembers fit to fight.

The Army is quick to point out that training for the ACFT doesn't put you at a higher risk for injury, provided that you train properly and don't overdo it. New training resources, like the updated Field Manual 7-22, *Holistic Health and Fitness*, include guidance on minimizing a soldier's risk for injury while preparing for the test. See Chapters 7 and 8 for exercises to help you improve your range of motion, and Chapter 9 for stretches that can improve your flexibility.

## Balance

Balance is an important part of the ACFT, and you use it in the 3 Repetition Maximum Deadlift and Standing Power Throw. The Army wants to see how well you can resist forces that cause falls (like throwing a medicine ball behind your head). Your core plays a huge role in balance, so these events show the military brass how well-conditioned your back, abs, and legs really are. Strengthening your core is just good business anyway. A strong core contributes to healthy mobility later in life; just as importantly, it makes fitting into your uniform and falling into the right spot on the Army's height and weight chart easier. Wobble over to Chapter 8 for ideas on improving your balance to max out your ACFT scores.

## Agility

Slow is smooth, and smooth is fast. You've probably heard that at least a dozen times throughout your military career, and it applies to your mentality as well as your body. Modern combat situations require mobility and agility, and you see these two key abilities tested on the ACFT. Technically, *mobility* is the ability to move freely and easily, and *agility* is your ability to do so quickly. The Army needs to know that you're able to move like a warrior. You don't have to be a professional athlete, but you do have to meet Army standards.

Most notably, the ACFT checks out your mobility and agility in the Sprint-Drag-Carry event, where you have to perform three distinct exercises quick, fast, and in a hurry. I cover those in Chapter 2.

## Explosive power

Movements that require maximum (or near-maximum) power output in a short amount of time tap into what fitness pros call *explosive power*. You see professional sports players use explosive power every time you watch a game; a quarterback uses it when he throws the ball, an outside hitter uses it when she spikes a volleyball, and wrestlers use it when they lift an opponent. The ACFT measures your explosive power in the Standing Power Throw, but that's not the only event that requires it — you use explosive power during the Sprint-Drag-Carry, the Two-Mile Run (if you sprint to shave a few seconds off your time), and maybe even during the LTK.

## Muscular strength and endurance

Remember the difference you and your family noticed in your physique after you graduated from Basic Combat Training (BCT)? When you joined the military, you may have already been strong — but you weren't "Army Strong." The ACFT measures your muscular strength and endurance in ways that you may not have trained for in BCT, and its demands are serious. It checks your muscular strength in four key areas: your legs, your core, your chest, and your upper back. You see muscular strength and endurance testing on the 3 Repetition Maximum Deadlift, Hand Release Push-Up – Arm Extension, Sprint-Drag-Carry, and LTK.



REMEMBER

Muscular strength and endurance are related, but they're not the same thing. You need endurance for tasks like lugging fuel cans around the motor pool, while strength ties into the maximum amount of weight you can lift one time. (In the gym, it's called a *one-rep max.*)

# Aerobic exercise for cardiovascular endurance

The Army measures your aerobic fitness through its old standby, the Two-Mile Run. Though you're unlikely to have to run for two miles in a combat situation (and you're even more unlikely to have to do it in your PT uniform), you are likely to engage in aerobic exercise — cardio — on the battlefield. The Army needs to know you can hack it, and it figures out what your endurance is like by making you run. Getting a good picture of a soldier's aerobic fitness takes about 12 minutes of continuous exercise, and most people take longer than that to cover two miles. (Personally, I'd rather the Army just made me run for 12 minutes to see how far I get, but so far, they haven't been very receptive to the idea.)

Aerobic exercise requires your heart to pump oxygenated blood to your muscles. Your heart has to beat faster to keep up with your movement, and your body has to figure out how to balance itself out until you stop the exercise. Check out Table 1-1, which gives you a ballpark range for where your heart rate should be in beats per minute (bpm) during moderate and vigorous aerobic exercise. The American Heart Association doesn't distinguish between ages 20 and 30 (that's why you don't see a row in the table for 25-year-olds) because people in that age bracket typically fall into the same heart rate zones. Chapter 8 shows you how to take your cardio fitness up a notch or two, so if that's an area you need to improve, you can find suggestions there.

**TABLE 1-1**

## Heart Rate Zones

Age	Moderate Exercise	Vigorous Exercise
20	100 to 170 bpm	200 bpm
30	95 to 162 bpm	190 bpm
35	93 to 157 bpm	185 bpm
40	90 to 153 bpm	180 bpm
45	88 to 149 bpm	175 bpm
50	85 to 145 bpm	170 bpm
55	83 to 140 bpm	165 bpm
60	80 to 136 bpm	160 bpm

## Anaerobic exercise for short-term muscle strength

Anaerobic exercise is high-intensity, high-power movement that requires your body to expend a lot of energy in a short period of time. Things like weightlifting, jumping rope, sprinting, and high-intensity interval training (HIIT) are examples of anaerobic exercise; if you take these movements to the battlefield, you're looking at carrying a battle buddy to safety, running ammo cans between one truck and another, or throwing equipment over a wall so you can get cover from enemy fire. This kind of exercise pushes your body to demand more energy than you'd need for aerobic exercise, like running, and it relies on energy sources stored in your muscles.



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*Aerobic* means “with oxygen,” and *anaerobic* means “without oxygen.” Sure, you still need oxygen to perform anaerobic exercises, but not in the same way that you do for aerobic exercises. Aerobic exercise uses oxygen to produce energy so your body can use fat and glucose for fuel, while anaerobic exercise can only use glucose for fuel. Glucose is available in your muscles for quick, short bursts of movement, and you get it through a process called *glycolysis*.

The Sprint-Drag-Carry is a prime example of how the Army tests your anaerobic fitness. Check out Chapter 8 for a wide range of exercises that can boost your anaerobic power.

## PRT: Love it or Hate it, It's Here to Stay

The Army's Physical Readiness Training, or PRT, was designed to prepare soldiers for the ACFT. Many PRT drills have migrated into ATP 7-22.02, *Holistic Health and Fitness Drills and Exercises*. These drills, now called H2F (a complete revision of PRT), are all about functional fitness, which uses drills, exercises, and activities that are specific to performing certain tasks. Army Field Manual 7-22 and Chapter 7 of this book both contain all the info you need on H2F, but save it for 0630; to max out your ACFT, you probably need to go above and beyond the Army's maintenance PT plan.

H2F covers preparation drills, core exercises, conditioning drills, and a whole host of movement training exercises that can help you perform well on the ACFT. But the best way to make sure you're ready for all six events is to hit the gym for some serious training after work or on the weekends — and if you're a little nervous about passing a certain event (I'm looking at you, LTK), that's where you need to focus.

## ARMY WELLNESS CENTERS: FREE (AND SMART) TO USE

If you live near or on an Army installation that has a Wellness Center, you're in luck. These often underutilized facilities are designed to help soldiers, family members, retirees, and DA civilians zero in on the best possible health plans. They're run by U.S. Army Medical Command, overseen by the Army Public Health Center, and staffed with health educators who can perform all kinds of evaluations to help you reach your fitness goals. From Bod Pods that measure your body fat content, VO<sub>2</sub> max testing, and basal metabolic rate evaluation to individualized meal plans and smoking cessation programs, Army Wellness Centers are located at nearly every base in the United States and many overseas. The pros at these centers can help with stress management, good sleep habits, weight management, and workout plans, too. You don't even need a referral — all you need to do is call and set up an appointment.

## Understanding How the ACFT Fits into Your Army Role

You have to pass the ACFT. If you don't, your career is in jeopardy. That's not doomsday talk; if you fail, you pick up a flag, and a flag suspends favorable personnel actions, like promotions, awards, schools, and others. Even worse, Army Regulation 600-8-2 says that if you're flagged for ACFT failure, your permanent change of station is at your commander's discretion (and that's *really* bad news if you're excited about a PCS because you're on orders to Schofield Barracks or Stuttgart). Finally, the Army can administratively separate you from service for ACFT failure.

If you have a physical training profile from your medical provider, you get a shot at alternate events on a modified ACFT (I cover those in Chapter 2). However, you still have to pass the 3 Repetition Maximum Deadlift, the Sprint-Drag-Carry, and your alternate aerobic event. If you don't, you're facing the same consequences as soldiers who fail the regular ACFT.

### Making the grade



REMEMBER

Every soldier is held to the same standards on the ACFT. The grading scale doesn't distinguish between males and females, and you don't get a break because you're older than your battle buddy. The days of knocking out a couple of dozen push-ups and sit-ups before shuffling around the track for 18 minutes are gone — now, it's all about whether you can keep up with your teammates.

Every job falls into one of three physical demand categories. For example, the infantry has the highest minimum standards. Other MOSSs, like Chemical, Biological, Radiological and Nuclear Specialist have the lowest minimum standards. Some jobs, like Parachute Riggers and Water Treatment Specialists, are somewhere in the middle. See Chapter 4 to find out how the test is scored, as well as what physical demand category your MOS falls into.

## Training on your own time — and helping your team

To improve your ACFT score, you have to put in the work. That means hitting the gym after COB and on weekends, or doing small-but-mighty exercises while you're at work or in the field. But there's an upside (other than passing the test, that is): Creating a PT plan for yourself and your team, squad, or platoon that results in a 100 percent pass rate makes a great counseling or evaluation report bullet. (I promise I won't tell anyone that you lifted some ideas from this book.) Check out Chapter 26 for tips on maxing out your score, and head over to Appendix A for a blank workout calendar you can use to set yourself — and your team — up for success.

## The Army Performance Triad

The Army's Performance Triad, or P3 for short, includes sleep, activity, and nutrition. Your daily routine in these three areas can either increase or decrease your physical and mental performance, which ties into your unit's performance. P3 is important to the ACFT, too, in these ways:

- » **Sleep:** The Army recognizes that adequate sleep is critical to mission success, even if it's tough to implement. Getting enough rest while you're training for the ACFT and immediately prior to taking it is incredibly important — it determines how well you build strength and endurance, how quickly you recover, and even how you perform on short notice.
- » **Activity:** The ACFT measures your physical fitness level and how well you're likely to perform on the battlefield, and training for it is critical. Physical activity improves your mood, makes you live longer, and helps keep your mind clear so you can make good choices.
- » **Nutrition:** The Army isn't testing whether you're vitamin D-fortified on the ACFT, but putting the right fuel in your body can help you perform your best. The right foods can increase your energy and endurance, shorten the recovery time you need between activities, improve your focus and concentration, and help you look and feel better, too.