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## The History of the US Army's Physical Fitness Testing

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**The History of the US Army's Physical Fitness Testing**

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## **Abstract**

The Army organization has and has always had the foundation of physical fitness. Dating back to 1906, fitness has remained a baseline for soldier readiness. The fitness testing has changed and adapted to the status of the Army, the resources, technology, and tactics used. This includes, but is not limited to wartime versus peacetime, draft force into volunteer force, and the complete integration of women into the force. It is apparent that the physical fitness knowledge of society versus the knowledge of military varies based on the time, and this has influenced the overall fitness of Americans. All the fitness tests have led to the current combat fitness test that is newly implemented and is still being changed. Physical readiness in the United States Army depended on the historical context of its time. Furthermore, Army physical readiness reflected American society's knowledge of health and fitness.

*Keywords:* Fitness, draft, volunteer-force, Army, peacetime, wartime, test, America, readiness, knowledge, research, history

The army defines physical fitness as, “the ability to function effectively in physical work, training, and other activities, while still having enough energy left over to handle any emergencies that may arise” (War Department, 2016). Maintaining a high level of physical fitness has remained a cornerstone in carrying out the Army’s missions for decades. Over time, as knowledge is presented, the army adapts its physical training and testing to meet the needs of the battlefield. The adaptations of these physical standards have enabled the army to maintain the relevancy of its combat force. The army has modified physical fitness testing many times since the early 1900’s, each time bringing innovative knowledge, changing physical demands, and varying results.

### **1906- First Army Wide Fitness Test**

The first recorded Army wide fitness test was in 1906. This test required the infantry to conduct weekly ruck marches and 18-mile movements on horses for artillery and cavalry units. The infantry also had a three-day test that consisted of a 45-mile ruck. The artillery and cavalry units also had a three-day test, which was a 90-mile ride (Shaul, 2015). During this time, the US military was involved in the Philippines in The First Battle of Bud Dajo. The relevance of the first fitness test was the first standardized test, a standard for each soldier to determine if they were fit to fight. The reason only these types of units (cavalry, infantry, artillery) were being tested is because that was what the Army was made up of at this time. There was not nearly the diverse number of jobs in the Army then that there are now. This fitness test was realistic and applicable to the engagements that the Army was currently in, and in this case, it was the Philippines.

A major engagement that the Army was involved in around mid-1906 an invasion of Cuba. Under seven thousand troops total were sent to Cuba, but those that were included about

half from the cavalry regiment and half from the expeditionary brigade. This explains why there was only one fitness test, but it was not a functional test unless you were a part of the job components listed above. President Theodore Roosevelt was the president of the United States currently and it was his call to intervene with the conflicts in Cuba. Roosevelt stated in the early 1900's, "The readiness and efficiency of both the Army and Navy in dealing with the recent sudden crisis in Cuba illustrate afresh their value to the nation. This readiness and efficiency would have been very much less had it not been for the existence of the General Staff in the Army and the General Board in the Navy; both are essential to the proper development and use of our military forces afloat and ashore" (Roosevelt, 1898). For the size and composition of the Army in 1906, the Army wide fitness tests proved to be sufficient.

In 1906, the Army was composed of a very small standing force. The fitness test given was specifically for the infantry, artillery, and cavalry units. These were the only units that the Army utilized in Cuba and were also the only units with fitness testing. This more than likely was correlated because the fitness test mimicked what was expected of soldiers overseas when involved in engagements. This test was also implemented directly for the engagements that the US was in during the invasion of Cuba (Military Wiki, 2013)

### **1920- First Army Training Manual: "The Army and the Reserve Officers Training Corps"**

In 1920, after World War I (WWI), "The Army and the Reserve Officers Training Corps" was written by Joseph E. Raycroft. World War I was a time when several major countries were at war together due to the assassination of an archduke. 65 million men, some from every continent fought in this war in Europe. The U.S. stepped in to assist allies late in the war and by joining the war, it allowed America to rise as a world power and rise out of the Great Depression (Stewart, 2010).

After this war, Raycroft became known by the Army. His credentials for the Army publication mentioned were “Professor of hygiene and Physical Education, Princeton University; Member of War Department Commission on Training Camp Activities, and Chairman Athletic Division; Member of American Physical Education Association; Member of Society of College Directors Physical Education; Member of Athletic Research Society; Member of National Institute Social Science, etc.” (Raycroft, 1920). The Army used his training recommendations after WWI specifically for fitness, and while this was his only document of his adopted by the Army, he was still given jobs by the Army to research soldiers from other countries after. The army also utilized him to assist in training during the second world war almost twenty-years later.

Although he did much work for the servicemembers, his interests were much bigger than solely the Army. Information on Joseph E. Raycroft can be found on the Princeton website titled, “Joseph Raycroft Papers, 1888-1953”. The papers state that he was a professor at Princeton University and the University of Chicago. He started his college profession as an NCAA basketball coach and was very successful coaching in Chicago. While at Princeton, he became the chairman of the Health and Physical Education Department. After being a sports coach at the University of Chicago, he found an interest in the focus on injury prevention for athletes and in 1933 he wrote “The Prevention and Care of Athletic Injuries” while working for Princeton. Following that publication, he wrote “The Inter-relationships of Health and Physical Education” in 1939 (Raycroft, 1953).

“The Army Reserve Training Corps (1920)” became the Army training manual for combat readiness at this time. In writing this book, the author used knowledge from the previous war to update the training manual used previously to prepare soldiers for combat. Raycroft also

used his knowledge in physical education, sports medicine, and injury prevention while drafting this manual that would be the first written guidance on fitness readiness in the Army. This book was written in 1920 and included the purposes of work and physical training: bearing, mental and physical control, ability in personal combat, and all-around physical efficiency (Raycroft, 1920). All-around physical fitness included a qualifying test of a run, jump, climb, hand grenade throw, and an obstacle course which mimicked the tasks that soldiers were expected to excel at to succeed in real combat.

On top of the quantitative test, he also wrote a recommended training plan that included rigorous training for all soldiers, mandatory daily one-hour trainings for combative and one-hour for physical efficiency training. The book emphasized keeping variety and interest while training to keep soldiers involved to prevent them from being homesick when on the front lines for long tours of duty (East, 2013). Just as he intended to motivate his students as a college professor and coach, he did the same with his army training plan. Raycroft gave the first quantitative physical outcome objectives for soldiers (fitness testing standards for the qualifying test). This was the first fitness plan that focused on mental and physical preparation for soldiers. His background in physical education and injury prevention allowed this document to be a reliable source for the Army to use for training.

A draft in the words of Major Dan (2013) is “also known as “conscription,” the United States has used the draft to compel military service in times of national emergency (war or imminent war) starting with the American Revolutionary War”. All men between the age of 21 and 31 were required to sign up for the draft in 1917 for WWI. This means that when the Army needed troops, they would randomly select men to fight. This was a non-negotiable ask from the Army and if someone declined, they would most likely be thrown into military prison. The draft

was necessary in the 1900's for WWI because the president was requesting one million troops to support the war and did not have a current large active army. During the draft for WWI, approximately 1/3 of men were determined physically "unfit" to serve in the Army. This alarmed the Army because it showed that among the civilian population, the drafted soldiers most likely mimicked the overall fitness of society.

At this time, it was stated that the Army had more knowledge of physical fitness than the civilian population in "A Historical Review and Analysis of Army Physical Readiness Training and Assessment", "Had the general public profited by the knowledge and experience of the Army in physical training it would not have been necessary, when the call for service in the Great War came, to discard one third of the potential manpower because of physical disability" (East, 2013). Meaning, that the military had this knowledge of fitness, but was unable to utilize it due to the Army being made up of civilians. This was particularly difficult to standardize fitness among soldiers during this time because the Army was mostly an all-draft force. The standing Army in the early 1920's was a small one.

In the 1920's there was more knowledge possessed by the army than what was known the mass majority. The army also did not have enough soldiers to fight a war. Due to this, the army issued a draft. Basically, the Army was taking civilians and turning them into soldiers to have enough combat power to be an effective force. During this period, fit men were not commonly drafted because most of the U.S. population was not "fit" due to lack of knowledge of fitness and the extended time of lax peacetime. It was the army's job, using Raycroft's manual to transform civilians into war fighting soldiers. Because this was a war time for the U.S., the Army was prioritizing fitness because they were accepting the challenge to turn civilians into soldiers to support the allies in the war.

## **1920-1940 - Effects of Peacetime**

Between 1920 and 1940, the United States was not involved in any major engagements. Up until this point, the fitness tests were specific for the current conflicts that the Army is engaged in. In this gap was also the Great Depression. While most of society was unemployed and had little money, the government was also affected by this. With the entire US economy at an all-time low, the Army also took a hit. The federally funded US Army did not have the funds to put soldiers through training or to maintain a standing Army.

As history shows, peacetime, or a period where there is no war, is usually a time where the U.S. military became lax and lazy. This was one of those times where this occurred in America. Wars up to this point were fought by Americans with a mainly drafted force. In most cases, there were more drafted soldiers than volunteer which made it difficult to regulate any fitness among a force because it had not been formed yet. Meaning when there were no wars going on, there was not a large standing Army that was constantly being trained in preparation for upcoming conflicts.

When the United States would enter a war, they would rely on troops to come from the draft. Once they enlisted soldiers, they would begin training them and a lot of times the initial entry training (IET) would take these unfit civilians and turn them into soldiers that were fit to fight. Unfortunately, not many came into the Army in good shape, so it was the Army's job to not only train these soldiers but have the knowledge and means to prepare them physically on top of tactically. During the Army's engagement in wars, a soldier is put through rigorous training that only halts when the war ends, or they get discharged from the Army. Therefore, the Army tends to be more "unfit" during peacetimes because they can only regulate this type of training when there is a draft (when there is a national emergency or a war). In the future, the Army will

learn from mistakes and attempt to make changes that will overall make the Army and society more combat ready even in peacetime.

In 1940, the Burke-Wadsworth Act mandated the first peace time draft. It brought to light that there were a higher number of unfit candidates compared to the previous draft, and that the current basic training was not effective in transforming civilians to soldiers, and they needed more time to adequately prepare soldiers for war. During this conscription, out of the first two million men, one million were rejected for service. The Army was searching for men who did not need weeks of physical training to be physically fit because there was a war soon and using weeks to get soldiers in shape was a waste of valuable time. With the number of fit soldiers coming in, the Army had to make a change to efficiently train draftees or there would not be an ample number of soldiers ready to fight in the war. This led to a new field manual on physical fitness to be published.

1920-1940 was a unique time due to the Great Depression and the time between world wars. It was specifically unique for the military. In times where the country is at peace, the Army tends to become more lax because there is not a certain conflict to prepare for and there is not a large standing force to standardize fitness among. A result of this was the Burke-Wadsworth Act that enabled a peace time draft to build up the numbers in the ranks to attempt to fix problems that the Army faced.

### **1941- Field Manual (FM) 21-20**

In 1941, Field Manual 21-20, “Basic Field Manual Physical Training” was published by the Army. As said before, fitness has remained a baseline for soldier readiness and in 1941, the War Department stated in FM 21-20, “Further, the complexities of modern warfare require so

much technical training for the soldier that all too frequently no time is allotted for physical training; yet the soldier who possesses great technical skill but is unable to withstand the rigorous life demanded is of questionable value. Hence, physical training must be an integral part of every training program.” In other words, a soldier is not of value to the Army if they are not physically fit. The Army requires a baseline for each soldier to be physically fit. There are many attributes that you do not have to have to be a soldier but being physically fit is non-negotiable. This document published was a means to transform unfit civilians into combat ready soldiers in the span of basic training. This was a solution to the wasted weeks of time remediating physical fitness deficiencies, a big problem the Army faced. FM 21-20 was the first field manual that was devoted solely to physical fitness.

FM 21-20 (1941) was specified for WWII physical readiness training. The authors of this document created a way for commanders to assess the physical readiness of their forces. This assessment was a combat obstacle course test (OCT). It included seven obstacles and was like the one in 1920 created by Raycroft. This OCT included a low hurdle, a wall climb, a running jump, a balance test, a fence vault, and a low crawl (the fence vault and low crawl were the only additional events in comparison to Raycroft’s test). Since this training was specified for WWII overseas, the manual included a new topic focused on water. Training received a water section for landing, water emergencies, swimming, etc. This was an example of how the Army learned from its mistakes and restructured doctrine to be as up to date and applicable to present time warfare.

In 1941, America was expecting another world war. With such a lengthy duration of peacetime, the emphasis of physical readiness in society was little to none. Jobs also changed from industrial to urban, which is less physically demanding than in previous years. The percent

of unfit men had increased, and this was correlated to advancements in technology, change of jobs, and the physical training required in high school versus what was recommended. In an effort to emphasize the importance of youth being fit, the Army recommended five days a week of training in high school. They came to find out this was only occurring two days a week and only 50 percent of men took this class (East, 2013).

In addition, new technology that society was developing, including washing machines, dishwashers, vacuums, etc., added to the lack of fitness among eligible men across society. These advancements replaced traditional actions that resulted in less exercise for Americans. The Army acknowledged these facts and again used this as a measure for adapting fitness training to accommodate the current necessities of the time. In the 1940's the US Army again relied on men who were drafted. Since they did not have a large, regulated Army, they could not regulate fitness requirements among all of society. Once they started drafting and forming the Army for the current war, they had to waste an ample amount of time specifically for physical training that could be used on other specialties.

In the 1940's draft, the Army saw more and more draftees that could not pass the standards to join the Army when it needed soldiers. In a way, by sampling a fraction of society with a draft, it was easy to see that society mirrored the Army. If the number of unfit draftees increase, that correlated to the number of unfit Americans. In this time, it was mainly due to the technology that was quickly advancing. A new manual was given in 1941, specific to the current war the Army was engaged in and the type of soldiers that were being trained (drafted soldiers). This war was also fought at the brink of the Great Depression and allowed the country to pull together and rise again. when the Army had to be implemented into a war, the entire country was at war too, supporting them.

## **1942- New Physical Readiness Training (PRT)**

Early 1942, a new fitness test was studied to determine combat readiness. Colonel Theodore Paul (Ted) Bank is given credit meeting the combat readiness need in WWII. Col. Banks served in WWI in 1917 as an enlisted soldier for the 32<sup>nd</sup> Infantry Division. He was promoted much quicker than his peers and became a second lieutenant at age 20. Bank attended the University of Michigan where he played football. He graduated in 1923 and went on to continue his career in coaching sports. He coached collegiately at Tulane University from 1922 to 1935 as an assistant football coach. He also coached boxing and basketball at Tulane for the next several years. He then became the head football coach at the University of Idaho until 1941 when he rejoined the Army (American Football Database, (n.d)).

The Army used Bank as chief of the Army's athletics and recreation branch. Colonel Banks met with several other men with credentials supporting the Army and fitness readiness. East (2013) states in his writing, "They began by administering 25 different physical fitness assessments to over 400 soldiers to determine which fitness assessments best measured combat readiness. Upon analysis, McCloy and Esslinger determined that ten fitness items best discriminated between fit and unfit soldiers". This led to the decision for the new fitness test in 1942.

The test chosen consisted of pull-ups, 20 sec. burpee, 3 successive broad jumps, shot put, pushups, 75-yd pick-a-back run, dodging run, 6-sec run, sit-ups, and 300-yd run (McKay, 2016). The purpose of testing soldiers was not only to have a standard baseline for readiness, but for soldiers to identify their shortcomings so they would be more motivated to train. With the new fitness test, Bank and his team also remodeled the first six weeks of IET with their plan. This new plan was successful at increasing numbers in each event. To verify his plan even more, he

had a control company and a company that trained with his plan. The results were: “The control company reported a 3.5% increase in physical fitness, while the experiential group reported a 23.5% increase in total physical conditioning” (East, 2013). East also mentioned a statement from Colonel Rowntree, who said that the Army was attempting to enlist a peacetime Army, but they ran out of options, so they were forced to change standards to increase the number of soldiers.

With the number of unfit draftees increasing, the Army made their first effort to emphasize the importance of fitness beyond soldiers. The Army launched a public awareness campaign to inform the citizens of the importance of physical readiness. The importance of society maintaining a level of fitness was crucial for the Army because of the draft. This was the Army’s attempt to share that importance so that more soldiers would be deemed “fit” when the Army called upon them. Later, TC 87 (Physical Readiness Training - PRT) was published. This was an outcomes-based document that gave standards for events and specific guidance. Even with all the efforts the Army did to prepare people for the war, their efforts failed to increase the number of men fit for combat, to the point that the Army lowered the standards and changed the age range for the draft. In 1943, the age to join the Army changed from 21 to 18. The assumption is that with more men coming straight from high school into the force, there would be a higher percent of soldiers deemed fit to serve when drafted. The draft or enlistment age of 18 would never return back to 21.

At this time, WWII was in full effect and millions of soldiers were being trained at a time. To better prepare the transition to soldier, the Army asked all high schools to create a fitness foundation to better prepare civilians to become soldiers. This supported the decision to change the enlistment age to 18 because if high schools were conducting physical training like

the Army recommended, then the Army's problem of physically unfit soldiers should be resolved. Most men who were in the draft age range could count on eventually be drafted at some point. On the title page of "Youth Goes to War", Lieutenant General Brehon B. Somervell, Commanding General, Army Services Forces stated: "Let us be realistic. Every able-bodied boy is destined at the appointed age for the armed services...Those who do not or cannot go to college must begin now...to prepare themselves for the tasks which are for them inevitable and unavoidable. Young people in high school must be trained specifically to become better warriors...a selectee who is rejected from military service because of physical disability is no good to the Army...Far too many young people are unable to serve their country because they are not in tip-top physical shape" (Whyte, 1942).

During WWII, it was not just the Army at war, but the entire country was fighting. America as a whole was invested in the war whether it was fighting, producing weapons, or factory manufacture. At this point, the country was also getting all knowledge of fitness testing from the Army and their resources. The Army was doing everything in their power to prepare soldiers for war, to include the prerequisite training done in high school. The physical education classes were adopted by over 50 percent of high schools in the country due to the "Youth Goes To War" paper (East, 2013). The change in enlistment age and addition to training in high school gave the Army hope for soldiers who join the Army in good physical shape. The Army would keep these standards even after the war to allow for more soldiers to be eligible to serve in the Army.

In 1942, the army brought in Ted Banks to support the decisions on the new fitness test. Due to the draft force, every man of age would be called upon. Supporting that, the army changed the draft age. This year the Army also attempted to implement more training in high

schools to promote fitness in the youth. This worked and fitness was adapted by over half of high schools in the country. This promoted the culture that when the army is at war, the entire country is supporting the effort.

### **1943- Women's Army Auxiliary Corps (WAAC)**

Stated by Whitfield East in "A Historical Review and Analysis of Army Physical Readiness Training and Assessment", "On 1 July 1943 the Women's Army Corps was signed into law and women were given military status as enlisted and officer personnel." This was the first time that women were legally allowed to be in the U.S. Army. "The Women's Army Corps (WAC) Field Manual—Physical Training" (FM 35-20) was created in 1943 by the army. This FM basically stated that women would be utilized to fill positions of men who would be better used in the front lines. The women were told that they needed to be able to effectively do these jobs, or the men who were fighting would have to be taken from the fight to do the non-combat jobs. With this new addition of women, an additional fitness test was also implemented. The woman fitness test was separate from the male fitness test. It consisted of pushups, sit-ups, wing-lifts, squat thrust, running, and balance, and had no specified standards to pass or fail (War Department, 1943).

With the Army desperately needing bodies to fill the ranks, they resorted to adding females to the forces. The number of females allowed in each unit was limited, but they finally were allowed in the Army. It was recommended to women that they do a "self-assessment" on the events mentioned in the field manual but there was no set standard for physical fitness at this time. The priority of women was to complete the easier jobs that the Army requires, so that more men would be able to do the combat jobs. At this time, women were not seen as physically able to conduct the same jobs as men. In comparison to men who had to pass a fitness test to serve,

women were held to a different standard because the needs of the Army were different depending on gender in the 1940's. The jobs available to women were mainly administrative and supply jobs. It was said that American society did not like the idea of women serving in the military, but "promoting the idea that each woman serving would "release a man for combat." Women relieved thousands of men of their clerical assignments, and many performed nontraditional jobs such as radio operator, electrician, and air traffic controller" (Britannica, 2020). Once the Army clarified that women would only be doing jobs that are non-combat, there was not as much controversy.

Women legally being allowed to enlist in the military was a very big step in the history of the Army for women, even though at this time the women's corps was separate from the actual Army. The controversy of whether women belong in the military would be something that would continue for decades to come. The arguments included that women may not be physically fit enough to be in the Army or that women were not capable enough for all jobs that the Army offer. As time passes, the Army allows more opportunity for women, but the controversy has not gone away.

#### **1944- Pamphlet no. 21-9 [PAM (21-9)]**

PAM 21-9, "Physical Conditioning", was published by the War Department in 1944. This was a training plan developed for basic training that consisted of a twelve-week training iteration with three different phases of development. PAM 21-9 implemented an additional fitness test, the Physical Efficiency Test Battery (PETB) to replace the previous. From 1942-1944, an ample amount of research was conducted on fitness testing for the Army. The War department (1944) stated in PAM 21-9 that the chosen tested events were "pull-ups, 20-sec. burpee, squat jumps, pushups, 100- yard pig-a-back run (which was increased from 75 yards from the AGF); sit-ups,

and the 300-yard shuttle run. The 70-yard zigzag run and the four-mile road march from the Army Ground Forces Test were eliminated”. As the fitness test became more standardized, other things did too. The uniforms and testing sites were specified. This test also added a scoring scale for each event, to be used as a competitive incentive for motivation.

The new twelve-week training iteration was planned out to start out slowly and over time increase the intensity and occurrences of workouts. There were three phases: Phase one was the “toughening phase”, phase two was the “slow improvement phase”, and phase three was the “sustaining phase” (East. 2013). To test the progress of the twelve-week training plan, soldiers would take the new PETB fitness test. The PETB was not a fitness test taken by regular units, but a test taken at the end of initial entry training to allow leaders to see if the training conducted was successful to excel on the PETB.

The importance of this was that the Army realized they would need to put in more work to develop these men into soldiers. They had changed the draft age, lowered the physical standards, and now they decided that fitness readiness was something that they would have to instill into soldiers. The Army implemented the twelve-week training iteration to do, specifically that. These soldiers would also have the physical fitness standard of passing the PETB. This test was specified for combat readiness due to the recent world war. PAM (21-9) was a step forward toward improving the Army fitness testing because it used a point grading system that allowed commanders a tangible measure of their force’s readiness. PAM (21-9) was a result of several years of research conducted by the Army and its highest fitness leaders. It was considered a new and different way to approach fitness readiness in the Army.

## **1946- Updated FM 21-20**

The Army learned many things from WWII and used those lessons to better the future Army. One important lesson was again the foundation of soldier readiness always begins with being physically fit. At this time, COL Theodore Banks was called upon again. He was attempting to come up with physical development programs for both the Army and society, so that boys can be prepared physically before they reach the draft age. The Army established the Physical Training School (PTS) in 1945 and tasked directly to update FM 21-20 and to implement training courses to create PRT supervisors and instructors. The emphasis on FM 21-20 was total soldier fitness in relation to combat readiness because the war was recent and Army leaders wanted to keep the momentum high towards physical readiness. An example of an adaptation was the preparation of ability to train during transport on boat or while in combat due to an after-action report from WWII (East, 2013). As time went on, more research was conducted, so a big difference between the 1946 version of FM 21-20 and the 1941 version is the addition of supplemental exercises to increase event scores. It also included descriptions and the purposes of the exercises. The emphasis on why the exercises were important and how to follow them was deemed necessary by the Army.

The events changed again with the update of this manual. As written in FM 21-20 (1946) the test of this time included “an outdoor and indoor “test battery.” The outdoor battery consisted of pull-ups, squat jumps, push-ups sit-ups, and 300-yard shuttle run; gone were the 20 sec. burpee and the 100 yd pig-a-back run from Bank’s 1944 Physical Efficiency Test Battery. The indoor battery substituted a shuttle run (25 yards x 10 laps = 250 yards) or 60 sec. squat thrusts test for the 300-yd shuttle run” (War Department, 1946). This was also the first test that the scores were adjusted dependent on different age groups, which would continue to be a trend as

decades passed. This manual also included how to not over-work muscles to prevent injury to promote healthier soldiers. The Army realized that if as a force it was not physically fit, that with time it would be a losing force and reflected on previous engagements thinking that if soldiers would have been fit, the number of casualties would have been less. This manual reflected the importance of physical readiness.

The new manual did not only include new testing events, but recommendations on how to train forces to enable a more fit force. Calisthenics workouts were added, like conditioning, rifle training, and swimming. It also added a section on strength and endurance. Prior to this, training was conducted carrying other soldiers so that one would have to train with resistance more than just body weight. This new manual included ways to gain muscular strength with weights like kettle bells and the deadlift. It also included gymnastics related workouts that would help with hand-to-hand combat.

FM 21-20 (1946) was an example of the Army adjusting with the changes of society. The physical condition of the population had change and since the Army was still drafting, it had to take this into consideration when figuring out how to train draftees. As new fitness tests were dispersed, the Army received more knowledge on what worked and what did not work. They used this trial and error to continue updating and advancing the fitness in the Army. The new manual gave two additional fitness tests, the outdoor and indoor. It also gave relevance and meaning to the fitness tests and events by discussing the purpose and descriptions. Because the army was recently involved in a war, the momentum was still driving towards creating a ready force to prepare for any near future engagements that might come up. Although the draftees are normally released from duty short after the war, the army continued to update training manuals during this peacetime.

## 1950-1956 - Cold War Era

In 1950, the US had been at peacetime for several years, so as history repeats itself, fitness had decreased, and people had become lax. This was five years after the US engagement in WWII and the Army went from being the strongest in the world to a lazy force. When the US joined in on the Korean War, they were no match for North Korean Army. During this war, over half of the Army's forces were drafted (Newsom Content Knowledge Project, (n.d.)). The US showed that they were not prepared for an engagement like that due to lack of preparatory training. The Army was severely limited to draftees in 1950 and it may have been due to the strict standards that the Army required for soldiers to have. The Army at this time may have been high quality, but at the time they also needed quantity specifically for the Korean War.

When enlisting soldiers, the Army tested soldiers based on several things; moral standards, mental standards, and medical standards. Moral standards meant that if a draftee had a criminal record, has trouble with the law, or has been discharged from the Army that they were considered unfit. On top of that, the Army held mental standards that were observed for all. These are in the form of tests with up to 90 questions about vocabulary, arithmetic, etc. (Karpinos, 1960). "Operationally, the test was to fulfill a dual function: (a) To measure the examinee's ability to absorb military training within reasonable limit of time, in order to eliminate those who do not possess such ability, and (b) to provide a uniform measure of the general usefulness for the service of those who qualified on the test" stated by Bernard D. Karpinos, the author of "Fitness of American Youth". In 1950, thirteen percent of the examinees were disqualified due to the mental standards. An additional fourteen percent were disqualified due to medical standards. Medical standards observed defects which were only considered unfit if the individual could not complete a check list of actions with the defect. This may include

hearing deficiencies, eye diseases, bone defects, etc. With all the standards in place in 1950, thirty two percent were unfit to serve in the Army (Karpinos, 1960)

The engagement with Korea led to the third revision of FM 21-20. The main change was again the events were updated for the fitness test. These changes included: “Physical Fitness Test Battery (Outdoor): pull-ups, squat jumps, pushups, sit-ups, 300-yard shuttle run or the alternative fitness test battery (indoor), which allowed for the substitution of an indoor shuttle run (250-yards at 25 yards per link) or 60-sec. squat thrust test for the 300-yard shuttle run. The normative scoring scales remained unchanged” (Department of the Army, 1950). In 1953 the Army’s physical readiness school was shut down due to budget cuts and in 1957, the male fitness test was changed again. At this time there were several fitness tests that the commander could choose from to administer to his troops. These tests were dependent on the unit type, the weather, and all around ‘commander’s discretion’.

Another update in 1956 was the WAC manual. Thirteen years after the original “Physical Training—Women’s Army Corps” (FM 35-20) was published, in 1956 the Army published a revised women’s physical training manual. The original FM 35-20 was degrading to females as it portrayed the only purpose in women being in the Army was to conduct the jobs that men should not have to do because they should be fighting in the front line. The fitness components in the original manual were extremely easy and did not have grading criteria. The revisions added conditioning, relays, swimming, etc. (FM 35-20, 1956), but did not compare to the amount of research or specification that the male fitness test contained for combat readiness.

The importance of these changes was that since the physical readiness school was shut down, someone else would be responsible for updating the fitness documents. Also, the male’s readiness doctrine was constantly being updated, but in the 50’s the Army did not prioritize

female's fitness readiness. There was still no standard for females, or any physical studies completed to determine the appropriate test in comparison to men. The women's doctrine had not been updated in years, although women were still working for the Army in non-combat positions. Due to the Army's engagements, the need for support soldiers increased, so the addition of females was crucial.

### **1957-1963 - Physical Conditioning (TM 21-200)**

In 1957, the Army published the newly updated version of TM 21-20 but renamed it TM 21-200. This manual had much more research and scientific knowledge of fitness behind it. It was also intended to be a hip-pocket manual for drill sergeants and non-commissioned officers (NCO's). FM 21-200 states the updated fitness test, all the events are the same, but the standards changed slightly. It also included a combat test specifically for combat units called the Physical Achievement Test (PAT), that included a distance run of one-mile. This was the first time in Army fitness testing that a run was included as an event. These were also the first mandatory fitness tests implemented in basic training (East, 2013).

In the coming years, the FM 21-200 would change several times. Once in 1959, )Technical Manual (FM 21-200 contained one change, that an Army Physical Fitness Test (APFT) and a Physical Achievement Test (PAT) were a requirement for all soldiers to pass with a score of 200 minimum total. East (2013) continues to discuss the changes occurring to FM 21-200 again in 1961. It received change two, that the readiness would return to focus on combat readiness. This change included scrapping the APFT and PAT and replacing it with the new test of record, the Physical Combat Proficiency Test (PCPT). FM 21-200 (1961) states "The PCPT events were (including minimum performance time/score): 40-yard low crawl (36 sec.),

horizontal ladder (number of rungs in one minute—36), dodge run and jump (agility run—26.5 sec.), grenade throw (15 pts), and a one mile run (8:30)” (East, 2013).

In 1963, Training Circular 130 21-1, “Army Physical Fitness Program”, replaced FM 21-200. It outlined the regulations for the PCPT which became mandatory for all soldiers under the age of 40 in 1963. The same year DA PAM 21-1—Physical Fitness Training Program for Specialist and Staff Personnel and DA PAM 21-2— Physical Training Program for Women was published. PAM 21-1 stated that males who were not in a combat job would not have to conduct the combat fitness test. PAM 21-2 consisted of the new fitness standards for all WAC. The events of the women’s test, the Army Physical Fitness Test (AMPFT) included: arm circle (18 reps), twister (15 reps), bent-over airplane (15 reps), sit-up (15 reps), jumping jacks (16 reps). There was no time limitation and female Soldiers “passed” if they could execute the requisite number of repetitions (East, 2013). Yet again, in comparison to the male’s fitness test, this was in no way an accurate measure of fitness because of the common viewpoint that females were weaker. The fitness test implemented in 1963 was again separate from the male’s fitness test and did not require training to pass.

In this time range, there were many changes to Army regulations about physical readiness. The increased knowledge of physical training reflected in the content presented in the multiple manuals changed and revised in this time. The fitness test for both males and females were updated but remained separate. And men who were not involved in combat jobs were not required to take a fitness test, like the women in the military because they did not have standards they had to pass either.

### **1963- Height and Weight Standards and Preparation for The Vietnam War**

AR 600-7, Weight Control, was published in 1963 when an increased issue with body composition happened during the US involvement in Vietnam. AR 600-7 covered the policies and procedures of body weight control for active-duty soldiers. Soldiers physical appearance was beginning to look unprofessional, so the Army implemented AR 600-7, a body weight standard based on age and gender (AR 600-7, 1963). The goal was to help regulate body composition for those soldiers serving in the Army. This regulation could prevent soldiers from enlisting or reenlisting if they did not maintain the standards given.

Following, in 1965, the Army was preparing for war in Vietnam. As usual, the Army increases focus on physical fitness training during war time. The fitness test emplaced during the Vietnam was focused on combat. As the time the Army spent fighting in Vietnam increased, so did the changed in training to adapt to the war. The Army also began training Vietnamese soldiers to advance their tactics (Holswarth, 2019). The Army's method of war was to create as many casualties as possible for the opposing side. To train solely for the Vietnam war, the infantry advanced individual training (AIT) mimicked the terrain of Vietnam.

Holswarth (2019) went on to say that there were fake villages in training that mimicked Vietnam villages. The purpose of this was to train infantrymen how to clear villages prior to boots on the ground overseas. IET included films or videos for the first time in the army. The videos allowed the instructors to utilize them to teach soldiers from how to brush teeth properly to how the enemy was expected to fight in the current war. These videos also allowed the things being taught to be consistent at all IET. This is an example of how the Army adapts its training to the specific engagements that the United States is involved in. Training was constantly being

changed and updated to fit the needs of the Army to include the training videos that allowed elaborate and efficient information to be passed down.

This marked a big moment in Army fitness history, the Army published AR 600-9 which regulated Army wide fitness assessments for the first time. Women were mentioned in this but were not included in the physical fitness requirements alongside the males because the WAC was still a separate corp. The doctrine currently on physical training was solely for males. This was important because for the first time, the fitness test being taken was not dependent on leadership, location, training, etc., but based off this document for the entire Army. Shortly after, in 1966, the inclement weather test was implemented to be taken during bad weather. The Army again created an advantageous fitness test to adapt to the conditions of the Army, this one being the weather.

In 1969, as knowledge on exercise science and anatomy increased, FM 21-20 was updated to include the new information. TM 21-200 was reintegrated and combined with FM 21-20 (1969). At this time, the Army had implemented four separate fitness tests, and by this regulation it was the commander's decision on which test their soldiers took. As time continued, the Army supplied leaders with everything they needed to successfully train their soldiers. The Army gave the leaders the option as to which test they could issue because at the time there were several options.

While the Army was still drafting troops, the fitness testing had to adjust to train the soldiers of that time. The Army had to consider changes in society, the theater being fought in, the terrain predicted, etc. The Army regulated fitness testing for the first time in history in the 1960's. In addition, the fitness testing and training requirements mimicked as closely as possible what combat would look like. This included several different fitness tests allowing commander's

discretion and mock villages for training, specifically supporting the war in Vietnam. This continues the trend that when the US is involved in a major conflict, wartime, the focus on fitness is more prioritized.

### **1973- All Volunteer Force (AVF)**

A “draft” is a required service obligation for the Army to all men of a certain age range, usually in a time of war when the government is trying to build up a big Army. A draft has been used since colonial times and in every major war until it was halted during the Vietnam. The Army disposed of the draft and made the Army an all-volunteer force in 1973. The Army had maintained a standing volunteer force prior to the halt of the draft, but it was never a large one that was capable of engagement alone without the support of additional troops from a draft

The reason the Army became an all-volunteer force was because the draft became too problematic for the military in that period of time. First, the draft was necessary in WWI and WWII because approximately 2/3 of soldiers in those wars were from the draft. During the Vietnam War, less than 25 percent of the forces were drafted, so the need in the 70’s was substantially less than in previous wars (East, 2013). Another reason was that the 25 percent of drafted soldiers made up over half of the casualties in this war, meaning these soldiers were not as fit for combat as volunteer soldiers who were ready and willing to fight. This unfortunately resulted in most injuries and death in these wars to be composed of drafted soldiers in the Vietnam War.

The volunteer soldiers that were full time soldiers being trained regularly in the Army were much more fit than the drafted soldiers, especially since the number of unfit men increased so much that the Army had to change standards just to meet the set number needed to fight. At

this point, part of the society did not agree with all of the engagements that the Army was involved in and did not agree in the requirement of service by the chosen men. This created protest and angry people who disagreed with the draft. This controversy was another reason that the draft went away, and the Army continued with an all-volunteer force. Richard Nixon made moves to get rid of the draft, as promised in his election campaign (Glass, 2013). Within two years of him being president, he signed a bill stating that the draft was ending and would not return unless the US government declared a national emergency that required it. In 2021, the army has continued to remain a large standing force and has not had to reapply the draft since 1972.

The draft had been necessary for the Army to succeed prior to this time. Due to the difficulties of training and integrating draftees, the public's opinion on drafts due to the opposition of engagements, and the number of drafted casualties the Army did away with the draft. From this point the Army relied, and still relies on, an all-volunteer force to protect this country during engagements. This would come to make a huge change among the army because for the first time the army would be able to regulate fitness among the people who were serving. Unlike the draft, they took unfit people and turned them into combat ready soldiers. An all-volunteer force allows a force that is ready at all times and whose fitness is able to be maintained always.

### **1975-1979 - Women in the Army**

In 1976, the number of women joining the army was constantly increasing. Although they were allowed in the Army, they were not allowed the same opportunities as many males. Standards were put into place for certain jobs, which limited females from participating due to the jobs being "too physically demanding". At this time, there was not a fitness test for entry of

this job, the Army just decided that females were not capable of accomplishing said jobs. The Army did not implement a tangible measure of capability for each job but counted out females only based on gender. Although, in a short period of time, the Army rethought this and did create a fitness test specifically for particular jobs.

The Army soon went from the lens that jobs are too physically demanding, to creating standards that if they were able to be passed, it did not matter whether the job itself was done by a male or a female, as long as there was someone in the position to complete it. This occurred in mid-1777 by the Army Vice-Chief of Staff. At this time, the limitations and capabilities of women were not known by the Army and they were trying to figure that out. It was not realistic to create a fitness test for a certain group without knowing the capabilities. This knowledge was known of men because the fitness testing for them had been prioritized and researched for decades before the 70's when the Army decided they should allow women to be a part of the main body Army.

In 1976, the Army also updated the FM 600-9, in which many changes occurred but specifically the height and weight standards were changed from the 1963 version. This one defined the words obesity and overweight and gave a maximum weight for specific heights for males and females (East, 2013). This manual did not specify the body fat composition in relation to a percent in this revision. As the US population average body fat percentage was increasing, the Army was attempting to stop the trend from continuing in the Army population.

From 1977 to 1979, the Army experimented with effectiveness of integrating the genders in basic training, due to hesitation and doubt that training males and females together would be possible. The main concern was that the training for the males would have to be made easier to accommodate the females. East (2013) stated the results showed that men and women were

capable of effectively training together and that standards could be changed for females without inhibiting the effective training of males. In 1978, history changed, and the Women's Army Corps was no longer a separate corps from the Army. Women were finally able to join the Army in the same manner as men. US Army Operational Test and Evaluation Agency (OTEA) determined that a maximum of 20% of females in a unit to prevent degradation of mission capabilities (East, 2013). While all jobs were not yet available for women, this was a historical event that allowed women to serve in the Army as they do today. This led to the complete integration at the close of 1979.

While the opportunities for both males and females were not yet equal, this was a big step for women. Women were first introduced to the same phases of training as men in these years. During the changes, women also took the same fitness tests as males, only modified. This test was the first fitness test taken by both genders, and the first test given to females that had a standard required to pass. Although this was a big milestone for females, the Army still determined that more men than women per unit were necessary to succeed. The army was not in any major conflicts during these years, but it was still sufficient for women to be in the military as during these years it was transitioning into a volunteer force.

### **1980- The Army Physical Readiness Test (APRT)/ Army Physical Fitness Test (APFT)**

In early 1980 a chosen group of people were given the job of creating a new fitness test to succumb to all the drastic changes that the Army had recently adapted. These changes include but are not limited to the integration of women into the Army, the transformation of the Army from a draft force to an AVF, the need for one standardized fitness test among the whole Army, and a need for a fitness test that was a better measure of physical fitness than previous fitness

tests. East (2013) wrote, “The new Army Physical Readiness Test had to be gender integrated, easy to administer, and require little or no equipment”.

In February 1980, the Army updated FM 21-20 into AR 350-15, the new Army regulation, ‘The Army Physical Fitness Program’. The doctrine was created supporting the American College of Sports Medicine (ACSM) stance on physical exercise (East, 2013). With the new regulation came the new fitness test: The Army Physical Readiness Test (APRT). This test was composed of push-ups, bent knee sit-ups, and a two-mile run. This fitness test was graded on a 300-point scale, with a maximum of 100 points per event, graded on DA form 705. For years, while in IET the requirement for soldiers was 50 points per event, and after IET it was 60 points per event to pass this test. This was the fitness test that the Army used for the next forty years.

Along with the studies done to create the APRT, the Army also gained knowledge on females. They began to consider the different bone density, pregnancy, menstruation, and injuries. They used this information to acknowledge that females are different from males, but that it does not mean they are incapable. Acknowledging these things allowed the Army to mitigate problems females would face and adjust training as necessary to give all soldiers the same opportunity even if their bodies are anatomically different. This fitness test included everyone, except for soldiers over the age of forty who did not have any scoring requirement in 1980 (War Department, 1980).

In 1983, the Master Fitness Trainer (MFT) course was created. In modern Army, there is a master fitness trainer assigned to each unit/battalion to guarantee that training is being conducted to the same standard Army wide. A MFT is a subject matter expert on how to train for the Army’s fitness test. The same year, the Army published another update of AR 600-9 (this

was the fifth updated version of this document). This update included the body composition portion. If a soldier was to go over their specified weight for their height, then a medical professional would determine their body fat. If a male, the percent had to be between 20 and 26. If female, the percent was between 28 and 34, both genders dependent on age. With the increased knowledge, the Army was able to determine a tangible measure of body composition portion, and they listed it in this manual in 1983 (Sakuma, 1990).

The 1980's were a time of change that would come to stay. The APRT was a test that was given to the whole Army, males, and females. Prior to this, there were multiple tests that could be administered, but this test became the standard army wide. It was a result of the needs of the Army due to all the recent changes. This was the first single fitness test administered to an all-volunteer force made up of both males and females. The fitness and composition manuals were also updated with these changes. In this time, there were no major conflicts that the army was engaged with, so it seemed that the army was focused on creating a culture and consistency among the newly all-volunteer force.

### **1980's- Additional Documents and Revisions**

In 1983, the U.S. Army was put to the test in the Caribbean. Although we won this with small numbers of casualties, the Army used this as a test of readiness and again adjusted direction for physical fitness training for soldiers. After that fight and until 1990, the Army adapted with the time and reevaluated the doctrine. The result of this was that the army created the "Commanders Handbook on Physical Fitness" (DA PAM 350-15), the "Individual's Handbook on Physical Fitness" (DA PAM 350-18), and "Family Fitness Handbook" (DA PAM 350-21). (East, 2013). The revisions were incited from after action reports from the most recent engagements.

In 1985, more updated Training Circulars (TC) and Field Manuals (FM) changed the APRT (Army Physical Readiness Test) to the APFT (Army Physical Fitness Test). Another change was that for the first time, this fitness test would be conducted in workout clothes rather than the combat uniform with boots as it had been up to this point. Due to this change, the standards had to be changed because run times would drastically change when running in tennis shoes versus combat boots. This was another change that would be maintained in the Army for many years to come.

FM 21-20 was revised again in 1986, changing the standards specific to different age intervals to eliminate the problem of soldiers over 40 not having grade standards. The standards were for set age ranges that determined what scores were needed to pass for a soldier's specific age and gender. This revision also included the updated maximum and minimums for each event due to the uniform change and the updated knowledge obtained by leaders. The APFT would continue to be authorized with this revision.

In 1986, the readiness training recommended to leaders was to not do workouts to specifically prepare for the APFT, but to continue to prepare for combat and real-life scenarios. The APFT was intended to be a baseline measure of fitness for all soldiers, and it was not meant to be something hard to obtain. But, because the Army was also incentivizing high PT scores (over 270) and using APFT scores for evaluation reports for officers and enlisted, units failed to focus on combat readiness fitness and settled for achieving a high APFT score for these reasons (East, 2013). All in all, the Army was satisfied with emphasizing test scores over transitional combat readiness. This set a trend that would continue for years in the Army. Although the Army created documents with an ample amount of knowledge, one would have to be knowledgeable on seven different documents to understand the Army's intent on fitness readiness because the

Army had published so many different manuals for fitness. This made it difficult for the Army to communicate its years of research and decisions, and hard for leaders to effectively train their soldiers.

In 1987, AR 600-9 underwent another change which resulted in a new revision of this document. This specifically changed that people who failed height and weight would no longer be taped for body composition by a medical professional, but by a leader of the same gender. Those doing the assessment used a tape measure to measure the specified circumferences, then would utilize a body composition chart to determine the fat composition percent. From there, they identified if that soldier was within the “passing” composition. The body composition chart did not change.

In 1989, AR 350-15 was published for the third time. East (2013) stated “In the 1989 revision the overarching outcome objective was reversed to read: “enhance combat readiness by developing and sustaining a high level of physical fitness”.” This means that the emphasis should not be on succeeding on the APFT because that is not equivalent to being a combat ready force. As the document continued to change over time, the thing that stayed the same was the consequences for not meeting the standard on each event of the PT test. This included remedial fitness training, retest, and if not improved or passed within a period, that soldier could be kicked out of the Army/school, barred for re-enlistment, or not be eligible for promotion.

The many revisions that were added in these years were important and effective. The army continued to prioritize combat readiness even though the fitness test was not combat focused. While this was a period that the army was not in many major conflicts, they had an ample amount of time to research fitness. The army was also composed of a large standing army due to the volunteer force, so the army could enforce the fitness guidelines put in place. During

this time, the army updated many documents and focused on polishing the edges of the manuals that they currently published.

### **1990's – Updates of Published Physical Readiness Documents**

In 1992, FM 21-20, "Physical Fitness Training", was published for the tenth time. Some changes included: updated content on body composition, sections on nutrition for optimal performance and the maximum and minimums for each event per gender were updated again. Mostly, these documents continuously changed with the knowledge that was being obtained and adapting to the current force's needs. The fact that this was the tenth publication shows the dedication of the army to continue to change and adapt to the current needs of the army over time.

1993 was the year that 350-15 was published into 350-41. This contained some minor updates, but again emphasized the importance of leaders focusing on intense physical training to prepare units for combat. It was recommended that leaders use the APFT as a baseline for soldier readiness, and not use it as the priority of training. The APFT should be a test that any person in uniform can pass with minimum physical capacity. The purpose of the APFT given was a baseline test that all soldiers are capable of passing and was not intended to be difficult necessarily.

In 1994-95, the Army went back and again reviewed and studied the effectiveness of the APFT in relation to it accurately testing minimum physical capacity for both genders. This review showed that the average performance had increased. It also showed that there was an almost equal fail rate for both males and females, but there was some controversy on the female grading criteria. For example, women scored 100 points or 'maxed' the two-mile run twice as

much as males did. This resulted in an update in 1998. This update did not completely follow the recommendations from the review, the only change was that females now had to conduct 19 pushups instead of 18.

Males and females' bodies are engineered differently, so it is not rational to create male and female standards the same. The challenge that the Army faced were creating a fitness test that was based off of anatomy yet challenging for both genders. The first female fitness tests could be seen today as embarrassingly easy, in the late 1990's it was still being observed that the Army may have been going easy on the female standards. This may have been do to less than necessary amount of research of the female anatomy or composition. It could also have been because women were still new to the Army and were not necessarily studied in relation to the fitness tests as much as males. This reflected on the fitness test standards and how they were viewed as unfair to some male soldiers.

A study was conducted in 1993 by Miller AE, MacDougall JD, Tarnopolsky MA, and Sale DG. The results were published in their writing, "Gender Differences in Strength and Muscle Fiber Characteristics". The authors stated, "The women were approximately 52% and 66% as strong as the men in the upper and lower body respectively. The men were also stronger relative to lean body mass" (Miller et al, 1993). While it is not known that the Army had the same knowledge on body composition by gender at the time, it is known that women and men should not be held to the same physical standards based on the sole fact that the capabilities of both genders are not the same. As new knowledge such as this came to light, it took trial and error to create a fitness test that was both fair and challenging. The result was a fitness test that had separate grading criteria based on gender. The discussion of fairness between the grading criteria continued to be a strong topic in the future after this fitness test.

As times changed, the Army's physical fitness did as well. With updated knowledge on women's fitness capabilities, came changes to the fitness testing standards. Research shows the different anatomical makeup between males and females. In this period, the APFT was there to stay, but it could not remain the same as decades passed which is why the standards are constantly changing to adapt to the current society. The Army may not have gotten it right the first time, but consistently changes to stay up to date with knowledge. This method showed with the different standards put in place.

### **2000's – AR 250-1 and 600-9 Revisions**

In 2003, AR 350-41 was terminated and replaced with AR 350-1 (2003). Another new document was created, but due to 9/11 and Operation Enduring Freedom in Iraq, it was put on hold for eight years. This document was FM 3-25.20 and recommended a new six-event fitness test to replace the three-event APFT that was the current test of record. "The six test items proposed in an "in progress review" to the TRADOC Commander were: standing long jump (2 trials), power squats (max repetitions in 1-min), heel hook (max repetitions in 1-min), agility run (12x25 yards), push-up (max repetitions in 1-min—no rest), and a 1-mile run" (East, 2013). Once word got out of this new fitness test, there was so much negative feedback that the Army temporarily suspended the new regulation. This test never was implemented, and the APFT remained the Army's test of record following 2003.

February 2006, AR 350-1 (2006) replaced AR 350-1 (2003). The biggest change was the addition of combative training program. The Army defines combatives as: "Modern Army Combatives is a ground based fighting system that teaches soldiers to close the gap between him or herself, gain dominance and finishes the fight. Combatives is the instruction of hand-to-hand and rifle-bayonet fighting and is key in ensuring Soldiers are mentally prepared to engage and

kill the enemies of the United States in close combat” (FM 350-1, 2006). This added to the conversation of physical readiness. As said before, the APFT (pushups, sit-ups, and a 2-mile run) was a baseline test that all soldiers should at a minimum be capable of passing. Although the Army sought out a combat ready force, the APFT was not a combat readiness fitness test. With the Army prioritizing combat readiness, they created the combatives course which allowed combat related training for all soldiers.

Another change happened in 2006, which was the updated AR 600-9, The Army Weight Control Program. One update was only applicable to women; the taping method differed from the old because they now measured only the neck, waist, and hips rather than also measuring the forearm in the previous regulation. The updated document also showed the new allowable percentages of fat for both genders by age groups. The following was the 2006 maximum allowable body fat percentages, “17–20 years: 20%/30%, 21–27 years: 22%/32%, 28–39 years: 24%/34%, and 40 years & older: 26%/36%” (AR 600-9, 2006).

In the US, as the time passes the number of obese individuals increases. CNN stated in 2002, "Poll results show that 80 percent of people older than 25 are overweight based on the body mass index (BMI), a national guideline computed through a combination of weight and height. That figure has risen from 58 percent in 1983". While these numbers have almost doubled in twenty years, the Army acknowledges the changes and updates, as necessary. The Army uses these changes to revise doctrine, A major change that the Army implemented was the taping system. To be considered overweight, one would have to weight a certain amount over the recommended weight for the age and height. The Army realized that it has to adapt with society, and while the height and weight tables remained the same, they created the addition of the taping

system that would show if an individual was out of regulation for body fat percentage rather than solely relying on the height and weight table.

This standard would come to change as the Army became informed that women naturally carry more body fat so the male and females should not be the same standard based on natural physiology. Prior to this change, males and females were given the same body fat composition limits even though that is not an accurate tool of measurement due to the genetic differences between the two genders. This is another example of the Army not having enough research on female anatomy and physiology to provide accurate measures of testing.

For example, what we know present day is, “Women generally have a higher percentage of body fat than men. A healthy range of body fat for women 34 to 55 years old is 25% to 32%: A healthy range for men the same age is 10% to 18%. With new knowledge it is clear that for this age group, a body fat percentage of over 38% for women and 25% for men is considered an indication of obesity” (Kravitz & Vella, 2002). The Army changed these standards when new information was learned. The female height and weight standards and taping standards remained different from the males from this year on.

The early 2000’s held many changes to Army physical readiness doctrine, to include the fitness test that was intended to replace the APFT. Although that change was halted, others remained. The Army Combatives program was added to AR 350-1 to include combat readiness training outside of the fitness test. The body compositions for both genders were changed to be consistent for males and females. As known now, the body compositions of males and females are different naturally and it is not realistic to grade this particular test on the same scale.

Different studies conclude the same things about body composition.

## **2006- Ranger Training**

The Ranger Regiment in Fort Benning was also busy writing manuals in 2006. The Ranger-Athlete-Warrior (RAW) program was established in 2006 along with its manual, RAW v.1.0., which was very brief and was limited to the objectives of the program. The RAW v.2.0. manual was released in 2007 that addressed the feasibility of the program. Finally, in 2008, the commander of the regiment created a group for the program that included physical and occupational therapists, dieticians and an exercise physiologist focused solely on the RAW program (East, 2013). They planned to train one soldier per company to be the master fitness trainer experts. Each battalion would also have physical therapist to prevent injuries for the rangers participating in RAW program.

In 2008, a physical assessment was approved to test the rangers of the RAW program. It was a 10-assessment test that consisted of: Illinois Agility test, 4kg medicine ball toss, Metronome Push-up, Pull-up, 300 Shuttle Run, BEEP test, Heel Clap, 185-pound bench press, 254- pound Dead Lift, finished with a 3-mile run and a combat focused obstacle course. East (2013) states that there was an increased number of soldiers joining the Army who were marginally fit and commonly injured in IET. This resulted in the Army spending millions of dollars researching injury prevention for the soldiers specifically in the Air Assault school. In the two-week course, an average of 53% were injured (East, 2013).

The 75<sup>th</sup> Ranger Regiment published RAW PT v.4.0. in 2010. The significant change in this document was the adjustment of the fitness test. The new test only had eight events; 5-10-5 Pro Agility test, Standing Broad Jump, 225-pound Dead Lift, Pull-up, Metronome Push-up, Heel Clap, 300 Shuttle Run, finished with the three-mile run and obstacle course. This new manual also gave information on exercises and multi-week training programs that would help improve

the events on the fitness test. In addition, RAW v.4.0. included a section on nutrition that listed a recommended number of calories, along with the macronutrient ratios for each macro to focus on diet in addition to fitness.

The success in the research allowed the Army to spread that new knowledge using an Instructor Certification School so that NCOs can support their units. This is relevant because even though it was not an Army wide change, it was a new fitness test taken by members of the Army. The trend is trial and error in the Army. In ranger training alone, there was four versions of the manual updated in four years. The Army continued testing and training until they arrived at the solution sought. The Ranger Regiment research and testing was information that would be used by the Army for years to come on fitness, injury prevention, and recovery. Although rangers were separate, they had a specific role and with that came a specific document on the fitness and diet recommended.

### **2009- Updated PRT Manual**

In 2009, some more big changes occurred. One being the new PRT manual, Training Circular (TC) 3-22-20 “Army Physical Readiness Training”. This manual only endured small changes in 2009 that emphasized the way leaders can effectively train their force. AR 350-1 (2006) was also revised in 2009. This included modern Army Combatives Training being updated. The new combatives school ensured the extended training for cadre in hand-to-hand fighting. This ensured that the Army was able to train soldiers correctly and effectively with the addition of subject matter experts who have been trained in combatives. This was a step forward in continuing and advancing the combatives course to focus on combat readiness. The Army only made minor changes during this revision.

In 2010, the Army updated TC 3-22.20 again. The emphasis was that the Army needed to prioritize combat readiness among the force. The purpose of this manual is as follows, “Soldier physical readiness is acquired through the challenge of a precise, progressive, and integrated physical training program. A well-conceived plan of military physical readiness training must be an integral part of every unit training program. This training circular prescribes doctrine for the execution of the Army Physical Readiness Training System” (Headquarters Department of the Army, 2010). This manual created the 10 event Preparation Drills and the 5 event Recovery Drills that are used in present day Army. The purpose of the preparation drills and recovery drills are to prevent injury by warming up before a workout and cooling down after.

From 2003 to 2011, the Army was involved in Operation Iraqi Freedom. For several concurrent years, the Army was in current engagement and combat. This was fought with the large standing Army that had been built up for decades prior to the end of the draft. This could be considered a war time for the US Army, and the fitness reflected it. The Army continued to use the APFT as a test of readiness. It was ideal during this time because it could be conducted basically anywhere with little to no equipment. Soldiers were capable of training for this test in almost all conditions. The Army did not lower standards for the fitness test during these years to guarantee the same amount of readiness.

Later in 2010, an APFT Working Group got together with the task of revising the APFT. The product of their time spent was two drafts of new PT tests. One was the Army Physical Readiness Test (APRT) and the second was the Army Combat Readiness Test (ACRT). In early 2011, the Army began a pilot study for the APRT. The events tested were the standing long jump, rower, shuttle run, push-ups, and a 1.5 mile run. To recommend and eventually transition to a new fitness test, it had to be studied and tested. The army took time to study this test, but the

results were not what was hoped for. A year passed and in 2012 they halted the implementation of the new PT test so that they could do more research on it. After review, there were several things mentioned that convinced the Army to shut down the two drafted fitness tests. The APFT continued to be the physical fitness test of record for all active duty, reserve, and national guard soldiers for several years to come.

The APFT was the Army's test of physical readiness longer than any other one. A big change in the 2000's was the preparatory and cool down drills. These drills reflected the increased awareness of injury prevention and recovery. The addition of the Combatives training for trainers at the combative school was also a relevant change. This allowed the Army to create a subject matter expert to train units. The focus on combat readiness stemmed from the Army's engagements in Iraq and Afghanistan, which allowed the preparation necessary for success in combat situations.

## **2018- ACFT**

Nearly forty years of issuing the APFT in 2018, the first document published for the Army Combat Fitness Test (ACFT) was the "Army Combat Fitness Test Training Guide". This would be the newest fitness test for decades. It consisted of six events: The 3-repetition maximum deadlift, standing power throw, hand release pushups, sprint-drag-carry, leg tuck, and two-mile run. The scoring standards were the same across the board for all ages and genders. There were also three grading standards, black, grey, and gold, which depended on each job based on physical difficulty (for example the heaviest standard, black, was the standard for infantry, armor, etc). The lowest passing score was the gold, or sixty points in each event to pass. For a soldier to "max" the ACFT, they had to score one hundred points in each event for a total of 600 points. Since the leg tuck was assumed to be a challenging event to train for, the Army

allowed an alternate event, the plank. This was a go or no go two-minute plank. The standards were given in the manual for each event.

The Army set the date, October 1, 2020 as the final date of record ACFT scores. This test was specific for combat readiness, as is in the name. This fitness test is different from previous because the purpose of this test is not to assess a baseline level of fitness. Unlike the APFT, scoring high on the ACFT translates to a more combat ready soldier. Therefore, if the Army entity is scoring high on the ACFT as a majority, then the Army is more combat ready. Each event tested in the ACFT is translational to a combat related task.

For example, the deadlift mimics a litter carry. The kettle bell carry in the sprint-drag-carry could be the same movement used when carrying ammo cans. The intent was that the combat fitness test would have to contain lots of preparatory training to succeed. Irby and Rozman (2020), state “The ACFT’s six events provide a more relevant measure of each soldier’s physical conditioning. They test ten components of fitness, while the APFT tests only two. The body type that excels at heavy deadlifting might be disadvantaged on the two-mile run and vice versa. The physically ideal soldier will score high marks across the board”. In their paper, “The Army Combat Fitness Test is Exactly What the Army Needs- as Long as These Challenges are Addressed”, they go on to discuss how the new fitness test is what the Army needs in relation to fitness requirements.

“The ACFT Training Guide” (2018), gives an ample of information on different exercises to conduct in preparation of each event, ensures proper preparation with the preparatory drills prior to execution, and example training schedules directed towards the ACFT for leaders. After the information on the new fitness test was released, there was not a published manual for

several months. Finally, the training guide was published that allowed leaders to have a guide to follow to prepare their soldiers for this new fitness test.

The ACFT first published document was a big change in the Army. The APFT was well known as the Army fitness test for years. Unlike the APFT that is maxed (100 points in each event) sometimes without any preparation, the ACFT requires an ample amount of training to succeed and even pass for some soldiers. The APFT was meant to be a baseline level test for soldiers, but it was seen as too easy. The ACFT is made up of six events that are translational to movements or lifts that are conducted in combat. While the goal of both tests was combat readiness, the ACFT is a more accurate measure of the readiness of a force due to the more life-like events.

### **2020- Updates to ACFT Manual**

ACFT 2.0 was released mid-2020. Due to the COVID-19 pandemic that has affected the entire world, the implementation date was pushed back for testing. In other words, the Army planned to implement the ACFT as a record test, but due to the pandemic, training was not able to be conducted as planned and the Army had to push the date back to enable soldiers to condition to pass. Unlike previous tests that were planned for but never truly adapted by the Army, this one seems to be the one that will stick. When 2.0 came out, the Army was only worried about units taking the combat fitness test so that they could get all the data possible on it in case scoring or events needed to be adjusted. ACFT 2.0 included the plank as a temporary alternate event for the leg tuck. In 3.0, the plank was given its own grading criteria and points from zero to one hundred. Soldiers can conduct the leg tuck event or choose to do the plank instead.

ACFT 3.0 is the most recent change to the Army Combat Fitness Test. It was released early March 2021. The main change to the doctrine is a grading scale for the plank. The plank has a tangible point system that has a time that allows the soldier to still score well in the event even if they are not good at the leg tuck. Another change was the removal of the colored point system. Prior to this, the standards were black, silver, and gold. The standard for everyone was dependent on the job they had. Each job was given the color standard based on the physical requirements their job demanded. 3.0 changed the grading colors, and the standard became sixty point minimum for each event, like the APFT. Another addition to this version was gender separate grading for blind promotion. Meaning when going to promotion boards, the board will not know a gender. They will receive a packet and look only at the accomplishment and capability.

As the Army publishes manuals they learn from previous times, add new knowledge, and conduct trial and error to get it right. This trend continued with the ACFT when the Army quickly changed the date for the record test to give soldiers more time to prepare. With the release of new volumes of the manual, the Army has also pushed back the record test date each time. The biggest changes in V 2.0 and 3.0 was the addition to the plank event point system that distinguished it officially as an alternate event for the leg tuck and the removal of the job-based grading scales. The Army was quick to change the color standards by job to a 60-point minimum for each event to return to the same grading criteria as the APFT formerly. There is most likely going to be more changes to come in the future.

### **Controversy of the Army Combat Fitness Test (ACFT)**

Like other “new” fitness tests, with the ACFT there have been many negative comments and opinions on it. The ACFT was no different, and opinions were clear. The controversy of the

leg tuck went to the extent that senators attempted to halt the newly implemented fitness test by reaching out to the Pentagon. Published by the Washington Post and written by Missy Ryan in October 2020 was an article named, “Senators urge Pentagon to suspend implementation of Army’s new fitness test”. Leaders have went to far extents to attempt to change the fitness test due to many reasons.

One big argument that has been seen repeatedly is the fact that this test is being called gender neutral by the Army. On top of that, this combat fitness test requires equipment for nearly every event, compared to the APFT that could be completed almost anywhere with no equipment. Finally, the Army implemented the fitness test without the creation of a master fitness trainer specified for the ACFT and did not present a field manual or guide on how to prepare for it.

First, the argument about this test being gender neutral has been controversial. When the first studies began in the Army, 70 percent of males passed the ACFT and 84 percent of females failed (Rempfer, 2019). After early results, the Army updated the standards and implemented alternate events like the plank for the leg tuck. Due to the difference in natural body capabilities, women were not only failing more, but men were consistently outscoring females. With women being allowed to join all combat jobs in 2015, this may be the reason the Army felt the need to implement a fitness test with standards based on the job. As time went on, the number of females that failed the ACFT decreased, therefore it is capable for women to train and succeed on the ACFT. The problem is most women must train a significant more amount to score well on the fitness test while males would not have to and receive the same score. Therefore, if the scoring standards are the same, the males will either be graded too leniently, or the women will be

graded too harshly. It is not possible to find the happy medium with scores that are the same across the board.

Just as it was unrealistic for the Army to grade body composition and fat percentage on an equal scale for both genders, so is having a fitness test that grades both genders on the same scale. Due to the natural differences in the body anatomy and physiology between the genders, a “gender neutral” test would have standards that were slightly different for men and women. In “Comparing Athletic Performances- the Best Elite Women to Boys and Men”, Doriane Coleman and Wickliffe Shreve stated “there is an average 10-12% performance gap between elite males and elite females. The gap is smaller between elite females and non-elite males, but it’s still insurmountable and that’s ultimately what matters”. This means that even the fastest female runner in comparison to the fastest male will always be marginally slower. This biological difference displays the inaccuracy of the scoring measures that the Army has created for this fitness test.

In ACFT version 3.0, the grading standards based on job (black- 70 points in each event, silver- 65 points in each event, and gold- 60 points in each event) were changed to a minimum of 60 points in each event for everyone. Mainly due to the controversy of women’s scores, the color standards went away. The ACFT, Army *Combat* Fitness Test, was put in place to make the Army a more combat ready force. By making the same fitness standards for everyone, it creates a level playing field for all jobs even if the physical capabilities requirements for each are different. This means that an infantry soldier that could be expected to do many-mile-long marches with up to one-hundred pounds on their back would be expected to pass the fitness test with the same standards as a Army lawyer that works in an office daily. The problem with the standards being gender neutral and lowered for combat arms branches is that the current 60 points per event be

moderately difficult for the average female soldier, but easy for the average male soldier. The controversy of women in the military is still a thing and the Army is adding to it with this change.

While the Army is very good at adapting and changing to the changes in society, they may have changed the standards and altered events too early. Although in early testing the female failure rate was high, it may have not been an accurate measure of scoring because the soldiers were not familiar with the test or events and the Army ACFT manual was not yet published to guide training. Due to this, the original standards may have been easier to achieve with proper training if the Army allowed more time to condition for it. In the 1900's, the Army restricted females from being in certain jobs. They realized that was not fair and set a fitness test as the filter to who could and could not join that was not dependent on gender. Until a few years ago, women were not allowed in combat jobs, but the same should be required for specifically combat roles in the Army. All combat arms jobs require more physically fit soldiers because the job is physically demanding. If the Army is attempting to build a more combat ready force than the fitness test for combat arms specifically needs to be more difficult, or even separate from the rest of the non-combat jobs offered in the Army.

Second, the ACFT requires equipment for every event besides the hand-release push-up and the 2-mile run. The APFT (two minutes of push-ups, two minutes of sit-ups, and a two-mile run) required only a stopwatch to conduct. The test had to be conducted in under two hours (War Department, 2012) and was able to be conducted faster based on the number of graders. To supply one unit with the equipment necessary to take the ACFT, it cost the Army approximately \$3,500 to run one lane. An author also states, "Multiple ACFT kits must be purchased per unit and installed at great expense. A single lane kit exceeds \$3,000. Additionally,

equipment will incur significant shipping costs for deploying units.” (Kind, 2019). On top of cost, the speed of the ACFT is a little different than the APFT because each grader can only have a group of four or less. The speed is dependent on the number of lanes that a unit can run at one time which goes back to the cost of equipment.

Additionally, due to the requirement of equipment, the problem of training arises in the ability of deployed soldiers or others in a predicament where they cannot specifically train for the ACFT to be held accountable. This is not yet a problem because the Army is not taking record fitness test current day, but it is something that can and will be problematic for the Army. It is not a matter of if, it is a matter of when this will need a solution. A similar discussion was mentioned by Lee Kind (2019) saying, “The ACFT is not easy to administer in garrison or deployed environments. Heavy equipment requires storage and delivery, some equipment requires installation, and the test is weather restricted for outdoor use. Multiple administrators requiring significant training are necessary. Medical personnel should be on standby due to the substantial risk of severe injuries while performing ACFT exercises”. Meaning that this combat test cannot likely been administered to the people overseas or in combat zones.

The final reason was that when the Army informed soldiers that the ACFT would be the test of record in 2018, there was no actual training manual published for leaders to begin training their soldiers, and there was not until October 1, 2019. The alarmingly high rate of failure of the leg tuck event was not as serious to army leaders because a publication had not been released for many months. Due to this, soldiers did not know how to train for the specific events tested on the fitness test. Because of this, the army pushed back the date of record several times to

accommodate the disadvantage. After it was published, the failure rates increased, and scores have gone up.

The main controversies that have been discussed involving the ACFT have been the arguments of gender neutrality, the cost and versatility, and the lack of doctrinal guidance given to the soldiers. Males and females are tested on the same standards which has brought up much debate due to the physiological composition difference depending on gender. This standard of grading has shown very different scores when comparing women to men, men on average score much higher on the ACFT than women. Many changes have been made, the color standards being removed and the leg tuck addition, and the army will most likely continue to make more changes. Moving forward, the army has spent millions of dollars alone on the required equipment to train and conduct the ACFT. The army has also not addressed how soldiers deployed will be able to train or conduct the fitness test used by the army currently. On top of all of that, the army is still catching up due to delayed publications of army manuals for the combat test and the current pandemic.

### **What to Expect in the Coming Years?**

The ACFT has received much hate in the three years that it has been implemented. It has been reported that some units are refusing to take it because of the unfairness. The army has consistently changed fitness test to adapt to the times. The US has currently pulled troops out of Afghanistan and Iraq, which is the only combat has been conducted for years. If history repeats itself, the army is changing to reflect the times it is in. The challenging fitness test may be the army's way of downsizing, but the active changes to promote retention do not support that claim. This only leads some to believe that the army will be seeing war soon, which is why all soldiers must not only be ready but combat ready.

Because the combat fitness test is gender neutral, women and men tested on the same standard, a prediction made is that the army may be in a war in the near future. The Army Chief of Staff stated that he does not want men and women to die at combat due to being unfit (Ham, 2018). If the US Army is currently not in any engagements, why is this a concern? A force required to achieve on a test such as this may be expected to fight with everyone. This new combat may be next to pier.

While this is a prediction, the test could also be a way of the army guaranteeing a combat ready force, if needed. Reflecting to the initial entry of the Army Physical Fitness Test, the goal was not to use the APFT as the measure of combat readiness, but to be used as a baseline test. As promotions and incentives became based off of the APFT, it became difficult for units to focus on anything but the success of their soldiers in relation to the fitness test. Meaning, the ACFT may also be a way for the Army to implement a test that allows soldiers to only succeed and excel if they are combat ready.

The Army determining the ACFT the new fitness test could mean a number of things. It could be because of downsizing, an upcoming conflict requiring every man and woman, or that the army simply wants to be ready if needed. The answer is unclear at this point, but only time will tell.

### **Concluding Remarks**

In summary, the US Army has conducted physical fitness tests since 1906 and up until current day, 2021. The fitness test is constantly changing to adapt to the current needs of the Army and of the country. Through the decades, the fitness tests presented have shown trends on the knowledge that the army possesses, the role of women in the military, whether it is a drafted

force or all volunteer, and whether the country is in a peacetime or a wartime. No matter what time, the army continues to revamp and revise doctrine to ensure the most ready force capable.

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