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**ARMY PHYSICAL FITNESS TEST (APFT):  
NORMATIVE DATA ON 6022 SOLDIERS**

**U S ARMY RESEARCH INSTITUTE  
OF  
ENVIRONMENTAL MEDICINE  
Natick, Massachusetts**

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**UNITED STATES ARMY  
MEDICAL RESEARCH & DEVELOPMENT COMMAND**

Technical Report No. -T94-7

**ARMY PHYSICAL FITNESS TEST (APFT):  
NORMATIVE DATA ON 6022 SOLDIERS**

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## **EXECUTIVE SUMMARY**

The purpose of this study was to develop normative values for Army Physical Fitness Test (APFT) events and to demonstrate the use of these normative values. Data, collected during the 1988 Active Army Physical Fitness Survey by the U.S. Army Physical Fitness School (USAPFS), were analyzed for this purpose. Subjects were 5346 male soldiers and 676 female soldiers from 14 Army installations in the United States. The APFT was administered by Master Fitness Trainers under the supervision of personnel from the USAPFS. Soldiers completed as many push-ups as possible in two minutes, as many sit-ups as possible in two minutes and performed a two-mile run for time. Data were separated into the age and gender categories on which the current APFT standards are based (17-21, 22-26, 27-31, 32-36, 37-41, 42-46, 47-51,  $\geq 52$  years). Percentile distributions were calculated for each event. Percentiles for raw scores and APFT points are presented in Tables 4 to 18 and Tables 19 to 33, respectively. Illustrative examples show how these norms can be used.

## INTRODUCTION

The Army Physical Fitness Test (APFT) is an evaluation of general physical fitness as assessed by push-ups, sit-ups and a two-mile run. The APFT is the Army's basic fitness assessment tool and by regulation is taken by all personnel twice a year (FM 21-20, 1984). The test objective is to evaluate the aerobic capacity and muscular strength/endurance of soldiers based on their maximal effort on the test events (Knapik, 1989). The APFT is not an indicator of job performance but rather a simple measure of the soldier's physical fitness. Information provided by the APFT is intended to be used by commanders and individuals to assess the effectiveness of physical training programs and provide a basis for determining training requirements and planning programs to address shortcomings.

In 1988 the U.S. Army Physical Fitness School (USAPFS) was charged with studying the current level of physical fitness in active Army personnel (the 1988 Active Army Physical Fitness Survey). Staff members from USAPFS visited 14 military installations across the United States and administered the Army Physical Fitness Test (APFT) to over 6000 soldiers. The report of the findings and recommendations from the study were forwarded to the Army Chief of Staff through the Commander, Training and Doctrine Command (TRADOC) in the Spring of 1989. Some of the results from this study were also reported in the scientific literature (O'Connor, et al., 1990).

Due to many requests for more detailed information it was decided to develop

norms from these data. The purpose of this paper is to present percentile distributions of the APFT events and show how these distributions can be used to make comparisons of APFT scores between individuals and groups.

## **METHODS**

### **SUBJECTS**

Data were collected on 5346 male and 676 female soldiers from 14 U.S. Army installations: Ft Harrison, IN; Ft Campbell, KY; Ft Monroe, VA; Ft Bragg, NC; Ft McPherson, NC; Ft Jackson, NC; Ft Stewart, GA; Ft Gordon, GA; Ft McClellan, AL; Ft Riley, KS; Ft Hood TX; Ft Carson CO; Ft Ord, CA; Ft Lewis, WA.

An effort was made to test 1% of all soldiers in the U.S. Army grouped by five-year age categories beginning at age 17 years. U.S. Army Soldier Support Center, Alexandria, VA, provided age and gender distributions of the U.S. Army as of 1 September 1988 for this purpose. Table 1 shows the number of soldiers requested and those actually tested.

### **PROCEDURES**

Master fitness trainers and non-commissioned officers from each installation measured the height and weight of each soldier. In most cases, weight was measured with a beam scale and height was measured with an anthropometer attached to the scale. Age, to the nearest whole year, was obtained from unit military records.

Master fitness trainers from the local installations administered the APFT between 1 October 1988 and 30 November 1988. They were trained and supervised by personnel from the U.S. Army Physical Fitness School (USAPFS). Testing was conducted using the standard Army-wide criteria described in Army Field Manual 21-20 (1984). The APFT consisted of three events: push-ups, sit-ups and a two-mile run. For both sit-ups and push-ups, repetitions completed in two minutes were recorded; for the two-mile run, time was recorded. A push-up was counted only if the soldier lowered his/her body in a generally straight line to a point where the upper arm was at least parallel to the ground, and then returned to the starting point with the elbows fully extended. Sit-ups were performed with the knees bent at a 90° angle, the hands behind the head and the legs anchored (the participants ankles were held on the ground by a second person). The soldier was required to raise the upper body to a vertical position so that the base of the neck was above the base of the spine and then return the upper body to the ground. Raw scores for each of the three APFT events were recorded and later converted to "points" using the standards described on DA Form 705 (May 1987).

Soldiers were informed that the APFT would be used for the soldier's record and were encouraged to provide a maximal effort. Testers observed soldiers not providing their "best" effort which was generally manifested by a soldier performing only the number of sit-ups or push-ups required to "pass" the tests without demonstrating effort. There were 609 soldiers who were judged to have not provided maximum effort. Scores from these subjects were not included in the database.

## RESULTS

Table 2 shows descriptive statistics on the physical characteristics of male and female soldiers in each age group. For males, body mass increased as age increased, while height remained about the same. For females, there was little change in body mass or height with age.

Table 3 shows the descriptive statistics on the three APFT events for male and female soldiers without regard to age. Tables 4 to 11 show percentile distributions of **APFT raw scores** for male soldiers in each age category. Tables 12 to 18 shows percentile distributions of **APFT raw scores** for female soldiers in each age category. Distributions are shown from lowest performance levels (first percentile) to highest performance levels (ninety-ninth percentile). In the  $\geq 52$ -year age category, there were only 6 men and no women. In the 47-51 age category there were only 2 women; thus, Tables 11 (men) and 18 (women) show values for individual soldiers. Tables 19 to 26 display percentile distributions of **APFT points** for male soldiers by age groups. Tables 27 to 33 show **APFT points** for female soldiers by age groups. Tables 26 ( $\geq 52$ -year men) and 33 (47-51 year women) show individual soldier values because of the limited sample sizes.

## **DISCUSSION**

Tables 4 to 33 allow individuals, commanders, trainers, medical professionals and other interested personnel to compare their APFT scores to that of a large military group representative of soldiers in the wider U.S. Army. Individuals can examine relative changes in their fitness as a result of physical conditioning, deconditioning, injury or other influencing factors. Commanders and trainers can use the tables to examine how changes in physical training programs or deployments have influenced unit fitness. Researchers can use the tables to compare APFT scores from small samples to a larger, more representative military sample.

It is relatively easy for an individual soldier to obtain his/her percentile ranking. He/she needs only to compare his/her APFT scores to those in the tables. It is somewhat more involved to obtain the percentile rankings of a group of soldiers: it is necessary to 1) separate the sample into the appropriate gender and age groups, 2) calculate average APFT scores for each age group and 3) determine percentiles for each age group and each APFT event. Illustrative examples for both individual and group comparisons are given below.

### **CASE NO. 1 - INDIVIDUAL SOLDIER**

SSG Very Strack is a 25 year old male soldier. On his last PT test he performed 56 push-ups, 67 sit-ups and finished the run in 13 min, 30 sec. By consulting Table 5 (age group 22-26 years) he can see that: 1) for push-ups he is above the 60th percentile (scores better than 60% of all soldiers), 2) for sit-ups he is

at the 70th percentile (scores better than 70% of all soldiers) and 3) for the run he is above the 80th percentile (scores better than 80% of soldiers). SGT Strack performs well on the APFT compared to other soldiers of his age.

### **CASE NO. 2 - EXCEPTIONAL PERFORMANCE ON THE APFT**

SPC Dobbin had done an exceptional job on a recent training exercise and her Commanding Officer was writing the justification for her award recommendation. He wondered about SPC Dobbin's proficiency on the APFT. SPC Dobbin was a 21 year old, so the Commander used the Table for 17 to 21-year-old females (Table 12). SPC Dobbin performed 50 push-ups, 76 sit-ups, and ran two miles in 14 min, 12 sec. The Commander found these raw scores corresponded to percentile ranks of 95, 90, and 99, respectively. SPC Dobbin was surpassed by only 5, 10, and 1% of her female peers in the Army. The Commander added these data to the award recommendation.

### **CASE NO 3 - EVALUATION OF A UNIT PT PROGRAM**

LTC Crusty Roads, Commander of an Infantry Battalion, wondered if the new unit PT program had been effective for his 17 to 21-year-old male soldiers. Improvement seemed obvious since his young soldiers' last APFT score was 247; a year ago it was 235. When LTC Roads examined Table 19, he found the young soldiers' fitness 6 months ago was at the 80th percentile; on the last APFT it was at the 89th percentile. LTC Roads realized his young male soldiers were surpassed by

only 11% of the males (in that age category) in the Army. Also, this past year his unit increased their fitness from the 80th to the 89th percentile--a remarkable gain since they were highly fit to begin with. LTC Roads passed this information on to his training officer and told him to keep up the good work.

#### **CASE 4 - COMPARING SOLDIERS OF DIFFERENT AGE AND GENDER**

LTC Zelda Distress was a 42-year-old nurse who was always the last person to complete the two-mile run during the APFT. Because LTC Distress recognized that male and female physical performances have different standards, she determined her rankings from the tables. She compared her scores to those of the unit's 29-year-old training NCO, SSG Meaner who often suggested she perform more PT.

On her last APFT, LTC Distress performed 28 push-ups, 71 sit-ups, and ran the two miles in 18 min and 24 sec. These scores correspond to percentile ranks of 90, 90, and 75 (Table 17). During the same APFT, SSG Meaner performed 61 push-ups, 72 sit-ups, and ran two miles in 14 min and 12 sec. Table 6 shows that the percentile ranks for these scores are 80, 83, and 70. The ranking of LTC Distress for each event, relative to her peers, is actually somewhat superior to that of the training sergeant with his peers.

## **CASE NO. 5 - FITNESS OF AN ARTILLERY UNIT**

CPT Waber was proud of his soldiers - they were the finest artillery personnel he had ever known. After the battery APFT, he compared the raw scores and total points of his soldiers to soldiers of similar ages in the Army. Table 34 shows the worksheet that he used. Raw scores for each APFT event (and the total score) were tabulated separately for each age group. Only the 4 youngest age groupings were used since almost all soldiers were less than 37 years old. Averages were entered into Table 34; then, percentile ranks were determined from Tables 4-7 and Tables 19-22.

CPT Waber learned that the percentiles for the different age groupings for the sit-up, push-up, and 2-mile run events varied from 76-80, 80-84, and 77-80, respectively (See Table 34). Percentiles, based on total points for the APFT, varied from the 83-86. The APFT scores provided CPT Waber with another indication that he had truly outstanding soldiers.

## **CASE NO. 6 - UNIT FITNESS AFTER A DEPLOYMENT**

Bayonet Battalion had just returned from a three-month training exercise in the Middle East. SFC Gabby, the training NCO, was concerned that the physical conditioning of the Battalion had deteriorated because they had less organized PT in the field. An APFT was conducted and raw scores for the 17-21 and 22-26 year-old age grouping were compared to scores collected 6 months earlier. These two groups

were chosen because 82% of the soldiers in the company were within these age limits.

Table 35 shows the worksheet SFC Gabby used. Scores for the male and female soldiers in the two age groups were first compiled and average values calculated for each event. Total points were also calculated for each age and gender category. Next, percentiles were obtained from appropriate tables for each age category for males (Tables 4-5 and 19-20) and females (Tables 12-13 and 27-28).

Looking at total points suggested that there had been some loss of fitness but not as much as SFC Gabby had suspected. Looking at individual APFT items gave a better picture of where the losses had occurred. The soldiers' scores for push-ups and sit-ups had decreased only slightly. On the other hand, two-mile run times had decreased severely. In fact, percentile ranking on the run showed that the soldiers had gone from far above average (>50th percentile) to well below average. SFC Gabby initiated changes in the PT program, increasing the amount of aerobic exercise.

**TABLE 1**  
**NUMBER OF SOLDIERS REQUESTED FROM MILITARY INSTALLATIONS**  
**AND NUMBER ACTUALLY TESTED (O'CONNOR, ET AL., 1990)**

AGE GROUP (YRS)	SOLDIERS REQUESTED (N)		SOLDIERS TESTED (N)		TESTED/ REQUESTED (%)	
	MEN	WOMEN	MEN	WOMEN	MEN	WOMEN
17-21	1302	138	1157	111	89	80
22-26	2852	310	1688	228	59	74
27-31	1476	212	1017	164	69	77
32-36	1180	122	825	119	70	98
37-41	532	24	382	34	72	142
42-46	352	10	217	18	62	180
47-51	80	10	54	2	68	20
≥52	16	10	6	0	38	0
<b>TOTAL</b>	<b>7790</b>	<b>836</b>	<b>5346</b>	<b>676</b>	<b>66</b>	<b>84</b>

TABLE 2  
 PHYSICAL CHARACTERISTICS OF THE MALE AND FEMALE SOLDIERS BY AGE GROUP

		17-21	22-26	27-31	32-36	37-41	42-46	47-51	≥52	ALL
MEN										
AGE (YRS)	M	20.0	23.7	28.9	33.7	38.7	43.4	48.5	52.3	27.6
	SD	0.9	1.4	1.4	1.4	1.4	1.3	1.4	0.5	7.0
BODY HEIGHT (CM)	M	176.6	176.4	176.5	176.2	176.3	176.7	178.7	176.5	176.5
	SD	7.3	7.3	7.5	7.3	7.2	7.6	7.2	10.3	7.3
BODY MASS (KG)	M	75.3	76.7	78.2	79.2	79.3	80.6	81.2	80.9	77.5
	SD	9.3	10.3	10.8	10.3	10.4	11.3	8.4	8.2	10.3
WOMEN										
AGE (YRS)	M	20.1	24.0	28.7	33.8	38.2	43.1	47.0		27.5
	SD	0.8	1.4	1.4	1.4	1.3	1.1	0.7		6.0
BODY HEIGHT (CM)	M	163.3	163.5	163.7	163.7	165.3	163.5	167.6		163.6
	SD	7.3	6.5	8.4	6.9	7.3	5.8	2.4		7.2
BODY MASS (KG)	M	59.0	59.8	61.6	63.1	61.7	60.6	54.5		60.8
	SD	7.4	6.8	7.8	8.5	7.3	6.5	2.5		7.6

TABLE 3  
 DESCRIPTIVE STATISTICS ON THE APFT EVENTS  
 FOR MALE AND FEMALE SOLDIERS WITHOUT REGARD TO AGE

	MEN				WOMEN			
	RAW SCORE*		POINTS		RAW SCORE*		POINTS	
	Mean	SD	MEAN	SD	MEAN	SD	MEAN	SD
PUSH-UPS	50.4	13.0	72.5	12.2	28.3	11.1	73.3	11.2
SIT-UPS	58.7	12.6	74.7	11.7	58.9	13.3	77.0	12.5
TWO-MILE RUN	15.1	1.7	77.9	17.1	18.3	2.1	79.7	20.5

\* Raw score units for push-ups and sit-ups are repetitions and for two-mile run, minutes.

TABLE 4  
 APFT RAW SCORES FOR MALE SOLDIERS 17-21 YEARS

PERCENTILE	PUSH-UPS (REPS)	SIT-UPS (REPS)	TWO-MILE RUN (MIN:SEC)
1	29	38	19:16
5	35	47	17:20
10	41	51	16:30
20	44	54	15:44
25	45	55	15:33
30	46	56	15:23
40	50	60	15:01
50	52	61	14:40
60	55	64	14:20
70	58	67	13:55
75	60	69	13:45
80	62	70	13:28
90	70	75	12:54
95	74	80	12:25
99	83	90	11:50
MEAN	53.1	62.1	14:44
SD	11.6	10.2	1:30
SE	0.3	0.3	0:03
N	1157	1157	1117

TABLE 5  
APFT RAW SCORES FOR MALE SOLDIERS 22-26 YEARS

PERCENTILE	PUSH-UPS (REPS)	SIT-UPS (REPS)	TWO-MILE RUN (MIN:SEC)
1	28	36	19:21
5	35	46	17:34
10	40	49	16:31
20	43	52	15:57
25	45	53	15:44
30	46	55	15:31
40	49	58	15:10
50	51	60	14:46
60	55	63	14:24
70	59	67	14:02
75	60	69	13:47
80	63	70	13:33
90	71	77	13:00
95	77	83	12:30
99	84	90	11:48
MEAN	53.2	61.5	14:50
SD	12.4	11.3	1:32
SE	0.3	0.3	0:02
N	1688	1688	1631

TABLE 6  
APFT RAW SCORES FOR MALE SOLDIERS 27-31 YEARS

PERCENTILE	PUSH-UPS (REPS)	SIT-UPS (REPS)	TWO-MILE RUN (MIN:SEC)
1	23	32	20:21
5	33	42	17:56
10	38	45	17:06
20	40	50	16:27
25	42	50	16:12
30	43	52	15:56
40	46	55	15:31
50	49	59	15:06
60	51	62	14:38
70	56	66	14:12
75	59	67	13:54
80	61	70	13:41
90	69	76	13:11
95	76	82	12:42
99	82	90	11:59
MEAN	50.7	59.6	15:09
SD	12.7	12.3	1:40
SE	0.4	0.4	0:03
N	1017	1017	985

TABLE 7  
APFT RAW SCORES FOR MALE SOLDIERS 32-36 YEARS

PERCENTILE	PUSH-UPS (REPS)	SIT-UPS (REPS)	TWO-MILE RUN (MIN:SEC)
1	20	30	20:25
5	30	39	17:58
10	33	40	17:28
20	36	45	16:43
25	38	46	16:30
30	40	49	16:16
40	42	51	15:49
50	46	55	15:26
60	50	57	15:02
70	52	61	14:34
75	55	64	14:23
80	58	66	14:10
90	65	74	13:30
95	73	80	13:04
99	84	90	11:56
MEAN	47.4	55.8	15:29
SD	13.1	12.7	1:36
SE	0.5	0.4	0:03
N	824	825	801

TABLE 8  
APFT RAW SCORES FOR MALE SOLDIERS 37-41 YEARS

PERCENTILE	PUSH-UPS (REPS)	SIT-UPS (REPS)	TWO-MILE RUN (MIN:SEC)
1	19	28	21:59
5	30	34	19:02
10	32	35	18:17
20	34	40	17:31
25	35	40	17:15
30	36	42	16:53
40	39	45	16:22
50	41	49	15:54
60	45	52	15:27
70	48	55	14:57
75	50	58	14:41
80	53	61	14:25
90	62	71	13:38
95	70	76	13:19
99	80	86	12:15
MEAN	44.2	50.5	16:04
SD	12.4	13.2	2:15
SE	0.6	0.7	0:07
N	382	382	366

TABLE 9  
 APFT RAW SCORES FOR MALE SOLDIERS 42-46 YEARS

PERCENTILE	PUSH-UPS (REPS)	SIT-UPS (REPS)	TWO-MILE RUN (MIN:SEC)
1	10	16	21:51
5	26	25	19:29
10	27	30	18:30
20	30	32	17:42
25	30	35	17:31
30	31	36	17:20
40	33	40	16:54
50	36	44	16:28
60	40	48	16:02
70	42	51	15:30
75	44	53	15:18
80	46	55	15:07
90	53	64	14:24
95	61	70	13:44
99	70	79	12:05
MEAN	38.4	44.6	16:30
SD	11.5	13.3	1:43
SE	0.8	0.9	0:07
N	217	217	210

TABLE 10  
 APFT RAW SCORES FOR MALE SOLDIERS 47-51 YEARS

PERCENTILE	PUSH-UPS (REPS)	SIT-UPS (REPS)	TWO-MILE RUN (MIN:SEC)
5	22	26	19:45
10	23	28	19:26
20	25	29	18:48
25	27	30	18:26
30	28	30	17:50
40	30	32	17:30
50	32	35	17:12
60	38	38	16:51
70	40	47	17:58
75	43	52	15:43
80	47	55	15:29
90	57	61	14:51
95	64	68	12:43
MEAN	35.8	40.1	17:03
SD	12.8	13.6	2:01
SE	1.7	1.8	0:17
N	54	54	53

TABLE 11  
 APFT RAW SCORES FOR MALE SOLDIERS  $\geq 52$  YEARS\*

RANK	PUSH-UPS (REPS)	SIT-UPS (REPS)	TWO-MILE RUN (MIN:SEC)
1	22	23	18:56
2	27	30	18:52
3	31	35	18:08
4	31	42	15:51
5	34	53	15:46
6	36	59	15:45
MEAN	30.2	40.3	17:13
SD	5.0	13.8	1:35
SE	2.1	5.6	0:39
N	6	6	6

\* These values are based on six soldiers.

TABLE 12  
 APFT RAW SCORES FOR FEMALE SOLDIERS 17-21 YEARS

PERCENTILE	PUSH-UPS (REPS)	SIT-UPS (REPS)	TWO-MILE RUN (MIN:SEC)
1	09	27	27:51
5	16	39	21:42
10	18	46	20:47
20	20	52	19:40
25	22	53	19:10
30	22	55	18:48
40	25	58	18:23
50	30	60	17:58
60	32	62	17:40
70	35	66	17:12
75	37	69	17:59
80	40	70	16:27
90	44	76	15:52
95	50	80	14:56
99	66	87	14:10
MEAN	30.0	60.3	18:12
SD	10.7	11.8	2:08
SE	1.0	1.1	0:12
N	111	111	111

TABLE 13  
APFT RAW SCORES FOR FEMALE SOLDIERS 22-26 YEARS

PERCENTILE	PUSH-UPS (REPS)	SIT-UPS (REPS)	TWO-MILE RUN (MIN:SEC)
1	13	40	22:01
5	17	46	20:40
10	19	49	20:12
20	20	52	19:11
25	22	53	19:57
30	24	56	18:41
40	27	60	18:10
50	29	62	17:50
60	31	65	17:13
70	35	68	16:40
75	39	71	16:21
80	40	73	16:05
90	48	80	15:26
95	54	88	14:36
99	59	98	13:04
MEAN	31.0	63.2	17:42
SD	11.1	12.3	1:52
SE	0.7	0.8	0:08
N	228	228	222

TABLE 14  
APFT RAW SCORES FOR FEMALE SOLDIERS 27-31 YEARS

PERCENTILE	PUSH-UPS (REPS)	SIT-UPS (REPS)	TWO-MILE RUN (MIN:SEC)
1	09	33	25:32
5	15	41	21:48
10	16	44	20:39
20	18	48	19:34
25	19	50	19:19
30	20	52	19:09
40	22	55	18:39
50	25	60	18:01
60	29	61	17:38
70	32	66	17:10
75	33	68	16:58
80	35	70	16:48
90	44	79	15:48
95	49	81	15:12
99	58	88	13:30
MEAN	27.5	59.5	18:15
SD	10.6	12.5	2:02
SE	0.8	1.0	0:10
N	164	164	159

TABLE 15  
APFT RAW SCORES FOR FEMALE SOLDIERS 32-36 YEARS

PERCENTILE	PUSH-UPS (REPS)	SIT-UPS (REPS)	TWO-MILE RUN (MIN:SEC)
1	05	29	25:22
5	14	36	23:00
10	15	37	22:07
20	18	40	21:00
25	20	42	20:39
30	20	44	20:21
40	22	46	19:35
50	24	50	19:10
60	26	54	18:34
70	29	60	18:02
75	30	63	17:44
80	32	67	17:24
90	38	75	16:18
95	52	77	15:45
99	56	93	14:25
MEAN	25.6	53.1	19:15
SD	10.0	13.9	2:12
SE	0.9	1.3	0:12
N	119	119	115

TABLE 16  
 APFT RAW SCORES FOR FEMALE SOLDIERS 37-41 YEARS

PERCENTILE	PUSH-UPS (REPS)	SIT-UPS (REPS)	TWO-MILE RUN (MIN:SEC)
5	14	22	23:26
10	14	32	23:02
20	14	35	21:45
25	15	39	21:14
30	15	42	21:00
40	16	44	20:33
50	19	48	19:21
60	20	50	18:32
70	23	60	18:14
75	26	65	17:12
80	32	66	17:06
90	43	72	16:57
95	56	81	15:05
MEAN	22.9	50.4	19:26
SD	13.0	16.4	2:26
SE	2.2	2.8	0:25
N	34	34	34

TABLE 17  
 APFT RAW SCORES FOR FEMALE SOLDIERS 42-46 YEARS

PERCENTILE	PUSH-UPS (REPS)	SIT-UPS (REPS)	TWO-MILE RUN (MIN:SEC)
10	12	30	23:30
20	14	34	22:12
25	15	35	22:09
30	15	38	21:43
40	16	44	20:53
50	17	50	20:19
60	20	53	20:02
70	22	55	18:53
75	22	57	18:26
80	23	58	17:52
90	28	71	16:09
MEAN	18.8	48.4	20:08
SD	5.6	14.3	2:18
SE	1.3	3.4	3:23
N	18	18	17

TABLE 18  
 APFT RAW SCORES FOR FEMALE SOLDIERS 47-51 YEARS\*

RANK	PUSH-UPS (REPS)	SIT-UPS (REPS)	TWO-MILE RUN (MIN:SEC)
1	12	26	24:06
2	27	55	18:12
MEAN	19.5	40.5	21:09
SD	10.6	20.5	4:10
SE	7.5	14.5	2:57
N	2	2	2

\* These values are based on two soldiers.

TABLE 19  
 APFT POINTS FOR MALE SOLDIERS 17-21 YEARS

PERCENTILE	PUSH-UP POINTS	SIT-UP POINTS	TWO-MILE RUN POINTS	TOTAL POINTS
1	47	46	14	123
5	53	55	44	163
10	59	59	54	178
20	62	62	62	190
25	63	63	63	195
30	64	64	65	199
40	68	68	69	206
50	70	69	72	213
60	73	72	75	219
70	76	75	79	227
75	78	77	81	230
80	80	78	84	235
90	88	83	89	248
95	92	88	94	258
.99	100	98	100	277
MEAN	71.0	70.0	71.2	211.7
SD	11.4	10.2	15.7	29.4
SE	0.3	0.3	0.5	0.9
N	1157	1157	1148	1157

TABLE 20  
 APFT POINTS FOR MALE SOLDIERS 22-26 YEARS

PERCENTILE	PUSH-UP POINTS	SIT-UP POINTS	TWO-MILE RUN POINTS	TOTAL POINTS
1	48	49	22	139
5	55	59	51	176
10	60	62	61	189
20	63	65	66	199
25	65	66	68	203
30	66	68	71	208
40	69	71	74	216
50	71	73	78	224
60	75	76	82	232
70	79	80	86	240
75	80	82	88	245
80	83	83	90	250
90	91	90	90	265
95	97	96	100	277
99	100	100	100	294
MEAN	73.1	74.4	77.1	224.2
SD	12.1	11.1	15.4	31.3
SE	0.3	0.3	0.4	0.8
N	1688	1688	1680	1688

TABLE 21  
 APFT POINTS FOR MALE SOLDIERS 27-31 YEARS

PERCENTILE	PUSH-UP POINTS	SIT-UP POINTS	TWO-MILE RUN POINTS	TOTAL POINTS
1	45	50	24	127
5	55	60	54	181
10	60	63	62	191
20	62	68	66	203
25	64	68	71	208
30	65	70	73	212
40	68	73	77	221
50	71	77	82	229
60	73	80	86	238
70	78	84	91	249
75	81	85	93	252
80	83	88	96	258
90	91	94	100	273
95	98	100	100	285
99	100	100	100	300
MEAN	72.5	77.4	80.3	229.7
SD	12.5	11.8	15.9	33.2
SE	0.4	0.4	0.5	1.0
N	1017	1017	1011	1017

TABLE 22  
APFT POINTS FOR MALE SOLDIERS 32-36 YEARS

PERCENTILE	PUSH-UP POINTS	SIT-UP POINTS	TWO-MILE RUN POINTS	TOTAL POINTS
1	44	52	38	138
5	57	61	60	184
10	60	62	65	197
20	63	67	73	208
25	65	68	75	214
30	67	71	77	218
40	69	73	81	226
50	73	77	85	233
60	77	79	89	242
70	79	83	94	254
75	82	86	96	258
80	85	88	98	264
90	92	96	100	279
95	100	100	100	290
99	100	100	100	300
MEAN	74.0	77.5	83.6	234.8
SD	12.6	11.9	14.3	32.4
SE	0.4	0.4	0.5	1.1
N	824	825	823	825

TABLE 23  
 APFT POINTS FOR MALE SOLDIERS 37-41 YEARS

PERCENTILE	PUSH-UP POINTS	SIT-UP POINTS	TWO-MILE RUN POINTS	TOTAL POINTS
1	44	54	23	135
5	58	61	58	178
10	60	62	65	193
20	62	67	72	203
25	63	67	74	209
30	64	69	78	214
40	67	72	83	223
50	69	76	88	232
60	73	79	92	241
70	76	82	97	251
75	73	85	99	255
80	81	88	100	260
90	90	98	100	282
95	98	100	100	292
99	100	100	100	300
MEAN	71.9	77.0	84.4	232.4
SD	12.1	12.5	15.9	34.7
SE	0.6	0.6	0.8	1.8
N	382	382	378	382

TABLE 24  
APFT POINTS FOR MALE SOLDIERS 42-46 YEARS

PERCENTILE	PUSH-UP POINTS	SIT-UP POINTS	TWO-MILE RUN POINTS	TOTAL POINTS
1	29	33	21	109
5	60	52	54	178
10	61	61	66	193
20	64	63	74	209
25	64	66	76	212
30	65	67	77	215
40	67	71	82	223
50	70	75	86	230
60	74	79	90	239
70	76	82	96	246
75	78	84	98	254
80	80	86	99	258
90	87	95	100	270
95	95	100	100	290
99	100	100	100	300
MEAN	71.9	74.9	83.6	230.1
SD	11.5	13.7	16.0	34.9
SE	0.8	0.9	1.1	2.4
N	217	217	216	217

TABLE 25  
APFT POINTS FOR MALE SOLDIERS 47-51 YEARS

PERCENTILE	PUSH-UP POINTS	SIT-UP POINTS	TWO-MILE RUN POINTS	TOTAL POINTS
5	59	59	59	184
10	61	61	63	192
20	63	62	69	196
25	65	63	75	200
30	66	63	77	203
40	68	65	81	219
50	70	68	84	226
60	76	71	88	237
70	78	80	97	247
75	81	85	99	251
80	85	88	100	261
90	95	94	100	285
95	100	100	100	293
MEAN	73.4	72.8	83.8	228.4
SD	12.5	13.6	14.0	36.0
SE	1.7	1.9	1.9	4.9
N	54	54	53	54

TABLE 26  
 APFT POINTS FOR MALE SOLDIERS  $\geq 52$  YEARS\*

RANK	PUSH-UP POINTS	SIT-UP POINTS	TWO-MILE RUN POINTS	TOTAL POINTS
1	66	54	70	188
2	71	64	71	218
3	75	69	78	233
4	75	76	100	243
5	78	87	100	253
6	80	93	100	268
MEAN	74.2	73.8	86.5	234.5
SD	5.0	14.6	15.0	27.6
SE	2.1	5.9	6.1	11.3
N	6	6	6	6

\* These values are based on six soldiers.

TABLE 27  
APFT POINTS FOR FEMALE SOLDIERS 17-21 YEARS

PERCENTILE	PUSH-UP POINTS	SIT-UP POINTS	TWO-MILE RUN POINTS	TOTAL POINTS
1	36	37	5	105
5	56	49	29	130
10	60	56	38	155
20	62	62	55	182
25	64	63	57	187
30	64	65	61	195
40	67	68	66	203
50	72	70	69	214
60	74	72	72	220
70	77	76	77	224
75	79	79	79	234
80	82	80	84	238
90	86	86	90	252
95	92	90	100	254
99	100	97	100	272
MEAN	71.6	70.3	67.2	207.2
SD	11.2	11.7	19.8	35.7
SE	1.1	1.1	1.9	3.4
N	111	111	108	111

TABLE 28  
 APFT POINTS FOR FEMALE SOLDIERS 22-26 YEARS

PERCENTILE	PUSH-UP POINTS	SIT-UP POINTS	TWO-MILE RUN POINTS	TOTAL POINTS
1	55	55	22	146
5	61	61	48	177
10	63	64	55	190
20	64	67	64	203
25	66	68	67	207
30	68	71	69	213
40	71	75	74	219
50	73	77	77	228
60	75	80	83	236
70	79	83	89	246
75	83	86	92	254
80	84	88	95	259
90	92	95	100	277
95	98	100	100	284
99	100	100	100	299
MEAN	74.7	77.8	77.5	229.3
SD	11.4	11.4	17.0	33.0
SE	0.8	0.8	1.1	2.2
N	228	228	226	228

TABLE 29  
 APFT POINTS FOR FEMALE SOLDIERS 27-31 YEARS

PERCENTILE	PUSH-UP POINTS	SIT-UP POINTS	TWO-MILE RUN POINTS	TOTAL POINTS
1	47	53	32	127
5	60	61	59	180
10	62	64	64	202
20	64	68	74	210
25	65	70	77	214
30	66	72	79	219
40	68	75	84	230
50	71	80	90	239
60	75	81	94	250
70	78	86	98	256
75	79	88	100	260
80	81	90	100	266
90	90	99	100	276
95	95	100	100	288
99	100	100	100	297
MEAN	73.2	79.3	85.8	236.8
SD	10.8	12.0	14.7	32.6
SE	0.8	0.9	1.2	2.5
N	164	164	161	164

TABLE 30  
 APFT POINTS FOR FEMALE SOLDIERS 32-36 YEARS

PERCENTILE	PUSH-UP POINTS	SIT-UP POINTS	TWO-MILE RUN POINTS	TOTAL POINTS
1	30	54	14	111
5	60	61	56	187
10	62	62	66	200
20	66	65	75	215
25	68	67	79	220
30	68	69	82	224
40	70	71	90	232
50	72	75	94	240
60	74	79	100	245
70	77	85	100	251
75	78	88	100	259
80	80	92	100	264
90	86	100	100	280
95	100	100	100	299
99	100	100	100	300
MEAN	75.0	77.6	87.2	237.8
SD	11.1	12.9	18.0	33.3
SE	1.0	1.2	1.6	3.1
N	119	119	119	119

TABLE 31  
APFT POINTS FOR FEMALE SOLDIERS 37-41 YEARS

PERCENTILE	PUSH-UP POINTS	SIT-UP POINTS	TWO-MILE RUN POINTS	TOTAL POINTS
5	62	45	61	188
10	62	62	65	200
20	62	65	78	212
25	64	69	83	214
30	64	72	86	218
40	66	74	90	236
50	71	78	100	246
60	72	80	100	250
70	75	90	100	260
75	78	95	100	267
80	84	96	100	268
90	95	100	100	294
95	100	100	100	300
MEAN	72.6	78.9	90.6	242.1
SD	11.8	15.7	13.4	32.1
SE	2.0	2.7	2.3	5.5
N	34	34	34	34

TABLE 32  
 APFT POINTS FOR FEMALE SOLDIERS 42-46 YEARS

PERCENTILE	PUSH-UP POINTS	SIT-UP POINTS	TWO-MILE RUN POINTS	TOTAL POINTS
10	60	63	65	198
20	64	67	78	218
25	66	68	78	225
30	66	71	86	228
40	67	77	93	234
50	70	83	98	244
60	75	86	94	253
70	77	88	100	259
75	77	90	100	263
80	78	91	100	266
90	83	100	100	283
MEAN	71.3	80.5	90.4	242.3
SD	8.0	12.6	12.8	26.2
SE	1.9	3.0	3.0	6.2
N	18	18	18	18

TABLE 33  
 APFT POINTS FOR FEMALE SOLDIERS 47-51 YEARS\*

RANK	PUSH-UP POINTS	SIT-UP POINTS	TWO-MILE RUN POINTS	TOTAL POINTS
1	68	62	64	194
2	86	91	100	277
MEAN	77.0	76.5	82.0	235.5
SD	12.7	20.5	25.5	58.7
SE	9.0	14.5	18.0	41.5
N	2	2	2	2

\* These values are based on two soldiers.

TABLE 34  
WORKSHEET USED BY CPT WABER (CASE 5)

		AGE GROUP			
		17-21	22-26	27-31	32-36
<b>PUSH-UPS</b>	<b>Raw Score</b>	61	62	61	57
	<b>Percentile</b>	78	78	80	76
<b>SIT-UPS</b>	<b>Raw Score</b>	72	70	72	69
	<b>Percentile</b>	84	80	82	84
<b>TWO-MILE RUN</b>	<b>Raw Score</b>	13:30	13:36	13:48	14:19
	<b>Percentile</b>	80	80	78	77
<b>TOTAL POINTS</b>	<b>Points</b>	243	255	263	271
	<b>Percentile</b>	86	83	83	85

TABLE 35  
WORKSHEET USED BY SFC GABBY (CASE 6)

		AGE GROUP 17-21		AGE GROUP 22-26	
		CURRENT APFT	PAST APFT	CURRENT APFT	PAST APFT
<b>MEN</b>					
<b>PUSH-UPS</b>	Raw Score	60	62	55	60
	Percentile	75	80	60	75
<b>SIT-UPS</b>	Raw Score	64	63	65	67
	Percentile	60	57	65	70
<b>TWO-MILE RUN</b>	Raw Score	15:06	14:18	15:00	14:00
	Percentile	40	60	45	70
<b>TOTAL POINTS</b>	Points	218	227	229	246
	Percentile	59	70	69	76
<b>WOMEN</b>					
<b>PUSH-UPS</b>	Raw Score	35	39	35	40
	Percentile	70	75	70	80
<b>SIT-UPS</b>	Raw Score	68	66	68	70
	Percentile	73	70	70	74
<b>TWO-MILE RUN</b>	Raw Score	18:24	17:12	17:48	16:00
	Percentile	40	70	50	82
<b>TOTAL POINTS</b>	Raw Score	220	234	240	265
	Percentile	60	75	64	83

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