

AD-A240 301



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SMOKING VERSUS NONSMOKING
AND
THE ARMY PHYSICAL FITNESS TEST

A thesis presented to the Faculty of the U.S. Army
Command and General Staff College in partial
fulfillment of the requirements for the
degree

MASTER OF MILITARY ART AND SCIENCE

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by

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1991

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91-10688



91 9 16 016

REPORT DOCUMENTATION PAGE

Form Approved
OMB No. 0704-0188

Public reporting burden for this collection of information is estimated to average 1 hour per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Washington Headquarters Services, Directorate for Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302, and to the Office of Management and Budget, Paperwork Reduction Project (0704-0188), Washington, DC 20503.

1. AGENCY USE ONLY (Leave blank)		2. REPORT DATE 7 June 1990		3. REPORT TYPE AND DATES COVERED Master's Thesis Aug 90 - Jun 91	
4. TITLE AND SUBTITLE Smoking Versus Nonsmoking and ^{the} Army Physical Fitness Test				5. FUNDING NUMBERS	
6. AUTHOR(S) Joan P. Eitzen					
7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES) U.S. Army Command and General Staff College ATTN: ATZL-SWD-GD Fort Leavenworth, Kansas 66027-6900				8. PERFORMING ORGANIZATION REPORT NUMBER	
9. SPONSORING / MONITORING AGENCY NAME(S) AND ADDRESS(ES)				10. SPONSORING / MONITORING AGENCY REPORT NUMBER	
11. SUPPLEMENTARY NOTES					
12a. DISTRIBUTION / AVAILABILITY STATEMENT Approved for public release; distribution unlimited				12b. DISTRIBUTION CODE A	
13. ABSTRACT (Maximum 200 words) This study determines the difference in Army Physical Fitness Test (APFT) scores among smoking and nonsmoking students attending the Command and General Staff Officer's Course (CGSOC) 1990-1991. This study examines APFT scores in three different events as well as total scores. The three events are push-ups, sit-ups and a 2 mile run. Scores of current smokers, those who have recently quit smoking, and non-smokers are evaluated. This study contributes to the knowledge of smoking and its link to physical fitness in this limited population using the APFT scores as the unit of measurement. Physical fitness affects overall mental and physical health, and physical readiness. Decreased physical fitness infers decreased endurance on the battlefield and this may impact overall military readiness. This is an important area to evaluate because it may have an overall effect on the future leaders of the military. The results of this study may also help to predict the future health of the current forces and related health care costs.					
14. SUBJECT TERMS Smoking Army Physical Fitness Test				15. NUMBER OF PAGES 64	
				16. PRICE CODE	
17. SECURITY CLASSIFICATION OF REPORT Unclassified	18. SECURITY CLASSIFICATION OF THIS PAGE Unclassified	19. SECURITY CLASSIFICATION OF ABSTRACT Unclassified	20. LIMITATION OF ABSTRACT		

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MASTER OF MILITARY ART AND SCIENCE

THESIS APPROVAL PAGE

Name of candidate: Joan P. Eitzen, MAJ, US/A

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The opinions and conclusions expressed herein are those of the student author and do not necessarily represent the views of the U.S. Army Command and General Staff College or any other governmental agency. (References to this study should include the foregoing statement.)

**SMOKING VERSUS NONSMOKING AND ARMY PHYSICAL FITNESS TEST,
by Major Joan P. Eitzen, USA, 65 pages.**

This study determines the difference in Army Physical Fitness Test (APFT) scores among smoking and nonsmoking students attending the Command and General Staff Officer's Course (CGSOC) 1990-1991.

This study examines APFT scores in three different events as well as total scores. The three events are push-ups, sit-ups and a 2 mile run. Scores of current smokers, those who have recently quit smoking, and non-smokers are evaluated. This study clearly shows a significant difference between APFT scores among smoking and nonsmoking students and implicates smoking as detrimental to physical fitness when using APFT scores as a measure of fitness.

This research project contributes to the knowledge of smoking and its link to physical fitness in this limited population using the APFT scores as the unit of measurement. Physical fitness affects overall mental and physical health, and physical readiness. Decreased physical fitness implies decreased endurance on the battlefield and this may impact overall military readiness. This is an important area to evaluate because it may have an overall effect on the future leaders of the military. The results of this study may also help to predict the future health of the current forces and related health care costs.

ACKNOWLEDGEMENTS

I would like to acknowledge the assistance given me by the members of my research committee. A special note of appreciation is extended to Lieutenant Colonel Ellen Synovec for her endless patience, interest, and expertise. Thanks too, to Dr. Joe Dziados and Dr. Fred Miser for their encouragement and technical assistance with setting up this research project.

Additional thanks to Lieutenant Colonel Bob Ramsey for consistently guiding me in the right direction. His patience, support, encouragement and guidance have been much appreciated. I would also like to thank John Luce, Alex McDowell, Edie and Julian Jensen, and Colonel Nan Borg for their endless support and encouragement.

Lastly, but most of all, thanks to my husband, Dr. Ed Eitzen who had faith in me even when I lost faith in myself. Without his technical expertise, support, love, and encouragement, I would not have been able to complete this project.

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CHAPTER I

INTRODUCTION

Smoking is responsible for more than one in every six deaths in the United States today. Smoking remains the single, greatest cause of preventable death in our society.¹ Smoking students in the Command and General Staff Officer's Course (CGSOC) were the inspiration for conducting this study. The students are frequently noted standing outside the doors of Bell Hall during breaks and in between classes smoking cigarettes. If time and energy spent smoking were put into exercising and improving fitness, would their Army Physical Fitness Test (APFT) scores be higher? First, scores needed to be evaluated and compared to determine if smoker's scores were higher, lower, or the same as non-smokers.

The purpose of this study is to identify whether there is or is not a significant difference between APFT scores in smoking and nonsmoking students attending the CGSOC during 1990-1991. This chapter will discuss aspects associated with smoking in general, smoking in the Army, smoking and fitness, the 'Fit to Win' program, and the current study.

General Aspects of Smoking

Smoking is a drug addiction. The Surgeon General's Report identified smoking as the most common cause of avoidable morbidity and premature death in the United States.² This conclusion comes twenty-five years after the U.S. Surgeon General's first warning that cigarette smoking is a serious health hazard. The Centers for Disease Control (CDC) has reported that in 1988

alone, more than 434,000 Americans died from health problems caused by smoking. This is an increase of 11 percent since 1985.³ Iverson in 1987 noted that there have been more than 10 million deaths in this century alone that can be attributed to smoking.⁴ Each time a person smokes a cigarette, five minutes of life is lost.⁵ In addition, the mortality rate for adult cigarette smokers is double that of nonsmokers.⁶

The health effects of smoking are devastating and account for thirty percent of all cancer deaths. In the United States, cigarette smoking is the major cause of cancer of the lung, larynx, oral cavity, and esophagus. In 1988, the CDC noted that there were 111,985 deaths from lung cancer.⁷ Smoking contributes to cancers involving the bladder, kidney, and pancreas. There were 30,850 deaths from these other smoking related cancers in 1988.⁸ Smoking is also the major risk factor of coronary heart disease, stroke, and peripheral vascular disease.⁹ Coronary heart disease alone results in almost 200,000 deaths per year and thousands of hospital visits.¹⁰ In addition to the ill health effects already mentioned, smoking in the United States contributes to the incidence of peptic ulcer disease, intrauterine growth retardation, and more than 5000 perinatal deaths each year.¹¹ Smoking is responsible for most of the deaths from emphysema, chronic bronchitis, and fires.¹²

Numerous studies have demonstrated that smokers have higher resting and exercise heart rates than non-smokers.¹³ This implies the heart has to work much harder to deliver oxygenated blood to vital organs and tissues. Goldberg noted in 1971 that cigarettes and the effects from smoking them can produce changes opposite to those seen with physical conditioning.¹⁴

Lungs appear to suffer the most from cigarette smoking, but the cardiovascular system is also affected. Smokers have been found to have a significant increase over non-smokers of symptoms such as cough, shortness of breath, sputum production, and wheezing.¹⁵ Most of these symptoms are related to diseases, such as bronchitis and emphysema, that occur in the small airways of the lungs in smokers.

Smokers' rate of small airway dysfunction is much higher than non-smokers. This is shown by reduced vital capacity and forced expiratory flow rates in pulmonary function studies that compared smokers and non-smokers.¹⁶ Lung function is decreased progressively as the number of smoking pack-years increases.¹⁷ Researchers have also found abnormal lung function in adolescents and young adults who have just begun to smoke. This seems to suggest an immediate negative effect.¹⁸ Increased airway resistance and decreased expiratory flow rates have documented this immediate effect after smoking just one cigarette.¹⁹ Smoking jeopardizes the cardiopulmonary system anatomically and physiologically.

Along with the devastating health effects of smoking, another aspect of smoking that is documented, as well as morbidity and mortality, is the cost to society of cigarette smoking. The cost of smoking is phenomenal in terms of higher health care costs, lost productivity, and increased absenteeism.²⁰ A forty-five percent higher rate of job absenteeism in the United States was noted among smokers as compared to non-smokers. Yearly, the cost of this absenteeism is a productivity loss of 43 billion dollars.²¹ In 1985, the cost of health care associated with smoking related illnesses was over 16 billion dollars.²²

Although smoking prevalence in the United States is declining, at least in the male population, there are still over 50 million adults who smoke.²³ The recent decline of smoking may have a positive effect on the associated higher health care costs. In 1965, 40 percent of Americans smoked. That was the year the Surgeon General issued his warning against smoking. From 1985 to 1988, the number of Americans who smoked declined from 30 to 29 percent. Because it may take up to 20 years to develop cancer from smoking, society is now paying for the damage that occurred 20 to 30 years ago when larger numbers of people smoked.²⁴

One can compare a burning cigarette with a chemical factory that produces over 4000 compounds.²⁵ Nicotine and carbon monoxide are the predominant compounds. These compounds hinder oxygen delivery and uptake; this impairs endurance and training response.

Smoking in the Military

It is widely held that cigarette smoking adversely affects the health and welfare of society. The military cannot escape the effects of smoking any more than society as a whole can escape them. The military, and the Army in particular, has a significant problem with smoking rates being almost twice that of the civilian sector. Approximately 28 percent of the American population smoke now. This rate is 40 percent among Army personnel. Department of Defense statistics indicate that the percentage of Army personnel who smoke is higher than any other branch of the military.²⁶

Health care costs may be higher as well. In 1984, the military health care system spent 210 million dollars on smoking related illnesses.²⁷ Thirteen

thousand, five hundred man-days are lost annually in the U.S. Navy due to smoking-related illnesses.²⁸ Upper respiratory infections related to smoking have caused the military significant losses not only in time and money, but also in terms of time lost from work.²⁹

The Army still has numerous areas where non-smokers are exposed to smoke from smokers. The CDC reported that in 1988, 3,825 nonsmokers in the United States died from lung cancer caused by passive smoking which is another's smoke.³⁰ Though smoking areas in Army buildings are to be designated areas, they are often in offices or areas in close proximity to several other offices and areas where there are non-smokers. Most U.S. Army Hospitals, however, have enforced no smoking policies inside the hospitals and those who smoke must go outside if they want to smoke. It is accurate to summarize that smokers affect the military as well as society.

Finally, if one puts aside the health, endurance, and general physical fitness concerns associated with smoking in the military, there are also direct effects of smoking on the battlefield. Discarded cigarette butts and matches may lead the enemy to a smoking soldier. Even though smokers may take precautions, they also get tired and make mistakes. Cigarettes smell and so does a soldier who smokes as well as his gear. Smokers often have chronic coughs. Also, there is the potential of starting a fire with a cigarette butt.

These smells and sounds could alert the enemy to a soldier's location. A captain on a Japanese destroyer spotted a light across the water during a patrol at night in World War II in the South Pacific. It was an American sailor smoking on the conning tower of a surfaced submarine. The Japanese gunners aimed at the glowing cigarette and sank the submarine. After this incident, the

Japanese officer threw his own cigarettes into the sea and vowed never to smoke again. An Army nurse in her memoirs told about U.S. troops that were warned in World War II that on a dark night a lighted cigarette was visible for miles at sea and thousands of feet into the air.³¹

In addition, smoking also appears to interfere with perceptual and motor skills such as reaction time, visual acuity, and time perception.³² Alterations in these skills on the battlefield could have devastating effects. Ill effects can occur in soldiers addicted to nicotine when smoking is not possible. Side effects of nicotine withdrawal include irritability and nervousness.³³ These side effects can affect concentration and performance on the battlefield and thus can be devastating.

Smoking and Fitness

One particular area that deserves extra attention in the military is the effects of smoking on fitness. Physical fitness is essential for combat readiness. It is important to know if there is a link between smoking and fitness. Chronic diseases such as coronary heart disease, emphysema, bronchitis, and lung cancer have already been noted as smoking's adverse health effects. Many studies have documented the long-term consequences of smoking, along with the effects of second hand smoke, but there has been very little research to evaluate if there is a difference in physical fitness among smokers and nonsmokers. The acute effects of a smoking habit on physical fitness in military populations are not known. The population attending the CGSOC is particularly interesting and important to study as this population will probably become the future leaders of the Army. They should be the most physically fit soldiers and

role models to others in the Army. Determining the difference between smoking and nonsmoking students' APFT scores may demonstrate if a link exists between fitness and smoking.

The Army Physical Fitness Test

In 1985, the Army instituted a physical fitness program.³⁴ Army leaders were beginning to put more emphasis on physical fitness. The military, particularly the Army, strongly emphasizes the physical fitness test which is given to each soldier twice a year to try to insure minimal physical fitness. Levels of fitness are measured by different events in this test. This is a base level of physical conditioning essential for every soldier in the Army, regardless of sex, specific specialty, or duty assignment. It also helps commanders assess general fitness of their units.

The APFT is a performance test made up of push-ups and sit-ups that are meant to evaluate muscular strength and endurance. Another component is a two mile run that is timed, which is meant to measure cardiorespiratory endurance. The APFT is standardized and objective and evaluates the basic components of physical fitness and a soldier's ability to perform physically.

The APFT uses strict criteria Army wide. The standards that are expected of soldiers are statistically derived and can be correlated with maximal oxygen consumption. This supports its use as a measure of physical fitness.³⁵ A raw score is obtained in each event and is then converted to a point score based on a scoring table for each event. A point system from zero to 100 has been standardized and adjusted for age and sex differences is used. All soldiers must attain a score of at least 60 points in each of the three events and attain an

overall score of at least 180 to pass and meet the minimum standards of the APFT. The maximum attainable score is 300 points. One must assume that students in CGSOC will do the best they can on this test, though the baseline requirement is only to pass, and little recognition is given for surpassing 180 points. Some units insure soldiers receive a physical fitness badge for scores over 275, however, this is a very inconsistent policy.

Selected soldiers at different points in their career are specially trained to help other soldiers improve their level of fitness. This is in hope that soldiers would become more physically fit and increase their endurance. Strength and endurance are physical qualities desirable in fighting men and women. These qualities should increase with improved physical training. Physically fit soldiers have a greater resistance to illness and disease and recover faster when injured than soldiers who are unfit. They also seem to have greater levels of self confidence, mental toughness, and motivation. Therefore, fit soldiers may cope better with stress and fear of combat and may perform at increased capacities.³⁶ As stated in Army's Field Manual 100-5, "well trained, physically fit soldiers in cohesive units retain the qualities of tenacity and aggressiveness longer than those which are not."³⁷

Aerobic capacity is the best single indicator of physical fitness. This is the ability of the cardiopulmonary system to efficiently deliver oxygen to working muscles.³⁸ Aerobic capacity is measured as maximal oxygen uptake in the laboratory. The physiological symbol for maximal oxygen uptake is $\text{VO}_2 \text{ max}$. This refers to the amount of oxygen blood cells can carry to tissues, muscles, and organs. Blood has to have enough oxygen to feed muscles in order for them to work efficiently. Smokers have a lower $\text{VO}_2 \text{ max}$ and the heart has to

work harder to deliver enough oxygenated blood to insure nourishment to tissues and organs. VO_2 max is seen as the 'gold standard' for cardiopulmonary fitness in military and civilian circles alike. Because performance on the APFT is closely associated with VO_2 max, the APFT score provides a reliable measure of physical fitness.³⁹

'Fit to Win'

Over the last several years, the Army has been highlighting efforts in research and development concerning areas in physical fitness. The Secretary of the Army designated 1982 as the Year of Physical Fitness. At this time, the Army Physical Fitness Research Institute was formed at Carlisle Barracks, Pennsylvania. There was much effort put into improving the physical fitness of soldiers. This was seen as a way to increase soldier's ability to successfully sustain operations on a modern and highly intense battlefield.

In 1986, the Department of Defense and the Department of the Army established a set of guidelines that were meant to promote healthier life styles and improve fitness.⁴⁰ This program is called 'Fit To Win' and the goals of this program are to improve the quality of life and health for all soldiers while at the same time improving combat readiness. 'Fit to Win' has become the Army's slogan.

Smoking cessation is a big part of the 'Fit to Win' program. This program was meant to help the Army meet the overall goals of maximum combat readiness, efficiency, and work performance. Cigarette smoking is detrimental to health and productivity and is inconsistent with these goals of the Army. If a significant difference is found in APFT scores between smokers and

nonsmokers, this data would provide evidence of a need for increased health education efforts and for more and better smoking cessation programs in the Army.

In the Army's "Fit to Win" program, a Health Risk Appraisal is included as part of the assessment. This consists of a cholesterol, blood pressure and blood sugar evaluation, and administration of a detailed questionnaire asking for smoking information. The smoking related questions have been tested and are valid and reliable. Therefore, they were used to collect smoking data for this study.

The Research Question

This study answers the question, "Is there a difference in APFT scores among smoking and nonsmoking students attending the Command and General Staff Officer Course (CGSOC) A.Y. 90-91?" The subordinate questions deal with whether there is a difference between smokers and nonsmokers in each event in the APFT- the number of push-ups and sit-ups a student can do, and the completion time of the two mile run.

This study on APFT scores in CGSOC students will reveal if there is a difference between smokers and nonsmokers APFT scores. If a decreased level of physical fitness is found in smokers, this infers decreased endurance on the battlefield.

The assumptions made concerning this study were:

- a. The questionnaire used to collect the data is valid and reliable.
- b. Access will be provided to APFT score cards.
- c. Students will be honest with self-reporting smoking behavior.

d. Students will do their best on the APFT.

The following are definitions of terms used for this study:

a. Smokers - students who currently smoke or who quit smoking during the last six months.

b. Nonsmokers - students who do not smoke or who quit smoking more than six months ago.

c. Physical fitness - a state of overall physical well-being

d. APFT - a standardized test administered to all U.S. Army personnel twice a year to measure fitness. Scores are adjusted for age and sex.

There are certain limitations and delimitations associated with this study.

The limitations are:

a. Students may under-report their smoking habits

b. When using self-reported survey data, there is a possibility for bias.

c. The survey will not be anonymous but will be confidential.

d. People interested in health will participate and others may not; therefore, there may be a selection bias.

e. Previous exercise history may affect results.

The delimitations are:

a. This study will not include a historical average of APFT scores.

b. This study will not include APFT scores other than scores from the test in October, 1990.

c. This study will only include active duty U.S. Army officers attending the CGSOC regular course.

d. This study will not include use of smokeless tobacco or cigar smoking.

e. This study will not include students with profiles.

f. This study will not include students taking alternate physical fitness tests.

Once this study identifies whether or not there is a link between smoking and APFT scores, results could be used to estimate physical readiness and fitness as measured by the APFT scores in a select group of officers. It is reasonable for one to assume that the more physically fit soldiers are, the easier they will find it to conserve their fighting strength. Since physical fitness affects overall mental and physical health, and physical readiness, this study contributes to the knowledge of if and how smoking is linked to physical fitness in this limited population, with APFT scores being the measure of fitness used.

Perhaps the results of this study may lead to policy changes within the military, specifically the Army. The post exchanges and commissaries deal heavily in cigarette sales. Elimination of cigarette sales in post concessions would carry with it a very strong message about the opinion of military leadership towards smoking.

Limitation of smoking during duty hours and smoking cessation inside all Army buildings such as Army hospitals have done would also be a step in the right direction. Special incentives could be offered for not smoking. These could be in the form of monetary compensation or extra days off. The possibility of forfeiture of health benefits for smoking related diseases should be seriously considered. Increasing number and locations, that is, availability of smoking

cessation programs and support of on-going educational programs on smoking hazards should be mandatory on all Army posts.

The results of this study will be forwarded to the Army Surgeon General and be presented at future research meetings held by the medical as well as military communities. This is in hope of having cigarettes removed from post concessions and to force the issue of health education. The results of this study will also be submitted to a professional journal for publication.

This study lends support to the federal-work-site smoking ban proposed by the Department of Health and Human Services and endorsed by Defense Department officials. This would also protect nonsmokers from the dangers of second hand smoke.

In summary, the probability of chronic health problems may be predicted if the smoking behavior among soldiers remains unchanged. Smoking is detrimental to good health and productivity and adverse effects from smoking are most likely cumulative. This has an overall effect on future leaders of the Army as well as the total military. One of the basic goals of the Army today is to heighten combat readiness, and to increase efficiency and work performance.⁴ Physical fitness is fundamental for combat readiness and smoking is not compatible with this goal.

ENDNOTES

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CHAPTER II

LITERATURE REVIEW

Bahrke, Baur, Poland, and Connors in 1988 examined the relationship of cigarette smoking and performance on the U.S. Army Physical Fitness Test . Soldiers who smoked performed fewer push-ups and fewer sit-ups. The average two-mile run time for smokers was slower than for non-smokers, however, the difference was not statistically significant. Statistical comparisons were made with one way analysis of variance. They also summarized that as the number of cigarettes smoked per day increased, repetitions of push-ups and sit-ups decreased. No significant changes were found for the two-mile run time. These studies were done on 147 soldiers attending a four week training course and the authors concluded that soldiers who smoke had significantly reduced physical readiness.¹

In 1986, Jensen looked at the relationship between cigarette smoking and physical fitness as measured by the Army Physical Fitness Test. Jensen looked at scores of 54 enlisted medical company personnel. Data analysis with a one-tailed t test revealed a statistically significant difference between smokers and non-smokers in all APFT scores except the push-up event. Along with these conclusions, this study also identified the need for further research in this area.²

Miser in 1987 conducted a study on 192 male soldiers in a Field Artillery unit at Fort Sill, Oklahoma. He obtained a smoking history during routine physical examinations and analyzed scores for two sequential Army Physical Fitness Tests. There were 109 smokers and 83 non-smokers included in this

study. He supported the findings noted previously of Jensen and Bahrke et al. and concluded that non-smokers are more physically fit than smokers as measured by performance on the APFT. All participants in this study were from the same unit that exercised together regularly. This ensured a baseline uniform level of training. He analyzed two sequential APFTs over one year to eliminate the possibility of substandard or extraordinary performance by individuals. This study also showed that the performance on the APFT decreased as the amount smoked per day and the duration increased. These results demonstrated an inverse relationship between smoking and APFT performance. Of additional interest, Miser also noted that there were four soldiers who failed the APFT and all were smokers. At the same time, there were three soldiers who earned the maximum score on the APFT and all three were non-smokers.³

Conway and Cronin in 1986 did a study on 1,357 men stationed aboard ships in the San Diego area to examine smoking prevalence and to assess the impact of smoking on their physical fitness. Most smokers in this group were non-black enlisted personnel with lower education levels than average. Smoking was clearly associated with poorer physical fitness, most notably on cardiorespiratory endurance (1.5 mile run performance) and muscular endurance (sit-ups). Men who had never smoked scored higher than current and former smokers. Former smokers performed better on the 1.5 mile run and sit-ups than current smokers. The researchers computed analyses of variance and Pearson product-moment correlation coefficients to examine the degree of association between the physical readiness test and performance and smoking.⁴

In 1988, Marti, et.al, in a study using Swiss data, suggested that smoking exerts a direct, biologically mediated, deleterious effect on endurance capacity. He concluded that the distance covered in a 12 minute endurance run was inversely related to daily cigarette consumption and years of smoking. This association was present even among light smokers who had been smoking less than 2 years when they were compared with non-smokers.⁵

Kristen (1983)⁶ once again documented that smokers have increased illness and morbidity as well as premature death. If smoking is decreased and fitness increased, one would expect to see a decrease in premature death.

Goldbarg, et. al, in 1971 noted that smoking only one cigarette lowered cardiac stroke volume in young men. Because of this, the author concluded: "since the major hemodynamic effect of physical training is to increase stroke volume over pre-training levels, cigarettes can thus be said to produce changes opposite in direction to those of physical conditioning."⁷

Niewoehner, et. al, in 1974 showed a relationship between smoking and pathologic changes in the peripheral airways.⁸ He identified the characteristic pulmonary lesion in young smokers to be respiratory bronchiolitis. This finding was confirmed by Berend, et. al, in 1979. He showed the relationship between small airway obstruction on pulmonary function tests with morphologic abnormalities from lung resections.⁹

Dockery, et. al, in 1981 showed that smoking has both an immediate and chronic effect on lung function in a study with a sample of over 8000 people.¹⁰

Krumholz compared oxygen debt in smokers to nonsmokers in 1964. He looked at smokers and non-smokers after five minutes of exercise and noted

a greater accumulation of oxygen debt in smokers.¹¹ Other later studies have confirmed that smoking impairs VO₂ max.¹²

Although the next few studies are not directly related to the relationship between the Army Physical Fitness Test scores and smoking, they are still of interest to this study.

The prevalence of smoking among military personnel exceeds the rates established for the general population. Studies done from 1980 to 1985 estimated that approximately half of all military personnel are smokers.¹³ With our knowledge about the effects of physical fitness on overall mental and physical health, it is important to know if smoking is related to physical fitness and thereby physical readiness. Smoking is a behavior that can be changed. If a significant difference in APFT scores is found between smoking and nonsmoking students attending the CGSOC, it would provide additional rationale to emphasize health education efforts and to focus preventive health care on providing smoking cessation programs to change this behavior.

Cronin and Conway (1987) stated that effective smoking prevention and cessation programs should decrease health care costs, increase productivity, increase physical fitness, and produce a healthier and fitter force.¹⁴ These are the basic reasons the Army's "Fit to Win" program was initiated.¹⁵

Literature that examines physical fitness measurements and smoking is limited. The effects of cigarette smoking on physical fitness in the U.S. Army CGSOC students has not been studied. CGSOC students, as future leaders of the military, are an ideal group to assess. If a significant difference in APFT scores is found between students who smoke and students who do not smoke, this study may help medical professionals direct health education and health

promotion efforts in the right direction. This study also contributes valuable information to the current literature. If premature death can be prevented and therefore keep the Army's leaders effective for a longer period of time, other soldiers would be able to benefit from the leader's military education and experience. In addition, if health care costs can be decreased, it would well be worth putting money and effort into health education, and health promotion, particularly smoking cessation programs.

ENDNOTES

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CHAPTER III

METHODOLOGY

It has already been noted that in the Army's "Fit to Win" program, a Health Risk Appraisal is included as part of the assessment. This consists of a cholesterol, blood pressure and blood sugar measurement, and administration of a detailed questionnaire regarding various health related practices including information on smoking. One of the assumptions made during this study was that the questions were tested before the questionnaire was put into use Army wide and that they are valid and reliable. Therefore, the questions pertaining to smoking from this questionnaire were used for the purposes of collecting data for this study.

Each Army CGSOC student was requested to complete a short, seven item questionnaire requesting demographic data and a history of smoking and exercise habits. Included with the questionnaire was an information letter explaining the study and requesting participation and written permission to verify APFT scores. The questionnaire and letter included are at Appendix A. Students were asked to return the questionnaires even if they chose not to participate. They were given the opportunity to state a reason why they chose not to participate, if that were the case. All CGSOC students were given questionnaires; however, only data from U.S. Army students taking the regular APFT test was used for the data analysis.

After the first questionnaires were distributed, 729 were returned within two weeks. One month after the original distribution, a second follow up

distribution was done through section leaders to attempt to increase the response rate. This request is attached as Appendix B. Sixty-six additional questionnaires were returned within one week. Total response rate was almost 80 percent of the approximately 1000 students eligible to participate.

A memorandum and a data collection form were distributed to all Academic Counselors and Evaluators requesting APFT scores of the students who returned the questionnaires to allow access to the APFT scores. The memorandum and data collection form is attached at Appendix C. Forty-two out of eighty of the advisers returned the information requested within two weeks, however, occasional event scores were not included with returned data. A second request (Appendix D) was distributed one month after the original and 20 additional forms were returned within two weeks. Although a third request was distributed two weeks later, the researcher collected the data on APFT scores for the remaining students. Because one advisor was not able to be contacted for APFT results, these students were deleted from the study.

Statview,¹ a statistical package made for the Macintosh computer was used to analyze the data for this study.

ENDNOTES

¹ Statview SE + Graphics, Abacus Concepts, Inc., Berkeley, CA.

CHAPTER IV

DATA ANALYSIS

It is important to comment here on the original intent of this research. This study had hoped to show a relationship between smoking and APFT scores. Initially, Pearson's correlation coefficient was performed. The data collected was not definitive enough to do correlation testing. Pearson's correlation coefficient demands continuous data for both variables. An unsuccessful attempt was made to score amount of smoking in a way to make the data continuous. Since this could not be done, Pearson's correlation was not the appropriate test to use. Therefore, this research was unable to show a relationship between smoking and APFT scores.

Instead, the research question was revised to examine the difference in APFT scores among smoking and nonsmoking students attending CGSOC in 1990-91 and a two tailed t-test was performed. In future studies, this obstacle could be overcome by asking respondents exactly how many cigarettes they smoked every day and years they have smoked. This would provide a continuum of smoking scores.

The t-test is used to compare the means of two groups. The unpaired t-test compares the means of two independent samples. A two-tailed t-test was chosen because it is sensitive to significant differences in either direction. The direction of the difference between the populations is unknown, therefore a two- tailed test is the appropriate test to use. In an unpaired two-tailed t-test of two population means, it must be assumed that the population variances are equal. Fortunately, the test is not overly sensitive to small

differences between the population variances. Since the sample variances in this study are similar, it can be assumed that the population variances are approximately equal. The assumption must also be made that the APFT scores are normally distributed. Since the researcher could not assume the direction of difference between populations and is concerned about a difference in both directions, it is appropriate to use a two-tailed test.

The data collected was separated by Army branches according to whether they were combat, combat support, and combat service support. Combat branches included: Infantry, Field Artillery, Armor, Aviation, and Special Forces. Combat Support included: Air Defense, Engineers, Signal, Chemical, Military Intelligence, Military Police, and Ordnance. Combat Service Support included: Transportation, Quartermaster, Judge Advocate General, Chaplains, Adjutant General, Finance, and all Army Medical Department Corps.

The raw data is included in the study at Appendix E. Names have been removed from the data set. The data from the questionnaire (Appendix A) was coded into the computer program as follows:

Question number 1: Choice number 1 was assigned a 3, number 2 was assigned 1.5, and number 3 was assigned a 0.

Question number 2: Choice number 1 was assigned a 3, number 2 was assigned 1.5, and number 3 was assigned a 0.

Question number 3: Eliminated from the data set - irrelevant to the study.

Question number 4: Choice number 1 was assigned a 3, number 2 was assigned a 2, number 3 was assigned a 1, and number 4 was assigned a 0.

Question number 5: Choice number 1 was assigned a 0, number 2 was assigned 0.5, number 3 was assigned a 1, number 4 was assigned a 1.5, and number 5 was assigned a 2.

Question number 6: Choice number 1 was assigned a 0, number 2 was assigned 1, number 3 was assigned a 3, number 4 was assigned a 7.5, and number 5 was assigned a 10.

Question number 7: Assigned yes or no.

Most respondents in this study were male, 32 to 36 years old, Caucasian, and in combat arms branches of the Army. This is reflected below in Table 1:

Table 1. Demographics of Study Respondents.

Demographic Characteristic	Number of Respondents (N)	Percent of Sample
Age (Mean = 36.0)		
32 to 36	489	66.34
37 to 41	208	29.42
42 to 46	29	4.10
47 to 51	1	0.14
Gender		
Male	666	93.67
Female	45	6.33
Race		
Caucasian	612	85.96
Black	65	9.13
Hispanic	8	1.12
Other	4	0.56
Unspecified	23	3.23
Branch Type		
Combat	334	46.91
Combat Support	219	30.76
Combat Service Support	159	22.33

Seventy four percent of study respondents never smoked. Most respondents that reported smoking, smoke less than one pack per day and only one person smoked two packs per day. Of the respondents who do smoke, almost 80 percent verbalized a desire to quit smoking. This data is included in Table 2:

Table 2. Smoking History of Study Respondents.

Historical Characteristic	Number of Respondents (N)	Percent of Sample
Smoking History		
Never Smoked	526	73.98
Quit over 6 Months Ago	138	19.41
Quit less than 6 Months Ago	5	0.70
Current Smoker	42	5.91
Smoker's Desire to Quit		
Wants to Quit	33	78.57
Does not Want to Quit	9	21.43
Cigarettes per Day		
Zero	669	94.09
Less than Ten	15	2.11
Ten to Twenty	16	2.25
Twenty to Forty	10	1.41
Forty or More	1	0.14

The average APFT score for all study respondents was 268. The minimum score was 187 points and the maximum score was 300 points with a range of 113 points. The mean number of repetitions performed for push-ups was 60, sit-ups was 67, and the time for the 2 mile run was almost 15 minutes. Table 3 on the following page summarizes the APFT data for the sample:

Table 3. APFT Scores: All Respondents.

APFT Event	Mean Score	Std. Dev.	Std. Error	Number (N)	Min	Max	Range
Overall Score (Points)	267.99	29.23	1.164	675	187	300	113
Push-Ups (Count)	59.99	16.25	0.623	680	14	144	130
Sit-Ups (Count)	67.35	14.78	0.566	681	27	122	95
2-Mile Run (Mins.)	14.94	1.74	0.067	677	11.27	22.42	11.15

When comparing smokers versus nonsmokers using an unpaired two-tailed t test, overall mean score for smokers was 247.80 and nonsmokers was 269.47. P value was 0.0001. A significant difference ($P < 0.05$) was noted in all other events as shown in Table 4 on the next page. The difference in the means showed a decrease in performance for each APFT event in the smoking group.

Table 4. Analysis of APFT Scores in Smokers (Current and Recent) versus Nonsmokers using Unpaired two-tailed T-Test.

APFT Event	Smoking Status (N)	Mean Score +/- St. Dev.	Unpaired T-Statistic	P-Value (2-tail)
Overall APFT Score	Nonsmoker (629)	269.47 +/- 28.57	4.937	0.0001
	Smoker (46)	247.80 +/- 28.57		
Push-Ups	Nonsmoker (634)	60.44 +/- 16.26	2.714	0.0068
	Smoker (46)	53.74 +/- 14.78		
Sit-Ups	Nonsmoker (635)	68.14 +/- 14.48	5.298	0.0001
	Smoker (46)	56.41 +/- 14.79		
2-Mile Run Time	Nonsmoker (631)	14.87 +/- 1.73	-3.512	0.0005
	Smoker (46)	15.80 +/- 1.71		

CHAPTER V

CONCLUSIONS AND RECOMMENDATIONS

There were a total of 712 participants in this study. Forty-two were smokers; however 5 had quit smoking during the previous six months and were therefore, counted as smokers for a total of 47 smokers or 6 percent. There were 665 non-smokers or 94 percent of the respondents.

To verify that the low number of smokers who chose to participate were representative of the CGSOC class of 90-91, the researcher collected data from the Health Risk Appraisal that had been done on all students attending CGSOC 90-91. According to this data, 93 percent of students attending CGSOC do not smoke; 7 percent do. Since the response rate of smokers is between 6 and 7 percent, the study is representative of smokers in the current class. Though this rate is much lower than the overall Army rate of smokers, it is probably because this is a highly educated, total officer population who are interested in their health. Also, they may be aware of the social stigma that is attached to smokers today. Most likely, the smokers that chose not to participate had lower scores than those who agreed to participate. It is suspected that if the smokers had high APFT scores, they would probably have chosen to participate. It seems probable that if the non-participant smokers would have participated, the difference between means would be even more significant.

When mean APFT scores were compared, smokers had scores that were statistically significantly ($P < 0.05$) lower compared to scores of non-smokers (247 versus 269). Smokers scored significantly lower than non-smokers in all individual events as well. (Table 4).

The results of this study show a significant difference between smokers and nonsmokers' APFT scores in the students who chose to participate. This suggests that cigarette smoking is detrimental to physical fitness as validated by the smokers' lower scores in all events in the APFT when compared to scores of non-smokers.

A recommendation for further research is to repeat this study in the same population or another population. It would be valuable to collect scores from the second record test of students and use these scores in the study as well. It would also be very valuable to look at the effect duration and amount of smoking have on APFT scores and to use a group where exercise could be controlled. For example, a study of soldiers in a basic training unit or soldiers attending airborne school. It would also be interesting to look at the relationship between smokeless tobacco and APFT scores as well as academic status of smokers versus nonsmokers. Students in school may not maintain their normal smoking behaviors, but it would be interesting to look at overall scores on the Health Risk Appraisal of smokers and nonsmokers for smoking overall behavior scores.

There is literature to support the many dangers of second hand smoke. It would be valuable to look at APFT scores of students who have wives that smoke.

Smoking cessation efforts would be valued in this population as evidenced by smokers' 80 percent positive response rate when asked if they wanted to quit. Studies were noted earlier that showed that lung function and VO_2 max quickly improves after smoking cessation (see literature review). The results of this study can be used to encourage the Army to make policy changes

concerning smoking and to increase smoking cessation efforts, health education efforts, and to show smokers that smoking does have a negative effect on their physical performance when using the APFT as a measurement tool. The potential for further research in this area is unlimited.

In summary, this study clearly shows a significant difference between APFT scores among smoking and nonsmoking students in the CGSOC 1990-91 class. This study implicates smoking as detrimental to physical fitness when using APFT scores as a measure of fitness.

Appendix A - INFORMATION LETTER

ATZL-SWG

7 January, 1990

MEMORANDUM FOR: ALL CGSOC STUDENTS

SUBJECT: INFORMATION LETTER - PARTICIPATION IN A STUDY

1. I would like your help in obtaining data for my research project for the MMAS program. My research question is "What is the relationship between smoking and the Army Physical Fitness Test (APFT) scores of U.S. Army students, A.Y. 90-91, in the Command and General Staff Officer Course (CGSOC)?"
2. In order to do this, I need to know if you smoke, how much you smoke, and how long you have smoked. I also need to know if you have ever smoked in the past, if you quit and when, or if you have never been a smoker. The data obtained from this questionnaire will remain completely confidential and will have no effect on you. All data will be presented in summary format only. It is extremely important that the data you supply be accurate.
3. The APFT score must be verified from the APFT score card because most scores are not totaled at the time of the PT test. Once the smoking history has been tied to a verified APFT score, the names will be discarded from the data set. The attached questionnaire should take less than five minutes to complete. Please complete the questionnaire and return both this information letter and the questionnaire to your survey representative.
4. Please sign below and return this questionnaire to your survey representative even if you do not wish to participate. Results of this study will be presented in May for all interested personnel when the thesis is completed. Thank you in advance for your assistance.

Joan P. Eitzen
MAJ, AN
10D

I understand that participation in this study is voluntary and I will /will not (cross out one that does not apply) allow the researcher to verify my PT scores from the APFT score card.

(Signature)

NAME (printed) _____ Section _____

If you have chosen not to participate and are willing to share your reasons for not participating, please use the space below.

Appendix A - QUESTIONNAIRE

This questionnaire is for Army personnel only

Survey Control Number 9136-004

Name _____ Section _____ Group _____

Branch _____ Age _____ Sex _____ Race _____

Please circle the number of the correct answer.

1. How often do you do at least 20 minutes of non-stop aerobic activity (vigorous exercise that greatly increases your breathing and heart rate such as running, fast walking, biking, swimming, rowing, etc)?

- (1) 3 or more times a week
- (2) 1 or 2 times a week
- (3) rarely or never

2. How often do you do exercises that improve muscle strength, such as pushups, situps, weight lifting, a Nautilus/Universal workout, resistance training, etc?

- (1) 3 or more times a week
- (2) 1 or 2 times a week
- (3) rarely or never

3. Do you have a physical condition that limits or prevents you from exercising?

- (1) Yes
- (2) No

4. Do you smoke cigarettes now?

- (1) Yes
- (2) No, "I quit in the last 6 months"
- (3) No, "I quit over 6 months ago"
- (4) No, "I never smoked"

5. How much do you smoke now?

- (1) "I don't smoke"
- (2) less than a half-pack a day
- (3) one-half to one pack a day
- (4) one to two packs a day
- (5) two or more packs a day

6. How long have you smoked?

- (1) "I don't smoke"
- (2) less than 1 year
- (3) 2 to 4 years
- (4) 5 to 10 years
- (5) more than 10 years

7. Do you want to stop smoking ?

- (1) "I don't smoke"
- (2) "I would like to quit now"
- (3) "I would like to quit someday"
- (4) "I don't want to stop smoking"

Appendix B - MEMORANDUM TO SECTION LEADERS

ATZL-SWG

7 February, 1991

MEMORANDUM FOR: SECTION LEADERS

SUBJECT: MMAS RESEARCH STUDY

1. I would like your help with increasing the response rate to the questionnaire I recently sent out to all CGSOC students. This data is necessary for my research project for the MMAS program. My research question is "What is the relationship between smoking and the Army Physical Fitness Test (APFT) scores of U.S. Army students, A.Y. 90-91, in the Command and General Staff Officer Course (CGSOC)?"

2. Participation in this study is voluntary, however I have had only 40 smokers respond. This data will only be presented in summary format and once scores are verified, I will discard names from the data. Results will not be seen anywhere in anyones record.

3. Would you please ask the students in your section if they would be willing to fill out this questionnaire now if they did not do so before? If they filled it out the first time, they cannot fill it out again. I really need their help in making this study a worthwhile effort to obtain my MMAS. If students choose not to participate, I would like them to fill out a questionnaire as well and sign it stating they will not give me the permission I need and possibly a reason why they have chosen not to participate. This will still increase my response rate. Please return the questionnaires to:

**MAJ Joan Eitzen
Section 10 D**

4. Feel free to contact me if you would like more information or if you need more questionnaires. Thank you in advance for your cooperation and assistance.

**Joan P. Eitzen
MAJ, AN**

Appendix C
MEMORANDUM TO ACADEMIC COUNSELORS AND EVALUATORS

ATZL-SWG

10 February, 1991

MEMORANDUM FOR: ACADEMIC COUNSELORS AND EVALUATORS

SUBJECT: MMAS RESEARCH STUDY

1. I would like your help in verifying Army Physical Fitness Test (APFT) scores from the October physical fitness test. This data is necessary for my research project for the MMAS program. My research question is "What is the relationship between smoking and the Army Physical Fitness Test (APFT) scores of U.S. Army students, A.Y. 90-91, in the Command and General Staff Officer Course (CGSOC)?"
2. Participation in this study is voluntary and students have given me written permission to verify their PT scores from the APFT score cards. Once scores are verified, I will discard names from the data.
3. Please provide requested information on the back of this memo for the students listed (U.S. Army students only taking the regular APFT test) and return to :

MAJ Joan Eitzen
Section 10 D

Only students who have chosen to participate are listed.

4. Feel free to contact me if you would like more information. Thank you in advance for your cooperation and assistance.

Joan P. Eitzen
MAJ, AN

Appendix C - DATA COLLECTION FORM

ACE _____ Section _____ Group _____

Student's Name	Sit-ups	Push-ups	2 mile run	Total score
	# score	# score	# score	# score

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____
9. _____
10. _____
11. _____
12. _____
13. _____
14. _____
15. _____
16. _____
17. _____
18. _____
19. _____
20. _____

**Appendix D - FOLLOW-UP MEMORANDUM TO ACADEMIC COUNSELORS
AND EVALUATORS**

ATZL-SWG

13 March, 1991

MEMORANDUM FOR: ACADEMIC COUNSELORS AND EVALUATORS

SUBJECT: MMAS RESEARCH STUDY - FOLLOW-UP REQUEST

1. This memorandum is in follow-up to my request for your help in verifying Army Physical Fitness Test (APFT) scores from the October physical fitness test (memorandum dated 20 February, 1991). This data is necessary for my research project for the MMAS program. My research question is "What is the relationship between smoking and the Army Physical Fitness Test (APFT) scores of U.S. Army students, A.Y. 90-91, in the Command and General Staff Officer Course (CGSOC)?"
2. Participation in this study is voluntary and students have given me written permission to verify their PT scores from the APFT score cards. Once scores are verified, I will discard names from the data.
3. If you have misplaced the original memorandum with the names of the students' scores I need, please leave me a note in my box in 10D. I am currently on emergency leave and will provide you with another copy upon my return.
4. Thank you very much for your cooperation.

**MAJ Joan Eitzen
Section 10 D**

Appendix D - DATA COLLECTION FORM

ACE _____ Section _____ Group _____

Student's Name	Sit-ups	Push-ups	2 mile run	Total score
	# score	# score	# score	# score

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____
9. _____
10. _____
11. _____
12. _____
13. _____
14. _____
15. _____
16. _____
17. _____
18. _____
19. _____
20. _____

Appendix E - RAW DATA

The raw data for this study is included in the following fifteen pages (44-58).

BRANCH	AGE	SEX	RACE	AEROBICS	STRENGTH	SMOKE	AMOUNT	YRS	QUIT	PT SCORE	P-U	S-U	RUN
1	C83	35	FEM...	CAU	3.0	0	0	0	0	300	85	78	16.39
2	C	33	MALE	CAU	1.5	0	0	0	0	300	83	88	13.48
3	C	34	MALE	CAU	3.0	0	0	0	0	223	45	60	10.08
4	C	36	MALE	CAU	1.5	1	0	0	0	278	78	78	14.22
5	C88	36	MALE	CAU	3.0	0	0	0	0	239	42	66	16.76
6	C	34	MALE	CAU	3.0	1.5	0	0	0	300	76	76	12.22
7	C88	36	MALE	CAU	3.0	0	0	0	0	242	49	49	16.39
8	C88	45	MALE	CAU	3.0	1.5	0	0	0	228	40	40	14.09
9	C	36	MALE	CAU	1.5	0	0	0	0	218	60	60	17.37
10	C8	36	MALE	CAU	3.0	1.5	0	0	0	247	65	70	16.75
11	C	36	MALE	CAU	3.0	1.5	0	10.0	0	238	40	40	12.88
12	C	36	MALE	CAU	3.0	0	0	0	0	300	82	80	12.99
13	C8	34	MALE	CAU	3.0	3.0	0	0	0	289	71	78	14.35
14	C88	36	MALE	CAU	3.0	1.5	1	0	0	288	40	41	13.82
15	C	36	MALE	CAU	3.0	3.0	0	0	0	281	82	88	14.86
16	C88	33	MALE	BLACK	0	1.5	0	0	0	217	41	46	13.22
17	C8	36	MALE	CAU	1.5	1.5	1	0	0	300	80	80	13.40
18	C	36	MALE	CAU	3.0	1.5	0	0	0	224	36	27	12.00
19	C88	46	MALE	CAU	3.0	3.0	1	0	7.5	291	76	89	12.99
20	C	33	MALE	CAU	3.0	3.0	0	0	0	289	76	78	13.17
21	C88	36	MALE	CAU	3.0	3.0	1	0	0	300	80	78	13.22
22	C	33	MALE	CAU	3.0	3.0	0	0	0	300	76	78	13.35
23	C	33	MALE	CAU	3.0	3.0	1	0	0	340	80	48	13.22
24	C8	36	MALE	CAU	1.5	0	0	0	0	288	81	76	14.17
25	C8	36	MALE	CAU	3.0	3.0	0	0	0	283	89	48	14.39
26	C	36	MALE	CAU	3.0	3.0	0	0	0	228	34	41	21.86
27	C8	42	FEM...	CAU	1.5	0	0	0	0	280	76	84	14.86
28	C	36	MALE	CAU	3.0	3.0	1	0	0	234	40	48	14.22
29	C88	46	MALE	CAU	3.0	1.5	3	1.5	10.0	234	40	48	14.22
30	C	33	MALE	CAU	1.5	1.5	0	0	0	288	72	68	14.27
31	C	36	MALE	CAU	3.0	1.5	0	0	0	284	70	88	13.87
32	C8	33	MALE	CAU	1.5	1.5	0	0	0	273	42	48	14.72
33	C8	34	MALE	BLACK	1.5	1.5	3	0	7.5	273	42	48	14.72
34	C	36	MALE	CAU	3.0	3.0	0	0	0	234	40	48	14.22
35	C	33	MALE	CAU	3.0	3.0	0	0	0	300	78	80	13.97
36	C88	34	MALE	BLACK	3.0	3.0	0	0	0	211	48	48	14.76
37	C	36	MALE	CAU	3.0	3.0	0	0	0	288	40	78	14.86
38	C8	33	MALE	CAU	3.0	3.0	1	0	7.5	239	49	50	14.86
39	C	40	MALE	CAU	3.0	3.0	1	0	0	300	76	88	13.37
40	C88	44	MALE	CAU	1.5	1.5	0	0	0	244	40	48	14.87
41	C8	40	MALE	BLACK	3.0	1.5	1	0	7.5	239	36	60	14.87
42	C	36	MALE	CAU	3.0	3.0	0	0	0	287	70	75	13.97
43	C8	34	MALE	BLACK	3.0	3.0	0	0	0	300	80	70	14.22
44	C88	36	FEM...	CAU	3.0	3.0	0	0	0	300	74	78	13.85
45	C88	36	MALE	CAU	3.0	3.0	1	0	0	283	76	88	11.86
46	C8	41	MALE	CAU	3.0	3.0	1	0	7.5	280	40	48	14.28
47	C	37	MALE	CAU	3.0	1.5	0	0	0	264	73	80	16.33
48	C8	37	MALE	CAU	1.5	1.5	3	1.5	10.0	264	73	80	16.33

BRANCH	AGE	SEX	RACE	AEROBICS	STRENGTH	SMOKE	AMOUNT	YRS	QUT	PT SCORE	P-U	S-U	NUM
49	C	37	MALE	CAU	3.0	0	0	0	0	300	75	78	13.82
50	C	34	MALE	CAU	3.0	0	0	0	0	278	65	73	14.87
51	C	34	MALE	CAU	3.0	1	0	0	0	183	38	33	14.76
52	C8	33	MALE	CAU	3.0	0	0	0	0	163	38	33	14.76
53	C	34	MALE	CAU	3.0	0	0	0	0	183	38	33	14.76
54	C	34	MALE	CAU	3.0	1	0	0	0	274	60	66	16.08
55	C8	38	MALE	CAU	3.0	0	0	0	0	283	60	66	16.08
56	C8	33	MALE	BLACK	1.3	0	0	0	0	288	60	66	14.03
57	C	38	MALE	BLACK	0	0	0	0	0	287	60	79	17.35
58	C8	36	MALE	CAU	1.3	0	0	0	0	214	40	40	16.48
59	C8	38	MALE	CAU	3.0	1	0	0	0	272	58	78	14.87
60	C88	38	MALE	CAU	1.3	0	0	0	0	312	40	60	17.87
61	C	34	MALE	CAU	3.0	1	0	0	0	300	61	78	12.89
62	C8	38	MALE	CAU	1.3	0	0	0	0	274	67	68	13.77
63	C8	42	MALE	CAU	0	0	0	0	0	246	38	48	14.76
64	C8	37	MALE	CAU	1.3	0	0	0	0	286	73	68	16.47
65	C	32	MALE	CAU	1.3	0	0	0	0	222	41	58	18.85
66	C	38	MALE	CAU	3.0	1	0	0	0	247	60	66	16.87
67	C	38	MALE	CAU	3.0	1	0	0	0	283	73	71	14.80
68	C	37	MALE	CAU	1.3	0	0	0	0	300	73	78	14.48
69	C	36	MALE	CAU	1.3	0	0	0	0	286	74	68	14.18
70	C88	37	MALE	BLACK	3.0	0	0	0	0	280	64	61	14.38
71	C88	41	MALE	CAU	3.0	0	0	0	0	242	60	48	14.18
72	C8	38	MALE	CAU	3.0	0	0	0	0	258	60	60	14.82
73	C8	38	MALE	CAU	3.0	3	1.0	10.0	YES	234	60	48	17.80
74	C	38	MALE	CAU	1.3	3	1.0	10.0	YES	300	78	82	11.37
75	C88	41	MALE	CAU	3.0	0	0	0	0	283	63	78	17.38
76	C	33	MALE	CAU	3.0	0	0	0	0	210	38	40	18.13
77	C8	36	MALE	CAU	1.3	3	1.0	10.0	YES	300	78	68	13.31
78	C8	38	MALE	CAU	3.0	0	0	0	0	287	61	78	14.07
79	C8	38	MALE	CAU	3.0	0	0	0	0	284	67	73	14.43
80	C8	37	MALE	CAU	3.0	0	0	0	0	247	61	67	14.83
81	C	37	MALE	CAU	3.0	0	0	0	0	300	73	78	13.48
82	C8	38	MALE	CAU	3.0	3	0	0	0	284	32	71	18.85
83	C8	41	FEM...	CAU	1.3	0	0	0	0	300	75	80	13.87
84	C8	34	MALE	CAU	3.0	0	0	0	0	286	71	80	16.33
85	C8	34	MALE	CAU	3.0	1	0	0	0	286	71	78	13.16
86	C	33	MALE	CAU	3.0	1	0	0	0	243	68	33	14.85
87	C	42	MALE	CAU	3.0	0	0	0	0	287	70	87	14.88
88	C	36	MALE	CAU	3.0	0	0	0	0	286	71	80	16.33
89	C	38	MALE	CAU	3.0	3	3	10.0	NO	300	83	88	12.37
90	C	38	MALE	CAU	3.0	0	0	0	0	300	73	78	12.32
91	C	33	MALE	CAU	3.0	0	0	0	0	223	61	47	16.33
92	C	38	MALE	CAU	3.0	0	0	0	0	281	73	78	14.82
93	C	38	MALE	CAU	3.0	0	0	0	0	258	41	64	16.73
94	C8	40	MALE	CAU	3.0	0	0	0	0	258	41	64	16.73

BRANCH	AGE	SEX	RACE	AEROBICS	STRENGTH	SMOKE	AMOUNT	YRS	OUT	PT SCORE	P-U	S-U	RUN
97	C33	36	MALE	•	3.0	0	0	0	•	266	83	60	14.63
98	C8	34	MALE	CAU	3.0	3.0	0	0	•	300	83	103	12.70
99	C	34	MALE	BLACK	3.0	3.0	0	0	•	300	88	108	13.20
100	C	38	MALE	CAU	3.0	3.0	1	3.0	•	300	74	78	13.27
101	C33	38	MALE	CAU	3.0	1.3	0	3.0	•	248	60	60	13.40
102	C3	36	MALE	BLACK	3.0	3.0	0	0	•	294	74	78	13.60
103	C33	44	MALE	•	3.0	3.0	1	0	•	300	85	84	12.68
104	C	34	MALE	CAU	3.0	3.0	1	3.0	•	300	73	78	13.33
105	C	34	MALE	CAU	3.0	3.0	0	0	•	268	73	48	11.62
106	C	33	MALE	CAU	3.0	1.3	0	0	•	287	70	78	13.05
107	C33	42	MALE	CAU	3.0	3.0	1	0	•	•	•	•	•
108	C8	38	MALE	CAU	3.0	3.0	0	0	•	281	68	87	13.22
109	C33	33	MALE	BLACK	3.0	3.0	0	0	•	300	73	78	13.37
110	C8	33	MALE	BLACK	3.0	3.0	0	0	•	300	43	78	14.33
111	C33	44	MALE	BLACK	3.0	3.0	0	0	•	300	71	68	13.77
112	C	38	MALE	CAU	3.0	1.3	0	0	•	288	63	66	10.37
113	C	38	MALE	CAU	3.0	3.0	0	0	•	302	78	83	13.82
114	C	36	MALE	CAU	1.3	1.3	0	0	•	300	78	82	14.33
115	C	38	MALE	•	0	0	3	1.0	YES	230	46	40	16.45
116	C33	36	MALE	CAU	3.0	3.0	0	0	•	300	74	82	12.40
117	C8	34	MALE	CAU	1.3	3.0	0	0	•	268	68	66	10.83
118	C33	36	MALE	CAU	1.3	1.3	3	1.3	NO	212	63	48	17.78
119	C8	34	MALE	CAU	1.3	0	0	0	•	218	48	66	17.27
120	C	38	MALE	CAU	3.0	0	1	0	•	231	60	83	17.40
121	C	43	MALE	CAU	3.0	3.0	1	0	•	268	60	68	17.78
122	C33	36	FEN...	BLACK	1.3	1.3	0	0	•	268	82	61	20.57
123	C3	34	FEN...	BLACK	1.3	1.3	0	0	•	281	58	78	18.30
124	C8	37	MALE	•	3.0	3.0	3	1.0	YES	277	62	78	16.32
125	C3	34	MALE	•	3.0	3.0	0	0	•	270	68	68	13.12
126	C3	36	MALE	CAU	3.0	3.0	0	0	•	300	74	80	12.38
127	C	33	MALE	CAU	3.0	3.0	0	0	•	268	47	62	13.97
128	C3	37	MALE	CAU	3.0	3.0	0	0	•	270	63	68	15.33
129	C33	41	MALE	CAU	3.0	3.0	0	0	•	300	78	73	12.38
130	C	38	MALE	CAU	3.0	3.0	0	0	•	300	78	84	12.23
131	C	38	MALE	CAU	3.0	3.0	0	0	•	261	47	82	12.30
132	C	38	MALE	CAU	0	0	1	0	•	268	40	39	18.97
133	C3	34	MALE	CAU	3.0	3.0	1	0	•	260	73	78	14.80
134	C3	36	MALE	CAU	3.0	3.0	1	0	•	261	46	68	13.82
135	C3	38	MALE	CAU	3.0	3.0	0	0	•	244	60	60	14.77
136	C	34	MALE	CAU	3.0	3.0	0	0	•	268	60	68	14.00
137	C3	33	MALE	CAU	3.0	3.0	1	0	•	300	74	78	13.33
138	C	34	MALE	CAU	3.0	3.0	0	0	•	300	80	80	13.17
139	C3	36	MALE	CAU	3.0	3.0	0	0	•	300	73	81	14.07
140	C3	32	MALE	CAU	3.0	3.0	0	0	•	261	74	68	13.16
141	C	38	MALE	CAU	3.0	3.0	1	0	•	278	60	78	13.85
142	C3	33	FEN...	•	3.0	3.0	0	0	•	268	48	78	18.78
143	C	37	MALE	CAU	3.0	3.0	0	0	•	300	80	81	13.27
144	C	34	MALE	CAU	3.0	3.0	0	0	•	300	78	80	12.65

BRANCH	AGE	SEX	RACE	AEROBICS	STRENGTH	SMOKE	AMOUNT	YRS	CUT	PT SCORE	P-U	S-U	RLM
146	C	36	MALE	CAU	3.0	0	0	0	•	300	83	80	13.85
146	C3	33	MALE	CAU	1.5	0	0	0	•	245	41	25	14.83
147	C	36	MALE	CAU	1.5	2	0	0	•	283	63	63	14.52
148	C33	35	FEM...	BLACK	1.5	0	0	0	•	217	30	44	21.80
149	C33	34	MALE	CAU	1.5	0	0	0	•	266	63	60	18.08
150	C33	41	MALE	•	3.0	0	0	0	•	286	63	73	13.77
151	C3	36	MALE	CAU	0	0	0	0	•	228	43	48	18.08
152	C3	•	•	1.5	0	0	0	0	•	240	45	48	14.82
153	C33	36	MALE	BLACK	3.0	0	0	0	•	244	60	82	18.30
154	C	34	MALE	CAU	3.0	0	0	0	•	283	40	74	14.03
155	C	36	MALE	CAU	1.5	3	1.5	10.0	YES	187	38	38	18.42
156	C	35	MALE	CAU	1.5	1	0	0	•	215	41	56	17.00
157	C33	36	MALE	CAU	3.0	0	0	0	•	300	60	60	11.37
158	C	33	MALE	CAU	3.0	0	0	0	•	274	47	80	13.22
159	C3	34	MALE	CAU	3.0	0	0	0	•	300	48	43	18.08
160	C	36	MALE	CAU	3.0	0	0	0	•	214	40	48	18.93
161	C	36	MALE	CAU	3.0	0	0	0	•	231	48	48	17.57
162	C	34	MALE	CAU	1.5	0	0	0	•	254	73	60	18.83
163	C3	33	MALE	CAU	1.5	0	0	0	•	239	60	49	14.83
164	C3	34	MALE	CAU	3.0	0	0	0	•	300	78	83	13.05
165	C33	36	FEM...	CAU	3.0	0	0	0	•	300	77	81	12.52
166	C	35	MALE	CAU	3.0	0	0	0	•	300	77	81	12.75
167	C	35	MALE	CAU	3.0	0	0	0	•	270	63	60	14.70
168	C3	32	MALE	CAU	1.5	0	0	0	•	283	66	64	18.90
169	C	36	MALE	CAU	3.0	0	0	0	•	300	73	73	14.45
170	C33	36	MALE	CAU	3.0	2	0	0	•	273	70	84	14.00
171	C33	35	MALE	CAU	3.0	0	0	0	•	237	64	45	18.10
172	C3	35	MALE	CAU	3.0	0	0	0	•	268	73	73	14.80
173	C	33	MALE	CAU	3.0	0	0	0	•	300	73	78	14.00
174	C	33	MALE	CAU	3.0	0	0	0	•	297	70	78	14.00
175	C3	40	MALE	CAU	3.0	0	0	0	•	300	73	73	14.70
176	C	34	MALE	CAU	3.0	0	0	0	•	229	60	49	18.80
177	C33	36	MALE	CAU	3.0	0	0	0	•	223	40	39	13.20
178	C3	34	MALE	CAU	3.0	0	0	0	•	288	73	78	14.00
179	C	43	MALE	CAU	3.0	0	0	0	•	248	43	60	18.90
180	C3	34	MALE	CAU	3.0	0	0	0	•	300	73	78	14.00
181	C	34	MALE	CAU	3.0	0	0	0	•	300	73	78	14.00
182	C33	36	MALE	CAU	3.0	0	0	0	•	300	73	78	13.87
183	C3	36	MALE	CAU	3.0	3	1.5	10.0	YES	269	76	71	13.87
184	C	36	MALE	CAU	3.0	0	0	0	•	268	67	73	12.77
185	C3	36	MALE	CAU	3.0	0	0	0	•	287	68	75	13.08
186	C	34	MALE	CAU	3.0	0	0	0	•	274	60	75	12.97
187	C	33	MALE	CAU	3.0	0	0	0	•	284	71	64	13.88
188	C	36	MALE	CAU	3.0	0	0	0	•	280	83	78	13.42
189	C3	43	MALE	CAU	3.0	1	0	0	•	289	87	80	13.72
190	C33	33	MALE	CAU	3.0	0	0	0	•	300	65	65	12.88
191	C33	40	FEM...	BLACK	3.0	1	0	10.0	•	300	49	78	18.85
192	C3	35	MALE	CAU	3.0	0	0	0	•	269	61	72	14.30

BRANCH	AGE	SEX	RACE	AEROBICS	STRENGTH	SHOULDER	AMOUNT	YRS	CURT	PT SCORE	P-U	S-U	NUM
183	C8	36	MALE	CAU	3.0	0	0	0	0	300	73	78	13.38
184	C	33	MALE	CAU	3.0	0	0	0	0	290	85	78	12.87
185	C	37	MALE	CAU	3.0	1.5	0	0	0	274	84	79	14.70
186	C	36	MALE	CAU	3.0	3.0	1	10.0	0	248	83	85	14.83
187	C	32	MALE	CAU	3.0	3.0	0	0	0	299	78	78	12.87
188	C88	35	MALE	CAU	1.5	1.5	0	0	0	235	43	57	15.35
189	C	36	MALE	1.5	1.5	0	0	0	0	228	45	58	14.50
190	C	34	MALE	HRIP	3.0	3.0	0	0	0	300	78	80	11.75
191	C5	32	MALE	CAU	3.0	3.0	0	0	0	308	75	80	15.45
192	C	36	MALE	CAU	3.0	3.0	0	0	0	242	60	40	15.36
193	C8	34	MALE	CAU	3.0	3.0	0	0	0	291	83	83	14.87
194	C	42	MALE	CAU	3.0	3.0	1	0	0	291	80	80	12.40
195	C5	35	MALE	CAU	3.0	3.0	0	0	0	285	73	75	16.10
196	C	36	MALE	CAU	3.0	3.0	0	0	0	300	75	80	13.82
197	C8	36	MALE	CAU	3.0	3.0	0	0	0	305	73	75	14.70
198	C8	34	MALE	BLACK	1.5	1.5	1	0	0	284	73	75	17.37
199	C	41	MALE	CAU	3.0	3.0	0	0	0	300	73	75	15.10
200	C88	36	MALE	CAU	1.5	1.5	0	0	0	205	65	57	17.43
201	C	34	MALE	CAU	3.0	3.0	0	0	0	300	100	85	13.70
202	C	34	MALE	CAU	1.5	3.0	0	0	0	229	60	61	16.10
203	C	36	MALE	CAU	0	0	0	0	0	200	35	40	18.37
204	C	36	MALE	CAU	3.0	3.0	0	0	0	260	30	82	14.82
205	C88	34	MALE	CAU	1.5	3.0	0	0	0	222	40	40	14.87
206	C	37	MALE	CAU	3.0	3.0	0	0	0	280	60	65	15.70
207	C	36	MALE	CAU	3.0	3.0	3	1.5	10.0	261	30	30	17.87
208	C8	33	MALE	CAU	3.0	3.0	0	0	0	280	81	71	14.33
209	C	36	MALE	CAU	1.5	1.5	1	0	0	225	40	60	15.05
210	C	36	MALE	CAU	3.0	3.0	0	0	0	289	73	75	16.05
211	C5	35	MALE	CAU	3.0	3.0	0	0	0	288	65	65	13.82
212	C8	33	MALE	CAU	3.0	3.0	0	0	0	289	61	60	15.05
213	C	40	MALE	CAU	3.0	3.0	1	10.0	0	300	78	80	14.02
214	C	36	MALE	CAU	3.0	3.0	1	0	0	297	82	82	14.25
215	C88	40	MALE	CAU	1.5	1.5	3	10.0	NO	289	60	74	18.05
216	C	36	MALE	CAU	3.0	3.0	1	0	0	299	45	74	18.07
217	C	34	MALE	CAU	3.0	3.0	0	0	0	279	82	80	12.40
218	C8	34	MALE	CAU	3.0	3.0	0	0	0	248	60	60	15.35
219	C	36	MALE	CAU	3.0	3.0	0	0	0	300	73	78	14.05
220	C5	36	MALE	CAU	3.0	3.0	0	0	0	210	40	40	18.02
221	C	36	MALE	CAU	1.5	1.5	0	0	0	238	45	45	14.30
222	C88	36	MALE	CAU	0	0	0	0	0	213	45	39	18.02
223	C	32	MALE	BLACK	3.0	3.0	0	0	0	275	84	80	14.35
224	C5	34	MALE	CAU	3.0	3.0	0	0	0	249	60	60	18.00
225	C8	37	MALE	CAU	3.0	3.0	0	0	0	300	73	75	13.23
226	C	36	MALE	CAU	3.0	3.0	0	0	0	300	72	75	14.08
227	C88	42	MALE	CAU	3.0	3.0	0	0	0	272	40	73	18.05
228	C5	37	MALE	CAU	3.0	3.0	0	0	0	280	35	70	15.70
229	C5	36	MALE	CAU	3.0	3.0	3	10.0	NO	258	60	40	12.85
230	C	35	MALE	CAU	1.5	1.5	0	0	0	243	43	65	18.35

BRANCH	AGE	SEX	RACE	AEROBICS	STRENGTH	SMOKE	AMOUNT	YRS	OUT	PT SCORE	P-U	S-U	RUN
341	CBS	36	MALE	HRSP	0	0	0	0	0	300	60	61	13.23
342	C	36	MALE	CAU	3.0	3.0	3	10.0	YES	283	54	73	18.05
343	C8	36	MALE	CAU	0	0	0	0	0	261	64	60	16.13
344	CBS	36	MALE	BLACK	1.5	1.5	0	0	0	204	35	43	16.37
345	C	36	MALE	CAU	3.0	1.5	0	0	0	248	45	73	14.13
346	C	37	MALE	CAU	0	0	0	0	0	226	38	49	16.13
347	C	34	MALE	CAU	1.5	1.5	0	0	0	233	40	67	14.35
348	C8	34	MALE	CAU	0	0	0	0	0	257	68	67	14.23
349	C	34	MALE	CAU	3.0	1.5	0	0	0	254	60	65	13.37
350	CBS	36	MALE	CAU	3.0	3.0	0	0	0	220	40	60	14.05
351	C	34	MALE	CAU	3.0	3.0	0	0	0	260	61	61	16.00
352	C	36	MALE	CAU	1.5	0	0	0	0	241	61	61	16.07
353	C8	36	MALE	CAU	3.0	3.0	0	0	0	266	45	73	16.00
354	C8	40	MALE	CAU	0	0	0	0	0	188	35	50	17.72
355	CBS	36	MALE	CAU	1.5	0	0	0	0	300	73	79	13.00
356	C	36	MALE	CAU	3.0	3.0	0	0	0	300	60	60	13.03
357	C	34	MALE	CAU	3.0	3.0	0	0	0	300	75	60	12.07
358	C8	37	MALE	CAU	3.0	1.5	0	0	0	279	60	60	13.00
359	C	37	MALE	CAU	3.0	3.0	0	0	0	255	60	64	14.00
360	C8	36	MALE	CAU	0	0	0	0	0	0	0	41	0
361	C	42	MALE	CAU	3.0	1.5	0	0	0	277	43	79	13.03
362	C8	41	FEM	CAU	3.0	3.0	0	0	0	277	55	78	16.02
363	CBS	34	MALE	CAU	3.0	3.0	3	1.5	10.0	222	62	42	17.07
364	CBS	36	MALE	CAU	3.0	3.0	0	0	0	300	78	79	12.00
365	C8	32	FEM	BLACK	3.0	1.5	0	0	0	270	40	64	15.02
366	C8	37	MALE	CAU	0	0	1	0	0	272	48	71	14.03
367	CBS	36	MALE	CAU	3.0	3.0	0	0	0	300	60	60	13.07
368	C	36	MALE	CAU	1.5	1.5	1	0	1.0	272	64	71	14.11
369	C8	37	MALE	CAU	3.0	3.0	0	0	0	280	72	78	16.03
370	CBS	34	MALE	CAU	0	0	3	1.5	10.0	180	35	50	17.00
371	CBS	36	MALE	CAU	3.0	1.5	0	0	0	186	36	39	14.90
372	C	34	MALE	CAU	3.0	3.0	0	0	0	300	73	79	12.05
373	C	36	MALE	CAU	3.0	1.5	3	0	10.0	240	73	43	14.00
374	C8	33	MALE	CAU	1.5	1.5	0	0	0	283	60	60	16.12
375	C8	36	MALE	CAU	3.0	3.0	0	0	0	268	65	118	12.07
376	C	33	MALE	CAU	0	0	0	0	0	300	74	78	13.00
377	C	37	MALE	CAU	1.5	1.5	1	0	0	275	70	75	17.05
378	C	36	MALE	CAU	3.0	3.0	0	0	0	0	0	0	0
379	C	36	MALE	CAU	3.0	3.0	0	0	0	286	78	78	16.00
380	C	36	MALE	CAU	3.0	3.0	0	0	0	258	44	48	13.70
381	C	36	MALE	CAU	3.0	3.0	0	0	0	249	40	60	12.07
382	C8	36	MALE	CAU	3.0	3.0	0	0	0	265	43	57	14.40
383	C8	36	MALE	CAU	3.0	1.5	0	0	0	225	40	60	16.33
384	C	36	MALE	BLACK	0	0	0	0	0	245	40	60	16.00
385	C	34	MALE	CAU	3.0	1.5	0	0	0	266	65	65	14.13
386	CBS	41	MALE	HRSP	3.0	3.0	0	0	0	300	64	61	13.00
387	CBS	34	FEM	CAU	3.0	1.5	0	0	0	300	73	73	13.70
388	C8	37	MALE	CAU	3.0	3.0	0	0	0	300	74	78	14.00
389	CBS	34	MALE	BLACK	3.0	3.0	0	0	0	300	74	78	14.00

BRANCH	AGE	SEX	RACE	AERONICS	STRENGTH	SMOKE	AMOUNT	YRS	QUR	PT SCORE	A-U	S-U	NUM
280	C	37	MALE	BLACK	1.5	0	0	0	0	258	53	57	18.49
289	C88	43	MALE	CAU	1.5	1	0	0	0	268	34	70	11.20
291	C88	46	MALE	CAU	3.0	1	0	0	0	210	41	64	18.80
292	C8	38	MALE	CAU	3.0	0	0	0	0	258	66	76	11.00
293	C	41	MALE	1.5	1.5	3	1.0	10.0	YES	218	48	40	18.80
294	C	37	MALE	CAU	3.0	1	0	0	0	300	75	74	11.00
298	C8	38	MALE	BLACK	1.5	0	0	0	0	223	48	40	11.00
299	C	36	MALE	CAU	3.0	0	0	0	0	278	48	79	13.00
297	C88	38	MALE	CAU	1.5	0	0	0	0	250	45	82	11.87
298	C8	34	MALE	CAU	1.5	0	0	0	0	280	48	61	11.12
299	C8	38	MALE	CAU	1.5	0	0	0	0	282	50	68	11.00
300	C88	38	MALE	CAU	3.0	0	0	0	0	248	48	62	11.10
301	C88	36	FEM	BLACK	3.0	0	0	0	0	248	14	63	18.00
302	C	36	MALE	CAU	3.0	0	0	0	0	300	118	88	11.00
303	C	36	MALE	CAU	1.5	0	0	0	0	281	48	77	11.48
304	C	38	MALE	CAU	3.0	1	0	0	0	280	61	75	11.86
305	C8	34	MALE	CAU	3.0	0	0	0	0	278	70	78	11.00
306	C	36	MALE	CAU	3.0	0	0	0	0	288	69	78	11.33
307	C	38	MALE	CAU	3.0	1.5	0	0	0	288	87	80	11.33
308	C88	37	MALE	CAU	1.5	1	0	10.0	0	288	88	88	11.00
309	C88	43	MALE	CAU	3.0	1	0	0	0	300	72	80	11.30
310	C8	38	MALE	CAU	3.0	1	0	0	0	278	62	68	11.23
311	C	32	MALE	CAU	3.0	0	0	0	0	300	108	112	11.58
312	C8	33	MALE	CAU	3.0	0	0	0	0	300	80	80	11.26
313	C8	37	MALE	CAU	1.5	0	0	0	0	224	37	41	11.82
314	C88	38	MALE	CAU	3.0	1	0	10.0	0	300	78	78	11.07
315	C	38	MALE	CAU	3.0	0	0	0	0	287	68	78	11.86
316	C8	36	MALE	CAU	1.5	0	0	0	0	233	48	60	11.46
317	C8	38	MALE	CAU	3.0	0	0	0	0	304	20	40	11.77
318	C	38	MALE	CAU	0	0	0	0	0	283	88	63	11.77
319	C	38	MALE	CAU	3.0	0	0	0	0	241	38	73	17.35
320	C	38	MALE	CAU	3.0	0	0	0	0	188	34	42	18.38
321	C8	40	FEM	CAU	3.0	0	0	0	0	0	0	0	0
322	C	37	MALE	CAU	3.0	0	0	0	0	300	73	74	11.30
323	C88	35	FEM	CAU	1.5	0	0	0	0	273	38	63	17.42
324	C88	34	MALE	BLACK	3.0	0	0	0	0	288	64	82	11.87
325	C	37	MALE	CAU	3.0	1	0	3.0	0	300	108	108	12.88
326	C	38	MALE	CAU	3.0	0	0	0	0	243	66	64	11.43
327	C8	33	MALE	CAU	1.5	0	0	0	0	308	38	40	11.00
328	C88	37	MALE	CAU	3.0	1	0	0	0	286	73	76	11.12
329	C8	40	MALE	CAU	3.0	1	0	0	0	287	68	80	13.00
330	C	34	MALE	CAU	1.5	0	0	0	0	242	60	61	11.80
331	C	33	MALE	CAU	3.0	0	0	0	0	287	60	82	13.88
332	C	38	MALE	CAU	3.0	1	0	10.0	0	316	44	60	17.78
333	C	36	MALE	CAU	3.0	0	0	0	0	300	78	80	12.85
334	C8	38	MALE	CAU	3.0	0	0	0	0	288	68	70	13.12
335	C88	40	MALE	CAU	3.0	1	0	0	0	245	40	40	11.88
336	C8	38	MALE	BLACK	1.5	0	0	0	0	260	58	68	17.13

BOUNCE	AGE	SEX	RACE	AEROBICS	STRENGTH	SMOKE	AMOUNT	YRS	QUIT	PT SCORE	A-U	S-U	MIN
337	C88	38	MALE	CAU	1.5	0	0	0	.	280	28	65	13.37
338	C8	36	MALE	CAU	3.0	1	0	0	.	281	28	68	12.48
339	C88	37	MALE	CAU	1.5	0	0	0	.	276	26	63	11.13
340	C8	36	MALE	CAU	3.0	0	0	0	.	288	31	73	13.97
341	C8	40	MALE	CAU	3.0	0	0	0	.	282	31	74	13.53
342	C	34	MALE	BLACK	3.0	0	0	0	.	300	33	78	12.53
343	C	35	MALE	CAU	3.0	0	0	0	.	300	33	71	11.28
344	C	35	MALE	CAU	3.0	0	0	0	.	296	33	69	11.17
345	C8	38	MALE	CAU	3.0	0	0	0	.	280	31	69	12.38
346	C8	40	MALE	CAU	3.0	0	0	0	.	286	31	78	14.14
347	C	34	MALE	CAU	1.5	0	0	0	.	230	20	57	10.05
348	C	36	MALE	CAU	3.0	0	0	0	.	281	28	62	12.28
349	C88	35	MALE	CAU	1.5	0	0	0	.	228	26	68	16.72
350	C	37	MALE	CAU	1.5	1	0	3.0	.	224	24	40	11.78
351	C88	35	MALE	BLACK	1.5	0	0	0	.	260	24	59	13.10
352	C	38	MALE	CAU	1.5	3	1.5	7.5	NO	248	26	60	13.36
353	C8	36	MALE	CAU	3.0	0	0	0	.	288	30	61	11.70
354	C8	38	MALE	CAU	3.0	2	0	10.0	.	282	30	78	13.53
355	C8	38	MALE	CAU	3.0	0	0	0	.	250	25	49	10.23
356	C	34	MALE	CAU	3.0	0	0	0	.	280	28	69	11.38
357	C88	35	MALE	BLACK	3.0	0	0	0	.	300	33	64	12.85
358	C	38	MALE	CAU	0	0	0	0	.	317	35	81	14.76
359	C8	38	MALE	CAU	3.0	0	0	0	.	279	24	71	13.38
360	C88	38	MALE	CAU	1.5	3	1.5	10.0	YES	223	23	65	16.45
361	C	38	MALE	CAU	1.5	0	0	0	.	288	28	55	13.38
362	C8	35	MALE	CAU	1.5	0	0	0	.	225	26	66	16.03
363	C88	33	MALE	CAU	1.5	0	0	0	.	288	30	67	11.73
364	C88	34	MALE	CAU	3.0	1	0	0	.	277	28	78	13.82
365	C8	37	MALE	CAU	3.0	0	0	0	.	281	28	84	14.89
366	C	33	MALE	CAU	3.0	0	0	0	.	284	28	78	13.27
367	C8	33	MALE	CAU	3.0	0	0	0	.	286	28	86	14.48
368	C	38	MALE	CAU	1.5	1	0	3.0	.	286	28	73	13.76
369	C88	38	MALE	CAU	3.0	0	0	0	.	288	28	89	17.48
370	C	33	MALE	CAU	3.0	0	0	0	.	300	33	100	13.27
371	C8	38	MALE	CAU	3.0	1	0	0	.	277	28	70	13.28
372	C8	36	MALE	BLACK	3.0	1	0	0	.	284	28	83	14.18
373	C88	37	MALE	CAU	1.5	0	0	0	.	300	33	70	13.53
374	C	34	MALE	CAU	0	0	0	0	.	288	28	64	11.28
375	C	36	MALE	CAU	3.0	1	0	0	.	279	28	73	12.77
376	C88	38	MALE	CAU	3.0	0	0	0	.	282	28	63	11.58
377	C8	36	MALE	CAU	0	0	0	0	.	280	28	81	13.53
378	C	34	MALE	CAU	3.0	0	0	0	.	300	33	83	11.23
379	C	35	MALE	CAU	3.0	0	0	0	.	280	28	61	11.27
380	C88	37	MALE	BLACK	3.0	0	0	0	.	288	28	77	14.07
381	C	33	MALE	CAU	3.0	0	0	0	.	300	33	78	13.30
382	C	37	MALE	CAU	3.0	3	1.5	10.0	YES	278	28	87	14.28
383	C	40	MALE	OTHER	3.0	0	0	0	.	283	24	83	16.53
384	C88	33	MALE	CAU	1.5	1	0	0	.	270	26	77	13.23

BRANCH	AGE	SEX	RACE	AERONAUTICS	STRENGTH	SMOKE	AMOUNT	YAS	QUIP	PT SCORE	PU	BU	NUM
385	C	34	MALE	CAU	3.0	0	0	0	•	•	509	61	74
386	CBB	36	MALE	CAU	3.0	3	13	10.5	YES	•	287	89	85
387	C	38	MALE	CAU	3.0	3	13	10.5	YES	•	285	81	85
388	CBB	34	MALE	CAU	3.0	0	0	0	•	•	285	47	71
389	C	36	MALE	CAU	3.0	0	0	0	•	•	286	71	78
390	C	37	MALE	CAU	3.0	0	0	0	•	•	285	73	71
391	C	34	MALE	CAU	3.0	0	0	0	•	•	•	•	48
392	C	34	MALE	CAU	3.0	1	0	0	•	•	283	74	85
393	C	35	MALE	•	1.5	0	0	0	•	•	278	51	78
394	C	34	MALE	CAU	3.0	0	0	0	•	•	300	78	85
395	C	38	MALE	CAU	3.0	0	0	0	•	•	289	81	78
396	CBB	38	FEM	CAU	3.0	0	0	0	•	•	244	21	89
397	C	34	MALE	BLACK	3.0	0	0	0	•	•	285	73	85
398	C	36	MALE	CAU	3.0	0	0	0	•	•	285	89	85
399	C	34	MALE	CAU	3.0	0	0	0	•	•	286	51	75
400	C	35	MALE	CAU	3.0	1	0	0	•	•	287	73	85
401	CBB	40	FEM	CAU	3.0	3	3	10.5	YES	•	226	24	32
402	C	38	MALE	CAU	3.0	0	0	0	•	•	284	89	89
403	C	34	MALE	CAU	3.0	0	0	0	•	•	282	89	78
404	C	36	MALE	CAU	3.0	0	0	0	•	•	300	73	78
405	C	37	MALE	CAU	3.0	1	0	0	•	•	273	73	85
406	C	37	MALE	CAU	1.5	0	0	0	•	•	251	89	85
407	C	38	MALE	CAU	3.0	0	0	0	•	•	271	81	89
408	C	36	MALE	CAU	3.0	0	0	0	•	•	288	78	85
409	C	34	MALE	CAU	3.0	1	0	0	•	•	286	73	85
410	CBB	44	MALE	CAU	3.0	0	0	0	•	•	284	85	28
411	C	36	MALE	CAU	3.0	0	0	0	•	•	287	73	77
412	C	38	MALE	CAU	3.0	0	0	0	•	•	286	89	78
413	CBB	40	FEM	CAU	3.0	1	0	0	•	•	288	18	21
414	C	37	MALE	CAU	0	0	0	0	•	•	287	73	75
415	C	45	MALE	•	3.0	1	0	10.5	•	•	•	•	•
416	C	36	MALE	CAU	3.0	0	0	0	•	•	288	78	85
417	C	34	MALE	BLACK	3.0	0	0	0	•	•	288	74	78
418	CBB	37	MALE	CAU	1.5	0	0	0	•	•	•	•	•
419	C	38	MALE	CAU	3.0	1	0	0	•	•	284	87	81
420	C	38	MALE	CAU	1.5	0	0	0	•	•	243	44	89
421	C	38	MALE	CAU	3.0	0	0	0	•	•	288	82	85
422	C	38	MALE	BLACK	1.5	0	0	0	•	•	277	84	84
423	C	34	MALE	CAU	3.0	0	0	0	•	•	282	87	74
424	C	38	MALE	CAU	3.0	0	0	0	•	•	288	78	79
425	C	35	MALE	CAU	3.0	0	0	0	•	•	278	89	78
426	C	36	MALE	CAU	3.0	0	0	0	•	•	251	29	74
427	C	35	MALE	CAU	3.0	0	0	0	•	•	288	89	85
428	CBB	36	MALE	CAU	3.0	0	0	0	•	•	288	78	85
429	C	34	MALE	CAU	1.5	0	0	0	•	•	288	89	75
430	C	38	MALE	CAU	1.5	0	0	0	•	•	288	82	78
431	C	37	MALE	CAU	1.5	0	0	0	•	•	271	82	78
432	CBB	38	FEM	CAU	3.0	0	0	0	•	•	288	85	78

BRANCH	AGE	SEX	RACE	AEROBICS	STRENGTH	SMOKE	AMOUNT	YRS	CURT	PT SCORE	P-U	S-U	NUM
433	C	37	MALE	CAU	3.0	0	0	0	0	217	43	59	1835
434	C	36	MALE	CAU	1.5	0	0	0	0	236	59	61	1836
435	C	41	MALE	CAU	1.5	1	1	0	0	261	66	76	1837
436	C	34	MALE	CAU	3.0	0	0	0	0	300	73	88	1838
437	C	33	MALE	CAU	3.0	0	0	0	0	300	77	86	1839
438	C	37	MALE	CAU	3.0	0	0	0	0	333	73	83	1840
439	C	37	MALE	CAU	3.0	0	0	0	0	333	69	89	1841
440	C	38	MALE	CAU	3.0	0	0	0	0	334	69	61	1842
441	C	36	MALE	CAU	3.0	0	0	0	0	365	69	73	1843
442	C	36	MALE	CAU	3.0	0	0	0	0	365	73	100	1844
443	C	37	MALE	CAU	1.5	0	0	0	0	370	47	67	1845
444	C	36	MALE	CAU	3.0	0	0	0	0	374	64	86	1846
445	C	38	MALE	CAU	3.0	0	0	0	0	376	63	74	1847
446	C	36	MALE	CAU	3.0	0	0	0	0	389	73	89	1848
447	C	33	MALE	OTHER	3.0	0	0	0	0	389	100	104	1849
448	C	37	MALE	CAU	3.0	0	0	0	0	381	49	69	1850
449	C	37	MALE	CAU	3.0	0	0	0	0	389	73	79	1851
450	C	38	MALE	CAU	1.5	0	0	0	0	384	39	59	1852
451	C	33	MALE	BLACK	3.0	0	0	0	0	381	37	64	1853
452	C	38	MALE	CAU	3.0	0	0	0	0	385	73	77	1854
453	C	34	MALE	CAU	3.0	0	0	0	0	399	89	79	1855
454	C	33	MALE	CAU	3.0	0	0	0	0	399	100	100	1856
455	C	38	MALE	CAU	3.0	0	0	0	0	399	74	89	1857
456	C	37	MALE	CAU	3.0	0	0	0	0	392	69	89	1858
457	C	38	MALE	BLACK	3.0	0	0	0	0	399	63	76	1859
458	C	36	MALE	CAU	3.0	0	0	0	0	399	82	89	1860
459	C	36	MALE	CAU	3.0	0	0	0	0	399	89	81	1861
460	C	38	MALE	CAU	3.0	0	0	0	0	399	49	77	1862
461	C	34	MALE	BLACK	3.0	0	0	0	0	387	69	84	1863
462	C	33	MALE	BLACK	3.0	0	0	0	0	395	76	87	1864
463	C	36	MALE	CAU	0	0	0	0	0	399	39	69	1865
464	C	35	MALE	CAU	3.0	0	0	0	0	399	86	89	1866
465	C	36	MALE	FEAR	3.0	1	1	0	0	348	43	69	1867
466	C	33	MALE	CAU	1.5	0	0	0	0	399	39	39	1868
467	C	38	MALE	CAU	1.5	3	3	13	13	348	63	85	1869
468	C	34	MALE	CAU	3.0	0	0	0	0	399	82	82	1870
469	C	36	MALE	CAU	3.0	0	0	0	0	399	26	26	1871
470	C	36	MALE	CAU	1.5	0	0	0	0	371	43	69	1872
471	C	36	MALE	BLACK	3.0	0	0	0	0	399	39	46	1873
472	C	33	MALE	CAU	3.0	0	0	0	0	399	73	61	1874
473	C	36	MALE	CAU	1.5	0	0	0	0	399	49	79	1875
474	C	36	MALE	CAU	1.5	0	0	0	0	399	65	76	1876
475	C	37	MALE	CAU	3.0	0	0	0	0	399	86	89	1877
476	C	36	MALE	CAU	3.0	0	0	0	0	399	86	89	1878
477	C	34	MALE	CAU	3.0	0	0	0	0	399	75	81	1879
478	C	36	MALE	CAU	3.0	0	0	0	0	387	61	67	1880
479	C	36	MALE	CAU	3.0	0	0	0	0	399	44	63	1881
480	C	36	MALE	BLACK	3.0	0	0	0	0	399	69	84	1882

BRANCH	AGE	SEX	RACE	AERONAUTICS	STRENGTH	SMOKE	AMOUNT	YRS	QUIT	PT SCORE	P-U	E-U	MAN
481	C	36	MALE	CAU	1.5	1.5	1	0	0	245	44	70	18.25
482	C8	37	PEN	-	3.0	3.0	3	14.0	YES	202	30	71	18.42
483	C8	38	MALE	CAU	3.0	3.0	1	0	0	200	25	81	18.35
484	C	38	MALE	CAU	3.0	3.0	0	0	0	271	47	76	18.72
485	C	38	MALE	CAU	3.0	3.0	1	0	0	240	26	80	18.30
486	C	34	MALE	BLACK	3.0	3.0	0	0	0	207	28	69	18.08
487	C	36	MALE	CAU	3.0	3.0	0	0	0	207	28	70	18.08
488	C	38	MALE	CAU	3.0	3.0	0	0	0	204	27	70	18.27
489	C8	38	PEN	CAU	3.0	3.0	1	0	0	272	39	72	18.69
490	C8	38	MALE	BLACK	1.5	1.5	0	0	0	203	26	68	18.05
491	C	32	MALE	BLACK	3.0	3.0	0	0	0	200	28	69	17.80
492	C	36	MALE	CAU	3.0	3.0	0	0	0	200	27	69	18.08
493	C8	38	MALE	BLACK	3.0	1.5	0	0	0	273	40	70	18.75
494	C8	38	MALE	BLACK	1.5	1.5	1	0	0	207	40	87	18.42
495	C8	34	MALE	CAU	3.0	3.0	0	0	0	277	44	76	18.32
496	C8	35	MALE	CAU	3.0	3.0	0	0	0	206	72	70	18.30
497	C8	36	MALE	CAU	3.0	3.0	0	0	0	206	73	70	18.28
498	C	38	MALE	CAU	3.0	3.0	3	1.5	YES	204	29	68	18.02
499	C8	38	PEN	CAU	3.0	3.0	0	0	0	200	22	70	17.35
500	C8	43	MALE	CAU	3.0	3.0	1	0	0	-	66	-	18.32
501	C8	36	MALE	BLACK	3.0	3.0	2	0	0	200	29	71	18.30
502	C8	34	MALE	CAU	3.0	3.0	0	0	0	206	29	69	18.42
503	C	38	MALE	CAU	3.0	1.5	0	0	0	200	47	68	18.47
504	C	38	MALE	CAU	3.0	3.0	0	0	0	200	73	70	18.28
505	C	34	MALE	CAU	3.0	1.5	1	0	0	202	22	70	18.77
506	C8	36	MALE	CAU	0	0	0	0	0	207	47	69	18.08
507	C	36	MALE	CAU	0	0	0	0	0	206	34	69	18.32
508	C	34	MALE	CAU	3.0	0	0	0	0	200	40	48	18.30
509	C8	36	MALE	CAU	3.0	1.5	0	0	0	242	40	64	18.72
510	C8	38	MALE	CAU	1.5	1.5	0	0	0	220	45	66	18.43
511	C	34	MALE	CAU	1.5	1.5	0	0	0	204	72	69	17.22
512	C8	-	MALE	-	1.5	1.5	1	0	0	206	70	70	18.30
513	C8	38	MALE	CAU	3.0	3.0	0	0	0	203	70	70	18.43
514	C	38	MALE	BLACK	3.0	3.0	0	0	0	277	40	70	18.13
515	C8	38	MALE	CAU	3.0	3.0	1	0	0	202	70	70	18.05
516	C	37	MALE	CAU	1.5	3.0	0	0	0	200	26	73	18.30
517	C	38	MALE	CAU	3.0	1.5	0	0	0	200	40	69	18.47
518	C	39	MALE	CAU	3.0	3.0	1	0	0	200	70	69	18.07
519	C	34	MALE	CAU	3.0	1.5	3	0	YES	200	74	70	18.78
520	C8	37	MALE	CAU	3.0	1.5	3	14.0	YES	207	73	69	18.80
521	C	40	MALE	CAU	3.0	1.5	0	0	0	-	-	-	-
522	C	38	MALE	BLACK	0	3.0	0	0	0	203	23	74	18.17
523	C	38	MALE	CAU	3.0	1.5	0	0	0	204	40	40	18.45
524	C8	34	MALE	CAU	3.0	1.5	0	0	0	200	74	71	18.70
525	C8	37	MALE	CAU	1.5	1.5	1	0	0	241	60	60	18.42
526	C	36	MALE	PRP	3.0	3.0	0	0	0	227	60	60	18.13
527	C8	38	MALE	CAU	3.0	3.0	0	0	0	210	50	50	18.13
528	C	34	MALE	CAU	1.5	3.0	0	0	0	202	20	63	18.00

BRANCH	AGE	SEX	RACE	AEROBICS	STRENGTH	SMOKE	AMOUNT	YRS	QUIT	PT SCORE	P-U	S-U	NUM
1309	C3B	36	PER...	CAU	3.0	0	0	0	0	286	76	34	21.36
1355	C	34	MALE	CAU	1.5	0	0	0	0	286	73	74	10.85
1351	C	41	MALE	CAU	0	3	2.5	10.5	NO	272	71	66	10.26
1352	C3B	41	PER...	CAU	3.0	0	0	0	0	300	76	48	17.88
1353	C	33	MALE	CAU	3.0	0	0	0	0	283	68	61	13.76
1354	C	36	MALE	CAU	3.0	1.5	3	10.5	NO	284	68	49	14.16
1355	C	43	MALE	CAU	3.0	3.0	1	0	0	300	76	68	14.28
1356	C	36	MALE	CAU	3.0	1.5	0	0	0	297	78	78	12.27
1357	C3B	34	MALE	CAU	3.0	3.0	0	0	0	287	68	73	14.35
1358	C3B	43	MALE	CAU	3.0	1.5	0	0	0	284	65	69	10.38
1359	C3B	36	MALE	CAU	3.0	3.0	0	0	0	300	76	66	13.67
1360	C3B	41	MALE	CAU	3.0	3.0	1	0	0	235	38	48	13.08
1411	C3B	34	MALE	CAU	3.0	3.0	0	0	0	300	73	78	12.12
1413	C	36	MALE	CAU	3.0	1.5	0	0	0	245	48	59	14.05
1415	C3B	37	MALE	CAU	0	0	0	0	0	234	48	68	17.33
1424	C3B	37	MALE	BLACK	3.0	3.0	0	0	0	246	48	69	13.98
1425	C	34	MALE	CAU	1.5	1.5	0	0	0	267	48	48	13.02
1426	C3B	36	PER...	0	0	0	0	0	0	232	38	65	17.67
1427	C3B	36	MALE	CAU	1.5	0	0	0	0	296	48	67	10.35
1428	C3B	36	MALE	CAU	3.0	3.0	0	0	0	275	48	73	14.76
1429	C	36	MALE	CAU	0	0	0	0	0	288	73	78	12.47
1430	C	40	MALE	BLACK	3.0	3.0	1	0	0	278	72	76	10.85
1431	C	35	MALE	CAU	3.0	3.0	1	0	0	276	73	65	15.48
1432	C	34	MALE	CAU	3.0	3.0	0	0	0	274	68	76	10.68
1433	C	41	MALE	CAU	3.0	1.5	0	0	0	244	68	61	13.35
1434	C3B	40	MALE	CAU	0	0	0	0	0	268	48	68	17.26
1435	C	36	MALE	CAU	1.5	1.5	3	7.5	YES	285	38	42	15.78
1436	C3B	37	MALE	CAU	3.0	1.5	3	1.5	YES	283	67	69	13.28
1437	C3B	36	PER...	CAU	1.5	1.5	1	0	0	258	38	39	10.26
1438	C	36	MALE	CAU	1.5	1.5	0	0	0	286	68	66	13.04
1439	C3B	36	MALE	CAU	3.0	3.0	0	0	0	287	73	78	12.28
1440	C3B	36	MALE	CAU	1.5	1.5	0	0	0	264	48	41	17.67
1441	C	32	MALE	CAU	3.0	1.5	0	0	0	308	48	72	14.36
1442	C	37	MALE	CAU	3.0	3.0	0	0	0	287	68	76	14.38
1443	C	34	MALE	CAU	0	1.5	0	0	0	277	68	69	13.05
1444	C3B	36	MALE	BLACK	1.5	3.0	0	0	0	287	48	69	13.77
1445	C3B	36	MALE	CAU	3.0	3.0	0	0	0	288	72	78	13.82
1446	C3B	34	MALE	CAU	1.5	1.5	0	0	0	248	68	48	14.78
1447	C	33	MALE	CAU	3.0	1.5	0	0	0	328	68	69	17.38
1448	C	34	MALE	CAU	3.0	3.0	1	0	0	300	76	78	13.88
1449	C3B	37	MALE	CAU	3.0	3.0	0	0	0	300	73	73	14.73
1450	C3B	36	MALE	CAU	3.0	3.0	0	0	0	279	61	71	14.18
1451	C3B	36	MALE	CAU	3.0	3.0	0	0	0	300	76	78	14.28
1452	C3B	36	MALE	CAU	3.0	3.0	0	0	0	228	38	41	12.23
1453	C	36	MALE	CAU	1.5	1.5	0	0	0	241	42	68	13.33
1454	C	43	MALE	BLACK	3.0	3.0	0	0	0	300	72	69	14.05
1455	C3B	36	MALE	CAU	3.0	1.5	0	0	0	286	71	74	12.47

BRANCH	AGE	SEX	RACE	AEROBICS	STRENGTH	SMOKE	AMOUNT	YRS	OUT	PT SCORE	P-U	E-U	PLAN
577	C	35	MALE	CAU	3.0	3.0	1	0	3.0	300	73	60	11.83
578	C33	37	MALE	CAU	3.0	3.0	0	0	0	382	45	68	14.82
579	C	37	MALE	CAU	3.0	3.0	1	0	0	386	69	74	14.82
580	C3	34	MALE	CAU	3.0	3.0	1	0	0	300	63	87	13.10
581	C	36	MALE	CAU	1.5	3.0	0	0	0	283	62	79	14.76
582	C	38	MALE	HISP	3.0	3.0	0	0	0	279	66	87	16.48
583	C	37	MALE	CAU	1.5	1.5	1	0	0	388	70	60	14.37
584	C	32	MALE	HISP	3.0	3.0	0	0	0	256	66	64	16.03
585	C	34	MALE	CAU	3.0	3.0	0	0	0	272	78	65	14.06
586	C3	34	MALE	CAU	3.0	3.0	1	0	0	289	61	69	13.80
587	C33	38	FEU...	CAU	3.0	3.0	0	0	0	276	34	66	16.18
588	C	34	MALE	BLACK	1.5	1.5	1	0	0	276	71	69	14.80
589	C	38	MALE	CAU	3.0	3.0	0	0	0	289	73	77	11.85
590	C	38	MALE	CAU	0	1.5	0	0	0	283	40	69	13.33
591	C	38	MALE	CAU	3.0	3.0	0	0	0	300	74	79	13.80
592	C	37	MALE	CAU	3.0	1.5	1	0	0	280	62	63	13.76
593	C33	38	MALE	BLACK	1.5	1.5	0	0	0	197	35	40	16.82
594	C3	41	MALE	CAU	3.0	3.0	0	0	0	300	76	76	13.80
595	C3	38	MALE	BLACK	3.0	3.0	0	0	0	0	73	79	0
596	C	38	MALE	CAU	3.0	3.0	0	0	0	286	66	62	11.72
597	C	38	MALE	CAU	3.0	3.0	1	0	0	300	73	61	13.67
598	C	38	MALE	CAU	3.0	3.0	0	0	0	288	69	77	14.67
599	C	40	MALE	CAU	3.0	3.0	0	0	0	300	78	69	13.08
600	C33	38	MALE	CAU	3.0	1.5	3	1	10.0	237	37	69	18.43
601	C	37	MALE	CAU	0	0	0	0	0	287	67	69	14.76
602	C	38	MALE	CAU	3.0	3.0	0	0	0	300	76	66	13.67
603	C33	39	MALE	CAU	3.0	3.0	1	1.0	10.0	288	44	37	16.67
604	C33	39	MALE	CAU	3.0	3.0	1	0	0	282	37	67	18.48
605	C	37	MALE	CAU	3.0	3.0	0	0	0	288	49	79	14.85
606	C3	40	MALE	CAU	3.0	3.0	1	0	1.0	300	75	73	14.80
607	C33	38	MALE	CAU	3.0	3.0	0	0	0	0	0	0	0
608	C3	38	MALE	CAU	3.0	3.0	0	0	0	276	63	74	14.80
609	C3	38	MALE	CAU	3.0	3.0	0	0	0	218	40	69	17.25
610	C	38	MALE	CAU	3.0	3.0	0	0	0	300	73	78	13.85
611	C	37	MALE	CAU	3.0	3.0	0	0	0	279	66	64	12.08
612	C3	38	MALE	CAU	3.0	3.0	0	0	0	300	76	63	13.10
613	C	34	MALE	CAU	3.0	3.0	1	0	0	300	69	69	18.27
614	C	38	MALE	CAU	3.0	3.0	0	0	0	286	60	60	14.76
615	C3	38	MALE	CAU	1.5	1.5	0	0	0	288	78	63	14.73
616	C33	38	MALE	CAU	1.5	0	3	1	10.0	289	69	79	13.00
617	C33	34	MALE	CAU	3.0	3.0	0	0	0	281	65	63	14.85
618	C	37	MALE	CAU	3.0	1.5	1	0	3.0	248	47	62	14.80
619	C	36	MALE	CAU	3.0	3.0	0	0	0	284	48	76	14.06
620	C	33	MALE	CAU	1.5	3.0	0	0	0	241	44	63	14.76
621	C	38	MALE	CAU	1.5	0	0	0	0	282	49	67	16.67
622	C3	38	MALE	CAU	3.0	3.0	0	0	0	288	68	68	13.85
623	C	38	FEU...	CAU	1.5	1.5	1	10.0	0	213	19	60	22.42
624	C33	42	FEU...	CAU	1.5	3.0	1	0	0	221	20	46	22.13

BRANCH	AGE	SEX	RACE	AEROBICS	STRENGTH	SMOKE	AMOUNT	YRS	QUAT	PT SCORE	A-U	S-U	NUM
655	C	36	MALE	CAU	3.0	1.5	0	0	0	217	45	45	18.00
656	C	36	MALE	CAU	3.0	1.5	1	0	0	243	47	71	18.20
657	C	37	MALE	BLACK	3.0	1.5	0	0	0	231	46	51	18.77
658	C	37	MALE	CAU	3.0	3.0	0	0	0	0	0	0	0
659	C	37	MALE	CAU	3.0	0	0	0	0	0	0	0	0
660	C	38	MALE	CAU	3.0	0	0	0	0	0	0	0	0
661	C	38	MALE	CAU	3.0	1.5	0	0	0	274	64	71	18.07
662	C	38	MALE	CAU	3.0	1.5	0	0	0	248	48	60	18.20
663	C	38	MALE	CAU	3.0	1.5	0	0	0	260	73	70	18.07
664	C	38	MALE	CAU	3.0	3.0	0	0	0	260	71	74	18.40
665	C	38	MALE	CAU	3.0	3.0	0	0	0	260	76	77	18.08
666	C	38	MALE	BLACK	3.0	0	0	0	0	262	69	78	18.27
667	C	38	MALE	CAU	3.0	1.5	1	0	0	244	27	45	18.79
668	C	37	MALE	CAU	1.5	1.5	0	0	0	263	72	72	18.27
669	C	38	MALE	CAU	3.0	3.0	0	0	0	237	42	60	18.07
670	C	38	MALE	BLACK	1.5	1.5	3	1.0	7.5	220	48	63	17.85
671	C	38	MALE	OTHER	3.0	3.0	1	0	1.5	260	60	60	18.05
672	C	38	MALE	CAU	3.0	1.5	0	0	0	258	36	60	18.05
673	C	38	MALE	CAU	3.0	3.0	1	0	0	300	73	70	18.00
674	C	38	MALE	CAU	3.0	1.5	0	0	0	317	43	57	17.70
675	C	41	MALE	CAU	3.0	3.0	1	0	0	0	0	0	0
676	C	34	MALE	CAU	1.5	3.0	0	0	0	252	69	65	18.50
677	C	35	MALE	OTHER	3.0	3.0	0	0	0	250	76	64	18.30
678	C	37	MALE	CAU	3.0	3.0	0	0	0	260	48	70	18.00
679	C	37	MALE	CAU	3.0	3.0	0	0	0	260	69	70	18.05
680	C	38	MALE	CAU	3.0	1.5	0	0	0	261	70	73	18.08
681	C	35	MALE	CAU	3.0	1.5	1	0	0	0	0	0	0
682	C	40	MALE	CAU	1.5	0	0	0	0	249	50	60	18.07
683	C	38	MALE	CAU	3.0	1.5	0	0	0	0	0	0	0
684	C	38	MALE	CAU	3.0	3.0	0	0	0	300	76	70	18.05
685	C	38	MALE	CAU	3.0	3.0	0	0	0	278	38	60	18.00
686	C	34	MALE	CAU	3.0	3.0	0	0	0	300	73	70	18.77
687	C	34	MALE	CAU	1.5	1.5	1	0	0	233	60	60	18.70
688	C	35	MALE	CAU	1.5	0	0	0	0	214	38	48	18.30
689	C	34	MALE	CAU	1.5	0	0	0	0	29	70	70	18.35
690	C	48	MALE	CAU	3.0	3.0	0	0	0	300	76	65	18.40
691	C	39	MALE	CAU	1.5	3.0	0	0	0	297	78	70	18.05
692	C	38	MALE	CAU	3.0	1.5	0	0	0	250	40	60	18.30
693	C	38	MALE	CAU	3.0	3.0	1	0	0	281	70	83	18.00
694	C	34	MALE	CAU	3.0	3.0	0	0	0	279	62	70	18.05
695	C	41	MALE	CAU	1.5	1.5	0	0	0	260	63	64	18.00
696	C	37	MALE	CAU	3.0	3.0	1	0	1.0	267	40	60	17.10
697	C	39	MALE	BLACK	3.0	3.0	0	0	0	249	50	60	18.77
698	C	38	MALE	CAU	3.0	3.0	0	0	0	243	47	62	18.47
699	C	38	MALE	CAU	3.0	3.0	0	0	0	0	0	0	0
700	C	37	MALE	CAU	1.5	1.5	0	0	0	263	66	60	18.30
701	C	35	MALE	CAU	3.0	3.0	0	0	0	300	60	72	18.05
702	C	41	MALE	CAU	3.0	3.0	0	0	0	249	51	61	18.30
703	C	34	MALE	CAU	3.0	3.0	1	0	0	273	61	63	18.35

	BRANCH	AGE	SEX	RACE	AEROBICS	STRENGTH	SMOKE	AMOUNT	YRS	GURT	PT SCORE	P-U	S-U	NUM
973	C	37	MALE	CAU	3.0	3.0	0	0	0	•	221	63	51	18.35
974	C	33	MALE	CAU	1.5	1.5	1	0	0	•	260	73	78	18.76
975	CBS	33	MALE	CAU	1.5	1.5	0	0	0	•	255	60	70	15.40
976	C	34	MALE	CAU	1.5	1.5	0	0	0	•	262	63	69	15.03
977	CBS	34	FEM..	CAU	3.0	1.5	0	0	0	•	300	68	82	18.05
978	C	33	MALE	CAU	3.0	3.0	0	0	0	•	260	72	80	15.40
979	CBS	34	MALE	CAU	3.0	3.0	0	0	0	•	300	60	66	12.85
980	C	35	MALE	CAU	3.0	3.0	1	0	0	•	267	60	70	14.12
981	CBS	37	MALE	CAU	1.5	3.0	0	0	0	•	265	68	78	14.52
982	CBS	37	MALE	CAU	3.0	1.5	1	0	0	•	216	47	60	17.82
983	C	36	MALE	CAU	1.5	1.5	0	0	0	•	217	45	60	18.70
984	CBS	32	MALE	CAU	3.0	3.0	0	0	0	•	279	66	74	12.93
985	C	37	MALE	CAU	3.0	3.0	0	0	0	•	260	63	82	14.06
986	C	36	MALE	CAU	3.0	3.0	0	0	0	•	272	69	75	15.08
987	C	36	MALE	CAU	3.0	3.0	0	0	0	•	265	63	66	14.77
988	CBS	36	MALE	CAU	3.0	3.0	0	0	0	•	300	124	121	12.85
989	CBS	37	MALE	CAU	3.0	3.0	0	0	0	•	300	76	76	12.77
990	CBS	36	MALE	CAU	3.0	3.0	0	0	0	•	269	74	80	18.09
991	CBS	36	MALE	CAU	3.0	3.0	0	0	0	•	267	65	69	14.76
992	C	37	MALE	CAU	3.0	3.0	0	0	0	•	222	40	57	16.43
993	C	36	MALE	CAU	3.0	3.0	0	0	0	•	300	76	80	13.10
994	CBS	36	MALE	CAU	3.0	3.0	0	0	0	•	300	77	87	12.08
995	CBS	36	MALE	CAU	3.0	3.0	0	0	0	•	266	60	73	14.85
996	CBS	36	FEM..	CAU	0	1.5	0	0	0	•	•	•	•	•
997	CBS	36	MALE	CAU	3.0	3.0	0	0	0	•	269	76	78	14.78
998	CBS	36	MALE	CAU	3.0	3.0	1	0	0	•	233	46	57	16.16
999	CBS	36	MALE	CAU	3.0	3.0	0	0	0	•	265	63	67	14.78
700	CBS	34	MALE	BLACK	3.0	3.0	0	0	0	•	274	66	69	14.36
701	CBS	35	MALE	CAU	1.5	1.5	1	0	0	•	164	39	39	18.57
702	CBS	37	MALE	BLACK	3.0	3.0	0	0	0	•	•	•	•	•
703	CBS	36	MALE	CAU	3.0	3.0	0	0	0	•	•	•	•	•
704	CBS	36	MALE	CAU	3.0	1.5	0	0	0	•	•	•	•	•
705	C	37	MALE	BLACK	3.0	3.0	1	0	10.0	•	•	•	•	•
706	C	34	MALE	BLACK	3.0	3.0	0	0	0	•	•	•	•	•
707	CBS	37	MALE	CAU	3.0	3.0	0	0	0	•	•	•	•	•
708	CBS	37	MALE	CAU	3.0	3.0	0	0	0	•	•	•	•	•
709	CBS	36	MALE	CAU	3.0	3.0	1	0	7.5	•	•	•	•	•
710	C	36	MALE	CAU	3.0	3.0	0	0	0	•	•	•	•	•
711	C	36	MALE	CAU	1.5	1.5	1	0	0	•	•	•	•	•
712	CBS	37	MALE	CAU	3.0	3.0	3	1.5	10.0	YES	168	35	42	18.46

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