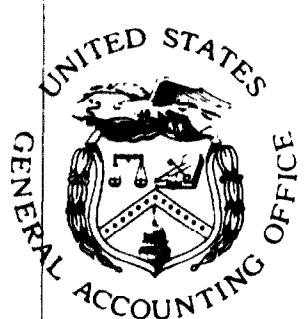
BY THE U.S. GENERAL ACCOUNTING OFFICE

Report To The Secretary Of Defense

Revising Medical Fitness Policies Could Provide Additional Quality Recruits At Less Cost Than Enlistment Incentives

Making entry medical fitness standards less restrictive for quality applicants for enlistment, as well as providing corrective treatment to recruits who currently would be disqualified for readily correctable medical conditions and physical defects, would increase the number of quality recruits entering the Armed Forces. Further, such actions could cost less than alternative enlistment incentives.

GAO recommends that the Secretary of Defense test these policy options and report to the Congress on costs and benefits.



FPCD-82-13
APRIL 7, 1982

UNITED STATES GENERAL ACCOUNTING OFFICE
WASHINGTON, D.C. 20548

FEDERAL PERSONNEL AND
COMPENSATION DIVISION

B-206494

The Honorable Caspar W. Weinberger
The Secretary of Defense

Attention: Director, GAO Affairs

Dear Mr. Secretary:

This report summarizes our review of the armed services' entry medical fitness policies and includes recommendations which, if acted upon, would increase the number of quality recruits, and could cost less than alternative enlistment incentive programs. In addition, the recommended trial programs would provide useful information relative to the reasonableness of the armed services' less restrictive mobilization medical fitness standards, which have never been used or tested.

As you know, section 236 of the Legislative Reorganization Act of 1970 requires the head of a Federal agency to submit a written statement on actions taken on our recommendations. This written statement must be submitted to the House Committee on Government Operations and the Senate Committee on Governmental Affairs not later than 60 days after the date of the report. A written statement must also be submitted to the House and Senate Committees on Appropriations with an agency's first request for appropriations made more than 60 days after the date of the report.

We are sending copies of this report to the Director, Office of Management and Budget; the Chairmen, House and Senate Committees on Appropriations and Armed Services; the Chairmen, House Committee on Government Operations and the Senate Committee on Governmental Affairs; the Secretaries of the Army, Navy, and Air Force; and other interested parties.

We wish to acknowledge the courtesy and cooperation extended to us by your staff during our review.

Sincerely yours,

Clifford I. Gould
Director

GENERAL ACCOUNTING OFFICE
REPORT TO THE SECRETARY
OF DEFENSE

REVISING MEDICAL FITNESS POLICIES COULD PROVIDE ADDITIONAL QUALITY RECRUITS AT LESS COST THAN ENLISTMENT INCENTIVES

D I G E S T

The services could get more quality recruits by easing their medical fitness standards, and by providing treatment for readily correctable medical conditions and physical defects. In fiscal year 1980, 61,000 applicants were disqualified for failing to meet the armed services' entry medical fitness standards. Of these people, over 25,000 were quality applicants. Because recruiters referred them to examining stations for medical examinations, these individuals apparently had no obvious disqualifying medical conditions or physical defects.

More quality applicants could be enlisted into the armed services if the less restrictive medical fitness standards currently used for service in particular skills, retention, and other areas were applied to entry medical fitness standards. For example, the physical standards for more than 25 percent of all active duty, enlisted entry-level Army military occupational specialties are less restrictive than the armed services' entry standards. Moreover, only subjective medical opinion supports entry medical fitness standards. In addition, although one of the five objectives of entry medical fitness standards is to insure that each recruit is medically capable of completing required training, Army basic training is only 5 percent of a typical 3-year enlistment. Furthermore, fewer than one-third of the Army's basic training programed hours involve physically demanding activities. (See p. 5.)

Entry medical fitness standards for certain applicants, such as medical specialists, are less restrictive than other entry medical fitness standards, as are those for

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Tear Sheet

retention and mobilization, in almost all cases. (See p. 10.) The services have adopted less restrictive medical fitness standards when their need for people apparently outweighed their reasons for the standards. (See p. 16.)

Making entry medical fitness standards less restrictive would significantly increase the number of quality recruits. For example, approximately 1,350 quality Army applicants were disqualified for weight in fiscal year 1980, but fewer than 275 (or 21%) were more than 20 pounds overweight or 10 pounds underweight. Thus, relaxing the current maximum and minimum entry weight standards by these amounts would result in about 1,100 additional quality recruits entering the Army each year.

The Department of Defense (DOD) could also increase the number of quality recruits by providing treatment for readily correctable medical conditions and physical defects.

Making such changes could result in some additional in-service health care costs and time lost from duty. Nonetheless, GAO believes the costs incurred by recruiting these quality applicants would be less than the costs of alternative enlistment incentives. (See p. 16.)

GAO's review was made to determine whether there was sufficient evidence to support a DOD trial program to increase the number of quality recruits by modifying entry medical fitness policies.

RECOMMENDATIONS TO THE SECRETARY OF DEFENSE

Because of the potential to increase the number of quality recruits at less cost than other alternatives, GAO recommends that the Secretary of Defense:

--Direct the Army, as Executive Agent for DOD-wide regulations on entry medical fitness standards, to develop and implement on a trial basis (1) less restrictive entry medical fitness standards for quality applicants and

(2) a corrective medical treatment program for quality recruits who currently would be disqualified from military service for readily correctable medical conditions and physical defects.

--Report to the Congress, as part of the fiscal year 1984 DOD budget presentation, on the costs (including documented data on time lost from duty and health care, using both military and civilian facilities, in the event that the Army chooses to contract out medical treatment) and benefits of the above trial programs, and the desirability of extending the test to the other services. (See p. 17.)

AGENCY COMMENTS

GAO requested official agency comments from the Secretary of Defense on a draft of this report. However, they were not provided and therefore could not be incorporated into the final report. (See p. 17.)

Contents

ABBREVIATIONS

DOD	Department of Defense
GAO	General Accounting Office
MOS	Military occupational specialty

CHAPTER 1

INTRODUCTION

The services have an increasing need for quality youths (i.e., mental categories I, II, and IIIa, as determined by the armed services' entry examinations 1/) because of increasingly complex and sophisticated equipment and military operations, increasing force size, and congressional concerns. To attract quality recruits, the Department of Defense (DOD) has used various enlistment incentives, such as bonuses and enhanced educational benefits. Since 1981 the Congress has raised the maximum enlistment bonus from $3,000 to $8,000 for each high-quality recruit agreeing to serve in a military occupational specialty (MOS) designated as critical. In the Army, alone, the average amount for enlistment bonuses from fiscal years 1976-81 increased from $2,305 to $3,161, with an increase to almost $5,000 expected in fiscal year 1982. The total amount for enlistment bonuses included in DOD's approved fiscal year 1982 budget was more than $130 million. To obtain high-quality recruits, the services also tested a number of educational incentives in fiscal year 1981 which provided as much as $20,100 in educational benefits for a 3-year enlistment.

Although the services will need additional quality recruits, they have been rejecting thousands of quality applicants for medical reasons. In fiscal year 1980, 61,000 applicants were disqualified for failing to meet entry medical fitness standards. Over 25,000 of these applicants were quality individuals, including about 15,000 high school graduates. (See app. I.) In addition, there may be more people who (1) did not apply because they thought they would be disqualified because of their medical condition or physical defect or (2) were rejected by recruiters during the prescreening process at recruiting stations for obvious, disqualifying medical conditions (e.g., grossly overweight) or physical defects (e.g., club foot) and not sent for a medical examination. More than half of the 61,000 applicants known to have been medically disqualified during fiscal year 1980 were disqualified for temporary reasons (as defined by the

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1/Quality of recruits, a major concern of the House and Senate Armed Services Committees, was defined in this way in the November 3, 1981, Conference Report on the DOD Authorization Act of 1982. Mental categories are based on percentile scores on the armed services' entry mental tests. Persons who score in the 50th percentile or above are classified as follows: mental category I (93-100), II (65-92), and IIIa (50-64).

armed services) such as overweight, underweight, or incomplete healing of fractures, and had not reapplied for entry by December 1980.

Making entry medical fitness standards less restrictive would significantly increase the number of quality recruits. For example, approximately 1,350 quality Army applicants were disqualified for weight in fiscal year 1980, but fewer than 275 (or 21%) were more than 20 pounds overweight or 10 pounds underweight. Thus, relaxing the current maximum and minimum entry weight standards by these amounts would result in about 1,100 additional quality recruits entering the Army each year.

OBJECTIVE, SCOPE, AND METHODOLOGY

Our objective was to determine whether there was sufficient evidence to support a DOD trial program to increase the number of quality recruits through modification of entry medical fitness policies, 1/ thereby decreasing the need for the Congress to provide expensive enlistment incentives, such as higher level bonuses or increased levels of educational benefits.

In carrying out the objective, we studied the possibility of (1) employing less restrictive entry medical fitness standards and (2) providing corrective medical treatment for recruits, directed at individuals who currently would be disqualified from entry for readily correctable medical conditions or physical defects.

We performed our review in accordance with the Office's current "Standards for Audit of Governmental Organizations, Programs, Activities, and Functions." We reviewed DOD regulations, directives, and internal memoranda; relevant GAO reports; and studies, reports, and other written materials from the services and the Office of the Secretary of Defense. In addition, we interviewed representatives from various DOD organizations, including (1) Offices of the Assistant Secretaries of Defense for Manpower, Reserve Affairs and Logistics; and Health Affairs, (2) the Director of Program Analysis and Evaluation, and (3) the DOD Manpower Data Center to obtain information concerning the background and justification of medical fitness policies, data on medical fitness policies, and data on medical fitness examination results. Within the Army we talked to representatives in the Offices of Director of the Army Staff, Deputy Chief of Staff for Personnel, Surgeon General, Inspector General, and other

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1/Entry medical fitness policies include establishing entry medical fitness standards, authorizing waivers of these standards, and providing corrective medical treatment for medically disqualified applicants.

medical and personnel officials to obtain information on the development, use, and cost of the Army's entry medical fitness policies. We also spoke with medical and personnel officials in the Air Force, Navy, and Marine Corps for comparable information. To obtain data on a variety of topics related to corrective medical treatment (e.g., correctability of certain medical conditions), we interviewed insurance carriers, individual medical experts, and various health association representatives. (See app. II.) We reviewed studies, reports, and other written materials from these sources as well as the U.S. Department of Health and Human Services' National Center for Health Statistics and National Center for Health Services Research. For further information on the armed services' entry medical fitness policies and their enlistment incentive programs, we reviewed studies and reports from the Rand Corporation, the Congressional Budget Office, and the Congressional Research Service.

To assess the feasibility of less restrictive entry medical fitness standards, we selected the following six categories which accounted for the majority of applicants (more than 59%) being medically disqualified in calendar year 1979 (for which more detailed data was available than for fiscal year 1980):

Leading category (note a)	Percent of all DOD medical disqualifications
Abnormal height or weight	19.7
Diseases, defects of musculoskeletal system (including bone fractures)	15.2
Ear, mastoid process, diseases and defects	7.1
Eye diseases and defects	6.5
Digestive system diseases and defects (including abdominal hernia)	5.4
Circulatory system diseases and defects	5.3
Total	59.2

a/Category titles are derived from calendar year 1979 medical disqualification rate data prepared by the U.S. Army Patient Administration Systems and Biostatistics Activity.

Within each category we ranked the specific entry medical fitness standards according to our judgment on (1) the ease of understanding by nonmedical personnel and (2) degree of restrictiveness of the standards. We chose for detailed examination the two standards in each of the six categories which most closely met these criteria. (See app. III.)

We reviewed the costs of the Army's current less restrictive medical fitness standards for entry-level occupations, entry of certain types of individuals, retention of personnel, and entry at time of mobilization for war or other national emergency. We did not consider post-service benefit costs.

Our review covered the period October 1980 to August 1981. Except for our review of DOD-wide precedents for corrective treatment programs, we limited the scope of our work to the Army because:

--The Army Surgeon General is the Executive Agent for DOD-wide regulations on entry medical fitness standards. As such, he is responsible for preparing Army Regulation 40-501, "Medical Services' Standards of Medical Fitness," which includes DOD-wide medical fitness standards for (1) enlistment and appointment of all military personnel except for special categories, (2) mobilization, and (3) physicians, dentists, and related medical specialists. The Surgeon General also is responsible for developing Army-wide retention medical fitness standards.

--The Army's personnel requirements are larger than any other service.

--The Army's percentage of quality recruits is lower than any other service.

--The Army, like the Air Force, establishes different physical requirements for each occupation. The Navy and Marine Corps do not.

To examine the feasibility of providing corrective treatment for recruits, directed at individuals who currently would be disqualified for readily correctable medical conditions or physical defects, we analyzed the costs of correcting four readily correctable medical conditions and physical defects--undescended testicle, abdominal hernia, overweight, and underweight. We selected these four conditions because 95 percent of all recruits treated under a former DOD program for corrective medical treatment--Project One Hundred Thousand's Medically Remedial Enlistment Program--had one of these four.

CHAPTER 2

CURRENT RESTRICTIVE ENTRY MEDICAL FITNESS STANDARDS CANNOT BE FULLY JUSTIFIED

Army recruits normally must first meet the armed services' entry medical fitness standards and then, after completing training, meet the Army's physical standards of the assigned MOS. This second set of standards may be considerably less restrictive than the initial set of standards. Moreover, after recruits enter the service, they no longer have to meet entry medical fitness standards but instead can meet less restrictive retention medical fitness standards. Thousands of Army personnel no longer meet entry medical fitness standards yet continue to serve.

For example, the physical standards for more than 25 percent of all active duty, enlisted Army MOS's having lower graded (E-1 to E-3) persons authorized are less restrictive than the armed services' entry medical fitness standards. Moreover, only subjective medical opinion supports entry medical fitness standards. In addition, although one of the five objectives of entry medical fitness standards is to insure that each recruit is medically capable of completing required training, Army basic training is only 5 percent of a typical 3-year enlistment. Furthermore, fewer than one-third of the Army's basic training programed hours involve physically demanding activities. In almost all cases, entry medical fitness standards for certain individuals, such as medical specialists, are less restrictive than other entry medical fitness standards, such as those for retention and mobilization.

MANY MEDICALLY DISQUALIFIED ARMY APPLICANTS COULD MEET LESS RESTRICTIVE PHYSICAL STANDARDS OF ARMY JOBS

The Army has established physical standards--which differ from the armed services' entry medical fitness standards--for every Army MOS. About one-third of all active duty, enlisted Army MOS's (107) have less restrictive physical standards than required of an applicant for entry into military service.

Army matches physical demands of jobs to applicants' medical qualifications

The Army quantifies the standards for each entry-level and higher-level MOS in a physical profile which rates the broad physical and psychological demands of the MOS. The Army had 331 active duty, enlisted MOS's with specified physical profiles as of September 1, 1981. Enlistees at pay grades E-1 through E-3 were authorized in 239 of these MOS's and only higher graded enlisted personnel were authorized in the remaining MOS's.

Physicians at the Military Entrance Processing Stations 1/ assign a physical profile to all applicants. To qualify for training and placement in a specific Army MOS, an applicant normally must have a physical profile equal to or better than the profile specified in the regulations. In determining an applicant's physical profile, physicians evaluate the functional capacity of particular body organs or systems, rather than any particular medical condition or physical defect. The body functions are considered under six factors, designated "P-U-L-H-E-S." These factors are:

(1) P--physical capacity or stamina

(2) U--upper extremities

(3) L--lower extremities

(4) H--hearing and ear defects

(5) E--eyes

(6) S--psychiatric

Appendix IV describes these factors and their use in greater detail.

For each of the six factors, the examining physician at the Military Entrance Processing Station assigns the number 1, 2, 3, or 4 to rate the applicant's functional capacity, with "1" indicating the best level. If the applicant has a "3" or "4" in his or her physical profile, the applicant would be medically disqualified from entry into the service.

Although applicants are medically disqualified from entry if their physical profile contains at least one rating of "3", about 31,000 authorized Army lower graded (E-1 through E-3) active duty, enlisted positions (in 69 MOS's) have physical standards which are less restrictive than entry medical fitness standards. Of these 69 MOS's, 18 allowed one "3", 43 allowed two "3's," and 8 MOS's allowed three or more "3's" in their physical profiles.

Thirty-eight active duty, enlisted MOS's with authorized strength only in grades E-4 through E-9 allowed at least one "3" in their physical profile. Seven of these MOS's allowed

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1/Previously called Armed Forces Examining and Entrance Stations.

only one "3", 23 allowed only two "3's", and 8 allowed three or more "3's" in their physical profiles.

ENTRY MEDICAL FITNESS STANDARDS ARE APPARENTLY SUBJECTIVELY BASED

The armed services' entry medical fitness standards are based on World War II standards. These standards, according to the Office of the Army Surgeon General, were developed from recommendations by military and civilian experts in the fields of medicine, personnel, economics, and administration. The Office of the Army Surgeon General was unable to provide documentary evidence to support the specific basis for any of the 12 current entry medical fitness standards selected for review. For example, although Army officials did not provide a written basis for the entry weight standards--which account for more medical disqualifications for enlistment into the armed services than any other reason--other written materials made available by DOD officials suggest the highly subjective basis of these standards. An April 1977 joint-service study on "Appropriateness of Medical Standards for New Accessions" stated:

> "The Service Chiefs would object strenuously to any attempt to relax the maximum weight/height standards for enlistment. Their concern is based only partly on medical grounds, i.e., an increased likelihood of becoming medically disabled. More important is that being overweight is associated with a lack of physical fitness, and a poor military appearance, which is considered to denote a lack of personal and professional pride."

In addition, the Army's November 1973 "Final Report, Medical Standards in the Volunteer Environment" noted:

> "The adverse effect of obesity on health is fairly well reported but weight is an imperfect measure of this defect. The current weight standards are derived from considerations such as logistical constraints and health-care requirements and based on average weights (related to height) of varying age groups. Further study might reasonably seek to find a better measure of obesity, such as skin fold measurements, or seek to find by what degree overweight may be associated with physical impairment or functional incapacity."

The Army Surgeon General asks civilian medical specialists to propose revisions of entry medical fitness standards. However, the Army Surgeon General does not require these specialists to explain the basis of their proposed revisions.

As a result, military medical personnel in the Office of the Army Surgeon General can only review the proposals on the basis of their personal medical experience and knowledge.

TRAINING CONSIDERATIONS FOR ENTRY MEDICAL FITNESS STANDARDS ARE QUESTIONABLE

Although one of the objectives of entry medical fitness standards is to qualify only applicants who would be medically capable of completing required training, this criterion is questionable because:

--physically demanding training requirements involve a small percent of a typical 3-year term of enlistment and

--the Army can waive physically demanding training requirements.

Physically demanding training requirements involve small percent of enlistment term

Army basic training during peacetime typically lasts 8 weeks, or 5 percent of a 3-year, 156-week term of enlistment. These 8 weeks include 405 programed hours of fundamental and weapons training, administrative activities, and testing. However, only 132 of these programed hours (or less than one-third of the total time) involve physically demanding activities, such as crawling, running, jumping, climbing, and marching. (See app. V.) Further, within these 132 hours, an unspecified amount of time is devoted to lectures and demonstrations as well as to tasks which are not physically demanding, such as applying camouflage.

Army waives physically demanding training requirements

Although the armed services' medical regulations provide for qualifying only applicants who can complete required training, Army training officials may also waive requirements for completing specific sections of training. This waiver is based on the official's subjective evaluation that the soldier has demonstrated the ability to become a productive member of a unit. Examples of requirements which may be waived are the Standard Army Physical Readiness Test and the Performance-Oriented End-of-Course Test.

After recruits successfully complete Army basic training, they begin advanced individual training. The only common, across-the-board physically demanding requirement to successfully

complete all advanced individual training programs is the Physical Readiness Test. However, the minimum passing score required to successfully complete advanced individual training also may be waived.

ARMY USES LESS RESTRICTIVE MEDICAL STANDARDS FOR CERTAIN INDIVIDUALS

The Army has

--authorized waivers of medical conditions and physical defects which normally disqualify an applicant from entering;

--established less restrictive medical fitness standards for entry of physicians, dentists, and related medical specialists;

--established less restrictive medical fitness standards for retention; and

--established less restrictive medical fitness standards for mobilization in the event of war or other national emergency.

Army grants waivers of entry medical fitness standards

The Army may grant waivers of entry medical fitness standards to applicants who would otherwise have been medically disqualified. The decision to grant a waiver is a subjective evaluation of the "risk" compared to the applicant's potential contribution to the service. General considerations for granting a medical waiver include whether the medical condition or physical defect (1) is progressive, (2) is subject to aggravation by military service, (3) would interfere with military training or duty, and (4) would be an undue hazard to the enlistee or other service member. Another important consideration is whether the applicant is likely to use the medical condition or physical defect existing at the time of entry as a basis for separation from the Army or to file claims against the Government at some future time. Army medical officials also review additional factors, such as the applicant's entry test scores, education, age, general physical makeup, and employment record.

Army attrition data as of June 1980 for persons who enlisted in the Army in fiscal year 1977 indicates that the attrition rate because of physical reasons for recruits receiving waivers of entry medical fitness standards differed by less than one-half of one percent for mental category I and II enlistees,

compared to recruits without medical waivers. The difference was less than 2 percent for recruits in mental category IIIa.

Army entry standards for medical specialists are less restrictive

To reduce shortages of medical specialists in the armed services, DOD has medical fitness standards for physicians, dentists, and related medical specialists which are substantially less restrictive than normal entry medical fitness standards. Frequent waivers of these standards are granted, enabling medical specialists with even lower levels of medical fitness to enter the Army. DOD policy is to consider the enlistment or appointment of all needed medical specialists (including hospital dieticians, physical therapists, pharmacists, etc.) potentially acceptable for military service, provided they can reasonably be expected to perform the same professional duty that they did in civilian life.

Retention standards for hundreds of medical conditions are less restrictive

Retention medical fitness standards generally begin to apply after the first 4 months of active duty, rather than at the end of a person's term of enlistment. These standards, which differ slightly by service, are less restrictive than their entry counterparts because of concessions the services are willing to make to retain individuals. These people are already trained in a skill or are considered by the Army to be fully motivated and have demonstrated that their medical condition will not interfere with satisfactory performance of duties. Retention medical fitness standards require that persons be judged by their ability to perform their duties, whereas applicants for entry are judged against medical fitness standards. Therefore, approximately 400 medical conditions and physical defects which disqualify applicants from entering the Army are not disqualifying for persons who want to stay in the service. Thus, such individuals could be retained on active duty even if their medical condition deteriorated. At least 30,000 Army personnel--in excess of two Army divisions--have assignment limitations as a result of meeting retention standards but not entry medical fitness standards.

Individuals having one or more of the listed medical conditions but who are subject to retention standards are not automatically separated from the service. Instead, their fitness or unfitness depends on whether

--they can perform the duties of their office, grade, rank, or rating in such a manner as to reasonably fulfill the purpose of their employment in the military service;

--they would compromise their health or well-being by remaining in the military service; or

--their retention in the military service would prejudice the best interests of the Government (e.g., a carrier of communicable disease who poses a threat to others).

Army can apply less restrictive medical fitness standards during mobilization

In 1960, the armed services issued the current mobilization medical fitness standards for use in the event of war or other national emergency. These standards are substantially less restrictive than entry medical fitness standards to "effect the maximum utilization of manpower under conditions of mobilization" and obtain "individuals who can be expected to be productive in the military environment," according to Army Regulation 40-501.

Mobilization medical fitness standards, as explained by the Office of the Army Surgeon General, were designed to provide for the entry of individuals whose medical conditions and physical impairments are relatively static in nature, but whose civilian-acquired skills (such as automobile mechanics, electronics technicians, etc.,) may be critically required in the armed services under conditions of mobilization. Mobilization medical fitness standards are implemented only upon specific instruction from the service Secretaries and apply to designated personnel categories. The services, however, have never used these standards.

CHAPTER 3

A CORRECTIVE MEDICAL TREATMENT PROGRAM IS PRACTICAL

Regardless of whether the armed services' entry medical fitness standards are changed, a corrective medical treatment program could be an economical way to enlist additional quality recruits. The purpose of this program would be to enlist such applicants who are currently medically disqualified to bring them up to the level of current or revised entry medical fitness standards, and to do so at less cost than would be incurred in attracting other quality recruits in the open marketplace. It appears that these objectives could be attained for at least four readily correctable medical conditions or physical defects--undescended testicle, abdominal hernia, underweight, and overweight. Indeed, all services at one time provided such corrective medical treatment, and the Marine Corps still does so.

DOD PRECEDENTS EXIST FOR A CORRECTIVE TREATMENT PROGRAM

Between 1967 and 1971 the services enlisted more than 30,000 recruits in the Medically Remedial Enlistment Program as part of Project One Hundred Thousand. This project was designed to enlist a maximum of 100,000 recruits a year who did not meet entry mental or medical fitness standards. Program participants enlisted under a waiver and agreed in writing to submit to appropriate treatment. After 6 weeks of treatment and recuperation, the recruits were expected to undergo basic training.

In that program, over 85 percent of the participants had originally failed to meet the services' weight standards, and 10 percent had either a unilateral undescended testicle or an abdominal hernia. Less than 5 percent had one of 11 other readily correctable medical conditions or physical defects.

The Congress, in the fiscal year 1972 Appropriations Act, prohibited the spending of any funds for mandatory quotas of mental categories, thereby effectively eliminating the mental category portion of Project One Hundred Thousand. However, the Congress did not prohibit the corrective medical treatment portion of the project.

The success of the corrective treatment program is evidenced by directions from the Assistant Secretary of Defense (Manpower and Reserve Affairs) to the services in 1971 to continue to accept recruits with easily correctable medical conditions and physical defects since "...experience has shown that this program provides the services with good military candidates after their physical defects have been corrected." In the intervening years,

however, only the Marine Corps has continued to operate a corrective treatment program for recruits.

CORRECTIVE MEDICAL TREATMENT WOULD INCREASE THE NUMBER OF QUALITY RECRUITS

As stated previously, more than 25,000 quality applicants in fiscal year 1980 were disqualified from military service for medical reasons. These people were quality applicants who had exhibited a desire to enlist by completing the pre-screening process at recruiting stations. In addition, they apparently had no obvious disqualifying medical conditions or physical defects because recruiters referred them to examining stations for medical examinations. Given the need for quality recruits and the services' lack of success in attracting adequate numbers of them, it appears that corrective medical treatment for readily correctable medical conditions and physical defects could be a practical alternative. Such conditions and defects as undescended testicle, abdominal hernia, underweight, and overweight would be prime considerations for such a program.

Undescended testicle

The Office of the Army Surgeon General has estimated that corrective treatment of an undescended testicle would cost about $2,400 in Army facilities. (Army officials did not estimate corrective treatment costs in civilian facilities for any of the four conditions.) Correcting an undescended testicle involves either simply removing the undescended testicle or affixing it to the scrotum by sutures.

According to Army officials, costs for successful corrective treatment would include about

--$1,100 for direct health care,

--$500 for travel,

--$575 for pay, and

--$250 for other costs.

Direct health care includes about $1,000 for surgery and a 5-day hospital stay and about $100 for five checkup visits after treatment. Travel would be to and from the treatment facility, which, according to the Office of the Army Surgeon General, would be at three basic training installations. The rate of pay is that of a grade E-1 recruit for 35 days. Other costs include administration, lodging, supplies, and food. The Army Surgeon General

also estimated costs for unsuccessful treatment 1/ that would preclude military service. But because these costs were not based on documented evidence, we did not include them in our computations.

Abdominal hernia

Corrective treatment of an abdominal hernia would cost slightly more--about $2,800 in Army facilities. An abdominal hernia is a protrusion through or into any part of the abdominal wall of an organ, such as the stomach or intestines, or part of an organ or other structure.

According to Army officials, corrective treatment costs would include about

--$1,300 for direct health care,

--$500 for travel,

--$700 for pay, and

--$250 for other costs.

Direct health care includes about $1,200 for surgery and a 6-day hospital stay, and about $100 for five checkup visits after treatment. Travel would be to and from one of the three treatment facilities. The rate of pay is that of an E-1 recruit for 42 days. Other costs include administration, lodging, supplies, and food. Again, we did not consider costs for unsuccessful treatment.

Overweight and underweight

Correcting an overweight or underweight condition would be the most expensive--about $4,550 in Army facilities. An overweight or underweight condition is determined by comparing an applicant's weight to weight tables in Army medical regulations. The tables are related to age, height, and sex. Individuals who are overweight or underweight would first undergo a medical examination to determine whether their condition is a correctable nonclinical weight problem. Individuals with a correctable weight condition would then participate in special programs,

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1/ Unsuccessful treatment costs include costs for persons not able to achieve the goal of successful treatment within the allotted time period (e.g., because of non-cooperation of the patient or treatment failure).

including daily monitoring, frequent clinical evaluations, patient education, and physical training.

According to Army officials, corrective treatment costs would include about

--$2,500 for direct health care,

--$500 for travel,

--$1,300 for pay, and

--$250 for other costs.

Direct health care includes about $95 for 4 clinic visits to determine if and how the weight condition can be corrected and approximately $2,400 for 100 clinic visits to treat the weight condition. Travel would be to and from the treatment facility. The rate of pay is that of a grade E-1 recruit for 7 days to determine correctability of the weight condition, and 70 days to treat the weight condition. Other costs include administration, lodging, supplies, and food during both the determination and treatment phases. Once again, the costs for unsuccessful treatment are not included.

Although directed at career personnel rather than new recruits, the Army already is operating a successful weight control program for serving personnel who do not meet weight standards. This program, known as "Lifestyle 81," operates at Ft. Eustis, Virginia. It attempts to modify entrenched personal habits of overweight Army personnel and helps to achieve a permanent weight loss. The Army base's commanding officer requires program participation by all base enlisted personnel who are overweight according to the Army's retention weight standards. Program components include:

--eating low calorie meals served on the base three times a day, 7 days a week, and

--attending mandatory education and physical fitness sessions at least three times a week.

Of the 53 persons participating in "Lifestyle 81" from February to mid-April 1981, 83 percent reached or exceeded the program goal of losing 15 pounds during the 10-week treatment period. The average weight loss was 20.5 pounds, or 2.05 pounds per week. Forty-one of the 53 program participants lost more than the 15-pound goal, including 14 people who lost between 26 and 45 pounds.

CHAPTER 4

CONCLUSIONS AND RECOMMENDATIONS

DOD could increase the number of quality recruits in the armed services by many thousands each year by (1) making entry medical fitness standards less restrictive for such applicants, and/or (2) providing corrective medical treatment for recruits, who currently would be disqualified for readily correctable medical conditions and physical defects. Moreover, these actions could be less costly than the enlistment incentives currently being used (e.g., bonuses) or contemplated (e.g., new educational incentives).

However, despite the potential gains in quality recruits that could be made by revising medical fitness standards, Army officials believe that standards must remain restrictive. Army officials, nevertheless, cannot objectively address the standards since they do not systematically collect performance data or in-service health care costs and time lost from duty of persons serving under less restrictive standards. Further, indirect evidence indicates that the job performance of soldiers who do not meet current entry medical fitness standards has been satisfactory and the costs have not been unreasonable. For example, the Army has more than 30,000 personnel on active duty who do not meet current entry medical fitness standards. If these individuals, as a whole, were not performing satisfactorily or if costs were excessive, it would be reasonable to expect that the Army would have taken steps to discharge these people and to tighten its policies.

Since at least 1964, however, DOD has studied making entry medical fitness standards less restrictive for all mental categories but has generally maintained the standards at the restrictive World War II level. Yet, the services have adopted less restrictive medical fitness standards when their need for people apparently outweighed their reasons for the standards. Making the entry medical fitness standards less restrictive, however, could result in some additional in-service health care costs and time lost from duty. Nonetheless, we believe that the costs incurred in enlisting such quality applicants could be less than the costs of recruiting additional quality recruits by other means.

Concerning the relative costs of correcting the four readily correctable medical conditions and physical defects we selected for review, the expenditures for enlistment bonuses offer illustrative benchmarks for comparison. The average dollar amount of Army enlistment bonuses in fiscal year 1981 was $3,161. In contrast, the cost of correcting two of the four cited examples

in Army facilities would be $2,400 (for undescended testicle) and $2,800 (for an abdominal hernia). If present average enlistment bonus levels increase to almost $5,000 in fiscal year 1982, as is expected, it would be less costly to correct the conditions and defects in all four cases than to pay enlistment bonuses. We recognize that costs of failures in the corrective program would reduce the savings. Although such comparisons between enlistment bonuses and corrective medical treatment cannot be made universally on the basis of only four examples, the data justifies testing such a correctional program.

RECOMMENDATIONS TO THE SECRETARY OF DEFENSE

Because of the potential to increase the number of quality recruits at less cost than other alternatives, we recommend that the Secretary of Defense:

--Direct the Army, as Executive Agent for DOD-wide regulations on entry medical fitness standards, to develop and implement on a trial basis (1) less restrictive entry medical fitness standards for quality applicants and (2) a corrective medical treatment program for quality recruits who currently would be disqualified from military service for readily correctable medical conditions and physical defects.

--Report to the Congress, as part of the fiscal year 1984 DOD budget presentation, on the costs (including documented data on time lost from duty and health care, using both military and civilian facilities in the event that the Army chooses to contract out medical treatment) and benefits of the above two trial programs, and the desirability of extending the test to the other services.

AGENCY COMMENTS

On January 21, 1982, we requested official comments from the Secretary of Defense on a draft of this report. As of this date, we had not received the Department's official position. Therefore, this report does not include official agency comments.

NUMBER OF MENTAL CATEGORY I-IIIa NON-PRIOR SERVICE APPLICANTS EXAMINED FOR MILITARY SERVICE IN FISCAL YEAR 1980 AND MEDICALLY DISQUALIFIED, BY SERVICE AND EDUCATION

Service	High school graduates	Non-high-school graduates	Total
Army	4,647	3,587	8,234
Navy	4,752	3,393	8,145
Marine Corps	1,359	1,212	2,571
Air Force	4,149	1,968	6,117
Total	14,907	10,160	25,067

APPENDIX II

LIST OF CIVILIAN MEDICAL AND HEALTH INSURANCE PERSONS INTERVIEWED

Aaron Altschul, Ph.D
Professor of Nutrition
Georgetown University
Washington, D.C.

Arnold Andersen, M.D.
Asst. Professor of Psychiatry and Behavioral Sciences
Attending Physician
Phipps Clinic
Johns Hopkins University
Baltimore, Maryland

Reubin Andres, M.D.
Professor, Johns Hopkins University
Clinical Director, National Institute on Aging
Baltimore, Maryland

George Bray, M.D.
Professor of Medicine
University of California
Los Angeles, California

C. E. Butterworth, Jr., M.D.
Professor and Chairman, Department
of Nutrition Sciences
University of Alabama
Birmingham, Alabama

Gary Davis
Associate Marketing Representative
Department of Data Services and Marketing
Hospital Data Center
American Hospital Association
Chicago, Illinois

Linda Delgadillo
Director of Communications
Society of Actuaries
Chicago, Illinois

Lisbeth Fisher
Executive Secretary
National Association to Aid Fat Americans
Bellerose, New York

Paul Hawkins
Vice President
Health Insurance Association of America
Washington, D.C.

Donald Jones
Associate Director of Research
Health Insurance Association of America
New York, New York

Ruth Mintz
Policy Analyst
Division of Policy Studies
American Hospital Association
Chicago, Illinois

Ralph A. Straffon, M.D.
Chairman, Department of Urology
Cleveland Clinic Foundation
Cleveland, Ohio

Robert Stuart, D.S.W.
Professor of Social Work
Graduate School of Social Work
University of Utah
Salt Lake City, Utah

Theodore Van Itallie, M.D.
Special Advisor on Human Nutrition to the Surgeon General
U.S. Department of Health and Human Services
Washington, D.C.

Roland Weinsier, M.D., Dr. P.H.
Associate Professor and Director
Division of Clinical Nutrition
Department of Nutrition Sciences
University of Alabama
Birmingham, Alabama

Wayne Wooley, Ph.D
Eating Disorder Clinic
University of Cincinnati
Cincinnati, Ohio

Brian T. Yates, Ph.D
Assistant Professor of Clinical/Experimental Psychology
Director, Self Management Institute
American University
Washington, D.C.

TWELVE ENTRY MEDICAL FITNESS STANDARDS

SELECTED FOR REVIEW

A. Medical category: digestive system diseases and defects

1. Hernia

(1) Hernia other than small asymptomatic umbilical or hiatal.

(2) History of operation for hernia within the preceding 60 days.

2. Ulcer

(1) Ulcer of the stomach or duodenum if diagnosis is confirmed by X-ray examination, or authenticated history thereof.

(2) Authentic history of surgical operation(s) for gastric or duodenal ulcer.

B. Medical category: ear, mastoid process, diseases and defects

(1) Auricle

Agenesis, severe; or severe traumatic deformity, unilateral or bilateral.

(2) Hearing acuity level

Hearing threshold level greater than that described in table I. (See p. 22.)

Hearing of all applicants for appointment, enlistment, or induction will be tested by audiometers calibrated to the International Standards Organization (ISO).

All audiometric tracings or audiometric readings recorded on reports of medical examination or other medical records will be clearly identified.

APPENDIX III

TABLE 1

Acceptable Audiometric Hearing Level
for Appointment, Enlistment, and Induction

Cycles Per Second (Hz)	Both Ears
500 1000 2000	Average of the 6 readings (3 per ear) in the speech frequencies not greater than 30 decibels with no level greater than 35.
4000	55 (each ear).

OR

If the average of the three speech frequencies is greater than 30 decibels ISO, reevaluate the better ear only in accordance with the following table of acceptability:

Cycles Per Second (Hz)	ISO
500	30 dB
1000	25 dB
2000	25 dB
4000	35 dB

The poorer ear may be totally deaf.

C. Medical category: diseases, defects of musculoskeletal system

1. Scars and deformities of the fingers and/or hand which impair circulation, are symptomatic, are so disfiguring as to make the individual objectionable in ordinary social relationships, or which impair normal function to such a degree as to interfere with satisfactory performance of military duty.

2. Limitation of motion. An individual will be considered unacceptable if the joint ranges of motion are less than the measurements listed below (TM 8-640):

Knee: Full extension.

D. Medical category: eye diseases and defects

1. Distant visual acuity. Distant visual acuity of any degree which does not correct with spectacle lenses to at least one of the following:

(1) 20/40 in one eye and 20/70 in the other eye.

(2) 20/30 in one eye and 20/100 in the other eye.

(3) 20/20 in one eye and 20/400 in the other eye.

2. Refractive error. Any degree of refractive error in spherical equivalent of over -8.00 or +8.00; or if ordinary spectacles cause discomfort by reason of ghost images, prismatic displacement, etc., or if an ophthamological consultation reveals a condition which is disqualifying.

E. Medical category: circulatory system diseases and defects

1. Hypertrophy or dilatation of the heart as evidenced by clinical examination or roentgenographic examination and supported by electrocardiographic examination. Care should be taken to distinguish abnormal enlargement from increased diastolic filling as seen in the well conditioned subject with a sinus bradycardia. Cases of enlarged heart by X-ray not supported by electrocardiographic examination will be forwarded to the Commander, United States Army Health Services Command for evaluation.

2. Hypertension evidenced by preponderant diastolic blood pressure over 90-mm, or preponderant systolic blood pressure over 159 at any age.

F. Medical category: abnormal height or weight

1. Weight related to height which is below the minimum shown in table 1, appendix III of AR 40-501 for men (see p. 25) and table 2, appendix III of AR 40-501 for women (see p. 26).

2. Weight related to age and height which is in excess of the maximum shown in table 1, appendix III of AR 40-501 for men (see p. 25) and table 2, appendix III of AR 40-501 for women (see p. 26).

Table of Weight
(Males)

TABLE 1. Militarily Acceptable Weight (in Pounds) as Related to Age and Height for Males - Initial Entry

Height (inches)	Minimum (regardless of age)	Maximum 16-20 years	21-30 years	31-35 years	36-40 years	41 years and over
60	100	158	163	162	157	150
61	102	163	168	167	162	155
62	103	168	174	173	168	160
63	104	174	180	178	173	165
64	105	179	185	184	179	171
65	106	185	191	190	184	176
66	107	191	197	196	190	182
67	111	197	203	202	196	187
68	115	203	209	208	202	193
69	119	209	215	214	208	198
70	123	215	222	220	214	204
71	127	221	228	227	220	210
72	131	227	234	233	226	216
73	135	233	241	240	233	222
74	139	240	248	246	239	228
75	143	246	254	253	246	234
76	147	253	261	260	252	241
77	151	260	268	266	259	247
78	153	267	275	273	266	254
*79	159	273	282	281	273	260
*80	166	280	289	288	279	267

*Applies only to personnel enlisted, inducted, or appointed in Army and enlisted or inducted into Air Force. Does not apply to Navy or Marine Corps enlistees or inductees.

APPENDIX III

Table of Weight
(Females)

Table 2. Militarily Acceptable Weight (in Pounds) as Related to Age and Height for Females - Initial Entry

Height (inches)	Minimum (regardless of age)	Maximum 18-20 years	21-24 years	25-30 years	31-35 years	36-40 years	41 years and over
58	90	121	123	126	124	135	135
59	92	123	125	129	126	139	138
60	94	125	127	132	128	142	141
61	96	127	129	135	131	145	141
62	98	129	132	139	132	148	147
63	100	135	136	141	136	151	150
64	102	136	140	144	140	155	154
65	104	140	144	148	145	159	158
66	106	144	149	151	150	164	163
67	109	147	151	156	154	168	167
68	112	152	158	159	159	172	171
69	115	158	160	164	162	176	175
70	118	162	166	168	167	181	180
71	122	168	171	171	171	185	184
72	125	171	175	176	175	189	188

APPENDIX III

EXPLANATION OF PHYSICAL PROFILE

SYSTEM FOR ARMY MOS

The six physical factors designated as P-U-L-H-E-S and identified in Chapter 9 of Army Regulation 40-501 are as follows:

1. P--Physical capacity or stamina. This factor concerns general physical capacity. It normally includes conditions of the heart; respiratory system; gastrointestinal system; genitourinary system; nervous system; allergic endocrine, metabolic, and nutritional diseases; diseases of the blood and blood-forming tissues; dental conditions; diseases of the breast; and other organic defects and diseases which do not fall under other specific factors of the system.

   In arriving at a profile under this factor, military medical examiners may consider build, strength, endurance, height-weight-body build relationship, agility, energy, and muscular coordination.

2. U--Upper extremities. This factor concerns the hands, arms, shoulder girdle, and spine (cervical, thoracic, and upper lumbar) in regard to strength, range of motion, and general efficiency.

3. L--Lower extremities. This factor concerns the feet, legs, pelvic girdle, lower back musculature, and lower spine (lower lumbar and sacral) in regard to strength, range of motion, and general efficiency.

4. H--Hearing and ear. This factor concerns auditory acuity and diseases and defects of the ear.

5. E--Eyes. This factor concerns visual acuity and diseases and defects of the eye.

6. S--Psychiatric. This factor concerns personality, emotional stability, and psychiatric disease.

Four numerical designations, or ratings, are assigned to evaluate the individual's functional capacity in each of the six factors, as follows:

1. An individual having a numerical designation of "1" under all factors is considered to possess a high level of medical (physical and mental) fitness. Consequently, he or she is medically fit for any military assignment.

2. A physical profile "2" under any or all factors indicates that an individual meets entry standards, but possesses some medical condition or physical defect which may impose some limitations on initial military occupational specialty classification and assignment.

3. A profile containing one or more numerical designations "3" signifies that the individual has a medical condition(s) or physical defect(s) which requires certain restrictions in the assignments within which he/she is physically capable of performing full military duty. Such individuals are not acceptable under entry standards in time of peace, but may be acceptable in time of partial or total mobilization. They meet retention standards but should receive assignments commensurate with their functional capability.

4. A profile containing one or more numerical designators "4" indicates that the individual has one or more medical conditions or physical defects listed in Chapter 3 of Army Regulation 40-501. The numerical designator "4" does not necessarily mean that the member is unfit because of physical disability. When a numerical designator "4" is used, an individual has significant assignment limitations which must be fully described if such an individual returns to duty.

PHYSICALLY DEMANDING PROGRAMED HOURS OF ARMY BASIC TRAINING

Subject	Number of programed hours	Examples of tasks
Individual tactical training	39	Move under direct fire. Construct individual fighting positions. Clear fields of fire.
Marches and bivouac	25	Complete a 12-15 mile tactical foot march. Complete a 6-8 mile and a 9-11 mile administrative foot march.
Physical readiness	40	Attain appropriate levels of physical readiness (i.e., achieve a total of 160 points in the Army Physical Readiness Test, with a minimum of 50 points in each event).
Conditioning course	4	Negotiate the conditioning obstacle course, including jumping, dodging, climbing, traversing, and balancing requirements in all weather conditions.
Confidence obstacle course	4	Negotiate the confidence obstacle course, containing 24 obstacles of the confidence-building variety during daylight, under all weather conditions.
Subtotal	112	
Reinforcement training	12	Preparation for performance-oriented End-of-Course Test.
End-of-Course Test	8	Demonstrated ability to perform selected critical tasks.
Total	132	

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