

September 14, 1942.

Mr. Ralph Dugan,  
Atchison County Community High School,  
Effingham, Kansas.

Dear "Red":

Under separate cover I am sending you a copy of the War Department Basic Field Manual "Physical Training", FM 21-20, with my compliments. I trust that you will find it helpful in your program.

I hope things are going well with you at the opening of the school year.

With best wishes for your continued success,  
I am

Sincerely yours,

FCA:AH

Director of Physical Education,  
Varsity Basketball Coach.



September 16, 1942.

The Dudley Lock Corporation,  
325 No. Wells St.,  
Chicago, Illinois.

Gentlemen:

Would it be possible for you to furnish us with the combinations for the following locks? We are unable to locate the combinations for these, and we are in need of every available locker and basket in our gymnasium this fall. I will appreciate your cooperation.

B P 45602

A 98207

A 98161

K R 9793

K R 9224

C V 4524

B P 84875

K R 9534

D G 6786

G B 6335

Very sincerely yours,

FCA:AH

Director of Physical Education,  
Varsity Basketball Coach.



July 1, 1942.

The Dudley Lock Corporation,  
325 North Wells St.,  
Chicago, Illinois.

Gentlemen:

We have two Dudley locks here in our gymnasium for which we are unable to locate the combinations. I wonder if you would be kind enough to send us this information. The numbers of these two locks are as follows:

B P 41136

B p 64194

Thanking you for your cooperation, I am

Sincerely yours,

Director of Physical Education,  
Varsity Basketball Coach.



July 11, 1941.

Dudley Lock Co.,  
Chicago, Illinois.

Dear Sirs:

We have in our office two Dudley locks for which we are unable to locate the combinations. I am wondering if you will be kind enough to supply these so that we may use the locks?

The lock numbers are as follows:

K R 9692

T G 7137

Very sincerely yours,

Director of Physical Education and Recreation,  
Varsity Basketball Coach.



THE PHYSICAL TRAINING PROGRAM OF THE ARMY AIR FORCES  
WITH IMPLICATIONS FOR SCHOOL AND COLLEGE PROGRAMS

E. B. DeGroot, Jr., 2nd Lt., A. C.  
Director of Physical Training, 4th Air Force

Part I

Physical Training in the Army Air Forces

My remarks this afternoon will pertain generally to the physical training program of the combat units of the Army Air Forces, and specifically to the physical training program of the 4th Air Force.

The Army Organization

First, I believe it would be in order to point out very briefly the organization of the Army Air Forces. The Air Forces are, of course, still a part of the Army. Although recently consolidated under one administrative command, there are still two divisions of the Air Forces with two separate physical training programs: (1) There is the division (formerly designated as the Air Corps) which has to do with the training of aviation cadets, and which Mr. Dashiell has so completely outlined. (2) There is the division (formerly designated as the Air Force Combat Command) which includes all those units comprising the actual combat troops --the fighting forces. There are four major commands or divisions of this combat force organized in the continental United States, designated respectively as the 1st, 2nd, 3rd and 4th Air Forces. The 4th Air Force now covers, roughly, the area of the Pacific Coast from Canada to the Mexican border. The 4th Interceptor Command, of which you have heard so much, is one part of this 4th Air Force.

There is no need to attempt an explanation of the Army Ground Forces organization or methods of physical conditioning at this time, except to note that the Army (ground forces) have neither hired civilians nor commissioned physical education men for use in conditioning troops. The Air Force is the only branch of the Army to have taken such action. You are all familiar, I'm sure, with the number and type of men and the type of program the Navy is instituting.



Probably you wonder why only the Air Force, and not the entire Army, has placed trained physical education men on a civil service and commissioned status to aid in developing a physical training program. Here is the reason: The ground forces obtain a fairly high degree of physical conditioning thru their regular, daily training routine, field drill, and maneuvers. They march, hike with heavy packs, engage in bayonet and other types of personal combat drill, dig, carry and build. All these activities are strenuous and exacting and they strengthen and harden the men for arduous campaigns. The daily duties and work of the Air Forces do not include this type of activities; therefore, the Air Force personnel needs a definite and separate program of activities which will develop and maintain a high degree of physical condition. Both the ground forces and the Air Forces promote leisure time recreational athletics.

What is the objective or purpose of the Air Force Physical Training Program?

The general objective, of course, is similar to the training objective of all units of our fighting forces: To prepare all personnel for severe combat conditions.

The specific objectives of the Army Air Forces physical training program, however, and the means used to obtain them, are somewhat different than those of the ground forces. Also, you must remember that the specific physical training objectives for flying personnel are somewhat different than those for ground personnel within the Air Forces. Very definitely, the Air Forces physical training program does not attempt to develop athletes; it does not attempt to harden personnel in the way that infantry training does. The specific objectives of the Air Force program are:

- (1) To bring about a condition in every officer and enlisted man which will delay in the onset of fatigue.



(2) To develop and maintain a high degree of endurance and stamina for the particular job to be done--such a condition that will permit the officers and men to continue their daily work effectively.

(3) To develop such physical condition that all personnel will have a great reserve of strength and endurance--a margin of safety which will carry them thru campaigns under such possible conditions as loss of sleep, lack of food, difficult living conditions and other hardships.

(4) To provide an outlet for, and relief from, the emotional stress and psychological strain involved in flying.

What is the administrative set-up and what type of personnel has been selected to aid in the conduct of the Army Air Force physical conditioning program?

Mr. Dashiell has told you about the civilian physical directors and their functions in the aviation cadet schools. The situation in the combat forces is very different.

Over a year ago, Mr. James E. Pixlee, then Director of Physical Education and Athletics at George Washington University, was appointed Director of Physical Training of the entire Army Air Forces. Mr. Pixlee directs and coordinates both programs of physical training, that in the flying schools and that in the combat forces. Somewhat later, five more physical education men were appointed, on executive order, in the civil service, as directors of physical training with the Air Force Combat Command. Mr. Birch E. Bayh, former director of health and physical education for the public schools of Washington, D. C., was appointed Senior Director of Physical Training of the Air Force Combat Command, and four other men appointed, one to each Air Force. I was appointed to such a civil service position with the 4th Air Force last June. No other trained physical education men have been appointed as physical training leaders with the combat Army Air Forces, either on a civil service or a commissioned basis to date.



Each Air Force Physical director has acted as an advisor (on physical training matters) to his respective Commanding General and has attempted to institute a physical conditioning program. There have been many obstacles and hindrances in accomplishing tangible results, with both flying and ground personnel. Lack of trained personnel with whom to work on each Air Base has been one of the greatest problems. In the entire 4th Air Force, since last June (1941), there has been but one officer trained in physical education, acting in the capacity of base physical director! Nine months ago the Senior and Air Force Directors of Physical Training began to work on the problem of obtaining well-trained, experienced physical directors for each air base. Finally, authority was granted by Headquarters of the Army Air Forces for the appointment from civilian life of some two score trained, qualified physical education men as 1st lieutenants, to be stationed one at each air base with the combat forces.

You probably will be interested to know what type of leader we have been seeking and what requirements we established for the selection of these men. Our prerequisites are quite different than those established by some other branches of the armed forces. We do not want men whose only qualification is that of being big-time coaches or big-name athletes. We want men who are well grounded in the principles of physical education, who know the fundamentals of the physiology of exercise, of hygiene, and of conditioning, and who have a broad experience and a wide knowledge of activities. The administrative and organizational ability of these men is highly important. Above all, we sought those with a high degree of tact, forcefulness, maturity, and with a personality that is strong and adjustable to many of the difficult problems that will be encountered on these jobs. The prerequisites established are as follows: (1) A graduate of a recognized college or university with a major in physical education; (2) one year's graduate work in physical education; (3) at least four years' full-time paid employment in



directing physical education activities; (4) present physical condition adequate to permit extended participation and active leadership in very strenuous activities; (5) personality that includes the factors already mentioned; (6) minimum of thirty years of age.

Men meeting these qualifications have been interviewed and recommended for appointment to Washington, where all final appointments will be made. Whether, with the expansion of the Air Force, we will be authorized additional commissioned appointments, I do not know.

What is the program of physical training activities in the Army Air Forces?

The activities recommended for use in developing and maintaining physical condition in the Army Air Forces are selected with a view to attaining the stated objectives of this program. There are several phases and sub-divisions of this physical training program:

First, there is a required program for enlisted personnel. This provides that all enlisted men will be required to participate in specified and organized physical training activities several hours per week, plus daily participation in calisthenics. Close order drill and fatigue work are not considered to constitute physical training activities. The activities utilized include the entire gamut, from formalized calisthenics and running, to basketball, handball and other team and individual athletic games. The requirement emphasizes that the activities must be vigorous and strenuous in nature, and that every man must be active during the entire physical training period. Details of scheduling, planning and conducting the activities are left to the discretion of the individual unit commander.

You may think that this required program is too indefinite in organization. But you must remember that the training day in the Army Air Forces is not like that of the so-called "line" branches of the Army. Each unit may have duties and time schedules that differ from the other units. Physical training can not be scheduled



for a certain time of day for all units or even for all the men in one unit as may be done in line outfits and in colleges and schools. Facilities and conditions also vary greatly at each base. This problem is not at all like school physical education, or like public recreation work.

All enlisted men must participate in the regularly scheduled required program except those over 40 years of age. The latter may substitute a program similar to the officers' program.

A second division of our program is the required physical training program for all officers of the Army Air Forces. This program requires all officers to participate in physical training activities a certain number of hours per week, depending upon the age of each individual officer and the particular type of duty he is performing. The amount and the importance of participation by flying officers is particularly emphasized.

Here again the entire range of athletic activities, and all types of exercise may be utilized if they are of a vigorous nature. The only vigorous types of exercise that we do not advocate for flying officers are boxing, football and other activities where severe bodily contact may injure the participant. Now you may wonder why we do not advocate the so-called aggressive, combat activities that are coming to be popularly considered as ideal training activities for all personnel in the armed forces.

We hear a lot of bunk these days about the values of rough contact sports which will develop courage, and aggressive spirit, and all those other intangible attributes that certain enthusiasts claim are inherent in particular athletic activities. That is the very type of foggy thinking and generalizing that has plagued physical education for years. Neither the psychologists, nor others, have one bit of scientific evidence that courage and aggressiveness are general qualities, or that there is any transfer of training of this type. Where is there any



scientific evidence that courage in football or boxing guarantees courage against bullets or courage in flying an airplane? What concrete evidence is there that the type of courage found in football players or boxers is superior to that found in trackmen, swimmers or badminton players? There have been no scientific studies made in this field to my knowledge. In contrast, the fact that has impressed me greatly is that we have so many of the wiry, thin-waisted, small and even definitely unathletic-appearing, but very successful combat pilots in our Air Forces. And they do have courage, or they would not have made the grade!

The type of activities that we are particularly advocating for our flying officers are those (1) which will develop and maintain general all-around endurance or fitness, (2) which involve a great deal of running, (3) which strengthen the abdominal muscles, and (4) which appeal to the particular interests of the individual flying officer. There is a reason why each of these types of activities, selected on the basis of our original objectives (superior physical condition for flying airplanes under combat conditions) is advocated:

(1) Activities of a vigorous nature which involve a great deal of running are selected as probably the best type of activities to develop general all-around endurance. This general quality of all-around endurance is absolutely essential to long distance flying and long duty hours; a great reserve pool of general physical condition or energy must be built up.

(2) Running, vigorous and/or extended running, is the one best exercise for the development and maintenance of a well-functioning circulatory system and respiratory system. Both these systems are tremendously important in altitude and distance flying. All of you know, from your courses in physiology and physiology of exercise, that the trained state and the optimum functioning of the organic systems, may be obtained and maintained only thru the continued vigorous use of the big muscle systems of the body. Therefore, we advocate lots of vigorous running, in any form, for flyers.



(3) Activities which strengthen the abdominal muscles are advocated with the objective of lessening the onset of the black-out involved in sudden changes of altitude and direction. There is no scientific proof available that a strong abdominal wall will absolutely lessen black-out. There is still a great deal that is not known about this particular condition. The evidence available, however, indicates that a strong abdominal wall will probably aid in preventing black-out. Until it is proved otherwise, therefore, we shall advocate the maintenance of a very strong abdominal wall. Certainly we know that this is one of the most neglected, and yet most important, muscle groups in the entire body for all daily activities and functions.

(4) Sports and games of a recreational type, which appeal to the individual officer, are advocated, in line with our objective to relieve flying stress and to provide an emotional outlet. They afford an opportunity to forget and become absorbed in that particular game. A program of formalized activities such as calisthenics or regimented participation in distance running or formalized games would probably not achieve this objective.

The third phase of our physical training program is the voluntary, recreational athletic program. We are attempting, in the 4th Air Force, to promote a broad intramural program which will include as many activities and participants as facilities, equipment and time will permit.

We are definitely discouraging the organization and promotion of post teams in the 4th Air Force. Why spend money and time, monopolize the few available facilities and the time of what experienced personnel there is available, on 40 football (or other "varsity") players, while the other 4960 men on the post are left out, or sit around and watch? Post teams are the froth of the recreational program. If the required physical training program is producing results, and if the intramural program is serving the largest number possible, then post teams may all be organized. We have seen enough of these athletic programs for the few at the expense of the many, in school and college athletics.



THE PHYSICAL TRAINING PROGRAM OF THE ARMY AIR FORCES  
WITH IMPLICATIONS FOR SCHOOL AND COLLEGE PROGRAMS

E. B. DeGroot, Jr., 2nd Lt., A. C.  
Director of Physical Training, 4th Air Force

Part II

What the Schools Must Do To Aid the Development of A Physically Fit Army

Your reaction to the required physical program outlined for the Army (Combat) Air Forces probably is that the time allotted is not sufficient to develop superior physical condition. You're right! It isn't! All we can do is attempt to maintain physical condition for combat purposes. The development of physical fitness and condition must be largely brought about before either officers or enlisted men come to the combat forces. That means that the physical developmental process must have been completed either in recruit camps and flying schools, or in schools and civilian life before entering the army. Our recruit camp training ranges from six weeks to twelve weeks, our cadet flying course thirty-five weeks. And gentlemen, the exigencies of training for modern warfare do not leave a great deal of time for physical training, even in this preliminary military training. Don't forget that this applies to those being trained for "line" organizations as well as for the Air Forces! Even if this time devoted to physical conditioning were tripled, you and I know that it isn't sufficient to develop the type of physical condition desired, if the individual has not had years of physical developmental background. The answer is, of course, that the physical educators in our schools and colleges and communities must do the job of developing and maintaining a strong and completely physically fit youth.

What kind of a job have physical educators done and what kind of physical specimens are reporting for military duty?

Gentlemen, physical education and physical educators and the school administrators behind them, have done a rotten job! They have failed to develop a physi-



cally fit population during the last twenty years. They have fumbled the ball!

The young men that are coming into the army are way below standard physically.

I make these charges on the basis of objective evidence and a considerable amount of observation.

First, my observation is one of comparison--comparison with the physical condition developed by our enemies. It was my privilege to be in Germany during 1938. The physiques, the vigor, and the general appearance of physical fitness of all German youths was amazing. I'm not referring to the athletes, but to all the young men we saw throughout Germany, both in uniform and out of uniform.

Hitler, in Mein Kampf, emphasized the absolute importance of building a physically strong, rugged youth as a foundation for a strong state. He accomplished this objective. The contrast of the general run of our school youth with those of Germany is distressing, to say the least.

Second, I have seen thousands of recruits in Air Force recruit camps during the last nine months. The general physical condition, the muscular development and the performance ability of these young men is nothing that we, in physical education, can be proud of. Before we discuss this matter of physical fitness, or physical condition, any further, let's determine what we mean by the term, "physical fitness."

You have read many statements, pro and con, during the last few months about the draft results, the number of rejections, and the physical fitness of our American youth. That term physical fitness needs clarification. It seems to me that there has been a great deal of foggy thinking by both physical educators and laymen (1) in interpreting the draft rejections (for physical disabilities), (2) in understanding what may be meant by the term "physical fitness", and (3) in what physical education may do to improve what kind of physical fitness.

Physical education received a great boost as a result of the draft in 1917-



Physical education was expected to rectify the physical disabilities revealed in that draft. Now comes the 1940-41 draft and the rejection rate, according to preliminary surveys, appears to be as high as 25 years ago! The cry is that physical education has failed! And we must admit that we laid ourselves wide open for that charge by claiming that physical education laws and physical education classes proper could alleviate the physical defects revealed in the first draft! The feature article in the March issue of the Physical Education Journal seems to be written along that same vein, too!

For what defects are men rejected in the largest numbers? The causes (for 1940 rejections), according to a report in the Army Medical Bulletin, are in order: teeth, eyes, ears, mental and nervous diseases, heart, hernia, lungs, venereal, musculo-skeletal, and feet. The first three, defective teeth, eyes, and ears comprise 41% of the disqualifications!

Now what can physical education proper do to rectify these defects? Very little. Almost all these defects must be remedied by medical treatment under the direction of medical personnel. Participation in physical education classes and in athletics certainly isn't going to do it! And I believe it is true to state that 95% of our physical education courses of instruction actually consist of activity periods.

It may be within the province of instructional hygiene to initiate the correction, and to follow-up on the correction of such defects. But how many schools and how many physical educators conduct a really vital, academic course in hygiene which produces tangible results? These rainy-day, hit-or-miss, one-day-per-week, substitute-for-activity-class type of hygiene classes are not only ineffectual but are a waste of time.

Physical educators, in my humble opinion, have made a mistake to claim that the physical education program in itself, can remedy the type of physical (morphological and organic) defects which cause rejection by the Army.



What physical education proper should have done in the past 20 years and what it should be doing right now is to develop the muscular strength, organic vigor, endurance, stamina, agility and bodily control of every grammar school, high school and college student, not merely of the sacred few who participate in interschool athletics. This is the kind of physical fitness and condition that physical education can claim to develop. This is the kind of physical condition that is absolutely essential as a foundation for both the Army and Navy and for the working, producing civilian population.

Besides my observations of thousand of recruits, I have some objective evidence on this failure of physical education to develop physically effective young men. Last fall I tested, thru a battery of standardized physical achievement tests, over 1,000 Air Force enlisted men, most of them newly inducted soldiers. In every test, without exception, the mean performance of these soldiers fell below the mean performance of unselected college students as determined by Dr. Cozens in his Achievement Scales for College Men. And those college men were not athletes. I believe the soldiers tested were a representative cross section of the type of men entering the Army today. They were from many states; about half of them were from California schools. They were selected at random from various types of Air Force Units. The age was about the same as that of our college men. Our new soldiers not only fall below the mean standards of college men, but also below the very conservative achievement standards suggested by the Army.

Let me give you some of the actual mean performances of these men:

	<u>Soldiers</u>	<u>College men</u>
Pull-ups	5	9
Push-ups from ground	16	23
Standing broad jump	6'7"	7'7"
220 yard run	34.2	not available
150 yard dash	21.3	18.7
75 yard dash	10.5	9.3



16% could not pull up more than twice; 23% could not push up more than 8 times; and 28% could not jump 6 feet from a stand!

And you should have seen the lack of agility, bodily control, and general clumsiness! When grown men in the prime of life struggle to chin themselves twice, can't coordinate their movements to perform a standing broad jump, and flounder all over the track in trying to run, it is a sad commentary on the physical education they have had, or rather haven't had, in school! Physical "education" indeed! Motor morons are what we are receiving into the army in large numbers. And of course, all these men are labeled "physically fit" for they have no organic or physical defects! It is obvious that having a morphologically and organically sound body does not mean that the individual has any degree of physical strength, endurance or general physical condition.

What can physical education do to aid the Army and Navy in building a fighting force?

Physical education can return to a real effort to achieve its (almost forgotten in recent years) primary objective: The building of strength, endurance and agility in every young man. The social integration of the individual, personality development, good citizenship and other similar objectives are fine and may be attained thru physical education. But let's get back to the one contribution which no other phase of education can make, and which we know and can prove that physical education can make.

As Dr. McCloy has so aptly put it: "How about some muscle"? Dr. McCloy, in the first few chapters of his book, Philosophical Bases for Physical Education, presents this case very effectively. I would recommend that every physical educator read or re-read this book. Those first chapters should also be read by every school administrator. Mark the chapters and place it in your principal's hands.



Specifically, what can physical education do to aid the war effort?

1. Develop every boy to his optimum physical potentialities. This means the development of all essential muscle groups: (a) shoulder girdle and arm, (b) abdominal, (c) back, and (d) leg muscles. This also means the development, in every boy, of the fundamental skills: (a) running, both sprint and distance suitable to his physiological age, (b) jumping, (c) throwing and catching objects, (d) climbing and supporting his weight entirely by his arms in varied situations, (e) balancing and general bodily control, and (f) swimming. Obviously, physical education programs comprised entirely or primarily of touch football, basketball, volleyball and soft ball are not adequate to produce all-around physical fitness. Men who call themselves "physical educators" and conduct such programs are failing their responsibility both to the youth under their charge and to the nation's war effort.

2. Eliminate these mamby-pamby activities and these coeducational activities from the required physical education period. Even if one whole hour per day were available for actual physical education activities, it would be inadequate. And we know that the actual activity time of every gym period is only thirty to forty-five minutes! Let's not waste the precious time that hard-won state laws have given us! Let the orientation classes, the social science department, or some other department, provide these purely social and non-vigorous recreational activities such as social dancing, ping pong, horseshoes, shuffle board, and coeducational team games.

3. Examine carefully all activities selected for use in the physical education period, and particularly the manner in which they are conducted. I'm not advocating one hour of calisthenics or one hour of running every day. But every activity should be selected and conducted in such a manner that real developmental values may be obtained. A "unit" of softball, which may last sev-



eral weeks, for instance, is practically worthless in developmental values, especially for those very boys who need physical development the most! What value do the boys (invariably the dubs) receive who, day after day, walk out to right and center fields, have a ball come near them a couple of times during the entire period, walk back, and go to bat a few times?! Parallel examples may be found in many other activities. Labeling such a total program of activities for the year as a "physical education course" is farcical. No wonder the Army is receiving motor morons in large numbers! Obviously, coaches and physical education teachers are going to have to spend as much time and energy in planning and teaching every physical education class as they have spent in the past on their varsity teams!

4. Teach the boys some skills in vigorous individual sports. It is amazing to find the number of officers and men who have no skill at all and have never played such games as handball, badminton, tennis, who can't swim, and who have never learned to handle any kind of a ball with any facility. Our problem of maintaining physical condition, particularly in our flying officers, would be tremendously lessened if these men were all equipped with skills in individual sports.

5. Teach every boy the fundamentals of water safety, and require that every boy learn to swim. With our planes operating over water constantly, and with hundreds of thousands of our soldiers and sailors exposed to torpedoing, swimming ability becomes tremendously important. Hundreds, probably thousands of our men may drown in this war because they cannot swim.

6. Vigorously follow-up for correction, with the parents of every boy whose examination reveals remedial physical defects. The cooperation of the school doctor, nurse, and principal, should be obtained in this work.

7. It seems essential to me, that some type of measurement of the physical achievement of every boy should be made. Every boy should be brought up to the



highest possible performance in strength, endurance and agility. This testing program, admittedly, is not easy to administer. But how else will you know where every boy is in physical condition and ability? And remember that we want to develop every boy, whether he has any athletic ability or not.

In closing, I would like to reemphasize these facts: (1) that performance physical fitness as well as functional physical fitness is absolutely essential to the war effort; (2) that the present physical condition of young men entering the Army is far below par; and (3) that physical education and physical educators have a tremendous responsibility in remedying this situation. I know that they are capable of the task and that they can do it. Let's get back to the fundamentals of physical education and eliminate the razzle-dazzle plays.

Paper presented before the Annual Convention, California Association for Health, Physical Education and Recreation; Sacramento, California, March 30, 1942.

*Here for 2 yrs as Phys Ed  
Stanford Grad.*

*I instructor 2 yrs.  
Tale raconteur at Stanford U.*

*South Park, Chicago  
Father, laid out fine*

*playground in  
Dundley Dept. each of San Jose St Teach, in Calif  
before he took position as Director of Phys  
Ed. in Rochester N.Y.*