Physical Fitness—Major Objective?

THAT remarkably resilient piece of machinery which man calls his body is today expected to rebound from the stresses and strains of modern living without the background of physical activity which its biological heritage demands. We have all seen cartoons predicting what effect our pushbutton, sedentary, spectator kind of living will have on future generations. The broad-bottomed, goggle-eyed creatures with atrophied shoulders, arms and legs may provoke a passing chuckle, but the implications of the caricatures cannot be lightly brushed aside.

Medical research has produced many miracle-working drugs, serums, and therapeutic potions. However, it has not yet discovered an ingredient or a combination of ingredients that will produce or develop good muscle tonus nor improve the condition of a muscle that has become flabby. Medical science and education have drastically reduced the number of deaths resulting from tuberculosis since the turn of the century: from 113.1 per 100,000 of population in 1900 to 5.9 in 1960. By way of contrast, death from major cardio-vascular-renal diseases was 364.9 in 1900; in 1960 it was 518.9 per 100,000 of population. It goes without saying that this increase is not due to neglect of research on the problem. No less authority than Dr. Paul Dudley White has said, “America is physically unfit as a nation and heart disease is definitely on the increase. . . . I have long advocated moderate exercise as one of the best ways to keep the heart in good condition.” It would appear that no one can do as much for man in this area as he can do for himself.

Hans Kraus, in his book, Hypokinetic Disease,¹ has stated that the physically active person has better adaptability to stress, less neuromuscular tension, less fatigability, ages later, tends less to overweight, has lower blood pressure, is stronger, more flexible, has a greater breaking capacity, and a lower pulse rate.

In 1957, soon after President Eisenhower created the President's Council on Youth Fitness, the American Association for Health, Physical Education, and Recreation initiated its Youth Fitness Project. This program undertook a nationwide sampling to give an indication of what American youth can do in selected physical performance tests.


T. J. Bleier is Supervisor, Health and Physical Education, Dade County Public Schools, Miami, Florida.

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Junior high school boys demonstrate a back-stretching exercise.

The project was undertaken by the Survey Research Center of the University of Michigan, under the direction of Paul A. Hunsicker. Eighty-five hundred boys and girls in grades five through twelve in schools throughout the country were given a battery of seven test items. These items consisted of pull-ups (modified for girls), sit-ups, shuttle-run, standing broad jump, 50-yard dash, softball throw for distance, and the 600 yard run-walk. From these test results two sets of percentile scores were worked out, one based on age and the other on the Neilson-Cozens Classification Index, which involves age, weight and height.

In 1958 the Association published its Youth Fitness Test Manual. This contained information regarding the tests, their administration, the two sets of percentile scores on each test, and recommendations for cumulative record keeping. At that time many schools throughout the country inaugurated the testing program outlined in the manual and reevaluated the activities of their physical education programs in terms of their contribution to the fitness of all boys and girls.

The President's Council on Youth Fitness has received further impetus and implementation during the Kennedy administration. In 1961 the Council and the American Association for Health, Physical Education, and Recreation joined forces in the preparation of Youth Physical Fitness: Suggested Elements of a School-Centered Program. The follow-

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ing recommendations are made for developmental exercises and activities:

It is recommended that all students spend at least 15 minutes per day in participating in sustained conditioning exercises and developmental activities designed to build vigor, strength, flexibility, endurance, and balance. In the remaining available time, a variety of activities should be provided. All physical education activities should be analyzed for their contributions to physical fitness. Special emphasis should be placed on the improvement of the individual child.

The publication of *Youth Physical Fitness* gave renewed stimulus and direction to the programs of the schools. It re-emphasized the importance of testing and the values accruing from such testing, not only as a means of motivating self-improvement in the pupil, but also as a basis for guidance through the maintenance of cumulative records. Screening to identify physically underdeveloped pupils is recommended as part of a well-planned and carried out health appraisal program. Three simple tests measuring strength, agility and flexibility—pull-ups (modified for girls), sit-ups, and the squat-thrust—serve the purpose for screening. Validated standards of performance on these tests are given. The pupil who does not meet the minimum standards for his or her age group can then be given an individualized exercise program to be carried out on the pupil's own time.

The concern of the country's medical profession in regard to the problem of the fitness of youth was made evident in the resolution adopted on June 28, 1962, by the House of Delegates of the American Medical Association "... urging state and local societies to encourage

*Senior high school girls demonstrate modified push-ups.*

COURTESY DADE COUNTY PUBLIC SCHOOLS, MIAMI, FLORIDA

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in every way the initiation and continuance of sound physical education of the nation's youth in schools and colleges... approving the principles of the President's Council on Youth Fitness in 1961... reemphasizing support of local school and college youth fitness programs...."

A recent statement by the Educational Policies Commission sets forth the overall responsibilities of the schools:

The school must be guided by certain conditions which are known to be basic to significant mental development. The school has responsibility to establish and maintain these conditions. One of them is physical health. ... An adequate physical basis for intellectual life must be assured.

Program for Fitness

In the Dade County public schools, we have long believed that the development of physical fitness is the unique contribution of physical education to the child's total educational experience. A daily 30-minute period in physical education is scheduled for all Dade County elementary school children. This is in addition to any supervised play period. The physical education period in the secondary schools is the same length as any other period of the school day. Boys and girls in grades seven through ten are required to take physical education every day. In some senior high schools it is also required for eleventh graders; in others, it is an eleventh grade elective. It is also an elective for twelfth grade pupils.

Each physical education period is begun with a series of vigorous, intensive, sustained exercises of a developmental nature (3-5 minutes—elementary; 6-8 minutes—secondary). This sequence of exercises is planned in accordance with recognized good practice in progression so that there will be a gradual building up to maximum activity to increase strength and endurance.

In order to avoid monotony our instructors provide variety through a pattern such as the following during any one week: Monday, regular conditioning exercises; Tuesday, isometric exercises (grades 6-12); Wednesday, circuit training; Thursday, continuous conditioning exercises; Friday, regular conditioning exercises—wind sprints, relay races, etc.

Shortly after the publication of the AAHPER seven-test battery in 1958, these tests were given to all Dade County public school pupils from the fifth through the tenth grades. Scores were tabulated and comparisons made with the national norms. Test results indicated that the 50 percentiles for Dade County boys and girls were generally above the 50 percentile of the national survey figures. In the spring of 1961 the test battery was given again. The scores again were tabulated and compiled on a country-wide basis. The two compilations were then compared. The effects of the emphasis that had been placed on vigorous exercise in the two previous years proved its value in improvement of scores. In the 1962 spring testing, IBM cards were used for the first time to record test scores. This increased the efficiency of tabulating and compiling processes.

We have thus been able to establish our own norms at the 50 percentile and the 70 percentile. In this way we have established three groups of pupils: those who score below the 50 percentile; those who score between the 50 percentile and the 79 percentile; and those who score 80 percentile and above.

Those pupils who score below the 50
percentile in any test are encouraged to carry out specific programs of developmental exercises and activities especially tailored to strengthen areas of weakness. These individual programs are designated as “homework,” which the pupil does on his own time, after school hours. The instructors explain to these children why it is important for them to overcome their particular deficiencies. They are retested periodically to determine their progress. Parents are informed of the fitness status of these children and their cooperation is solicited in helping the girls and boys stick to the prescribed exercise routines. Sometimes Mom and Dad get some benefit from them, too!

All other pupils are encouraged and challenged to continue to increase their fitness status. Preclass time provides an opportunity for special fitness exercises on chinning bars and for individual conditioning exercises. Any pupil working on improving his physical abilities may participate. “Homework” is provided for all.

Better Teaching

With the information afforded by test results, more effective teaching is made possible. The instructor can now provide for individual differences on the basis of tangible data. Suspected handicaps indicated by low test scores may be checked out by medical referral. Overweight and underweight pupils can be helped to work out sensible diet and exercise programs. An understanding of the meaning of the test results motivates pupils to work toward self-improvement.

During the 1961-62 school year, an experiment in ability grouping in physical education was carried out. One class period was selected and pupils reporting that period were grouped (boys and girls separately) according to levels of achievement revealed by the testing program. Each group had its own instructor. This proved very successful; content could be better organized and adapted to the level of pupils with similar capacities, skills, and physical characteristics, and progression and continuity were implemented. Many pupils who previously had not had that experience now had a chance to excel, to assume leadership, and to derive greater satisfaction from participation.

This year the plan is being extended to two class periods during the day. Pupils in grades six through twelve will be included. Grade level, as well as ability, is considered in setting up these groups. While single grade groups are preferable, the grouping of pupils of like abilities from two consecutive grades; i.e., 7-8, 8-9, etc., is permissible. Depending on the number of pupils reporting and the number of instructors available, two or three groups may be set up. The two-group plan would consist of pupils of low-low average abilities and those of

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high average-high abilities. The three-group plan would divide pupils into low, average and high ability groups.

Special recognition award certificates are given to pupils who have made noteworthy improvement in their fitness status. Underdeveloped pupils who have been able to bring their scores up to the Dade County 50 percentile and pupils who have no single test score below the 80 percentile receive this recognition. Satisfactory school citizenship is a prerequisite. Some schools have Physical Fitness clubs, designated by colors as status symbols. Raw scores on Dade County percentiles made on the seven-test battery determine club classification. Members of the 420 club have no score below the 50 percentile; members of the 560 club have no score below the 70 percentile; and those in the 650 club have no score below the 90 percentile.

We have reemphasized activities definitely geared to development of stamina, muscular strength and endurance, and coordination. This has not been done, however, at the expense of the sports and games and rhythmic activities which are an integral part of a well-rounded physical education program. We have taken those steps which we feel are vital in fulfilling our obligation to determine the fitness needs of our boys and girls and to provide the facilities, instruction and guidance necessary to meet those needs adequately.

A Concerted Effort

Our senior high schools all have gymnasiums, many of which have adequate gymnastic equipment. In addition, all have athletic fields. The playgrounds of our elementary schools and our junior high schools are our physical education classrooms. Hard court areas are planned for multiple use. Grassy areas provide for softball, touch football, and other team and individual sports.

A modified gymnastic program in elementary and junior high schools has been made possible through the installation of chinning bars and the use of vaulting boxes, low parallel bars, and balance beams. Recently we devised a rope-climbing rig that will become a standard installation. It consists of galvanized pipe used for the uprights and four “arms.” Fixtures are attached for eight climbing ropes. For the elementary schools the rig is 12 feet high; for the junior high schools, it is 16 feet high. By the middle of this school year most of our elementary and junior high schools will have the foregoing equipment, as well as horizontal ladders (6' x 12'—elementary) (7'6" x 16'—junior high) installed on their playgrounds. With these various pieces of equipment available, more pupils can participate in a wider range of individualized activities, either during the pre-class period, or, if prescribed by the instructor, during the period allotted for body-conditioning exercises.

Unfortunately, in some quarters it has been considered a mark of sophistication and superior intelligence to belittle the importance of physical activity and to avoid participation in such activity. The cost in life, health, and happiness has been, and will continue to be incalculable unless the children of the nation are given the opportunities, through the facilities, equipment, time allotment, and competent instruction necessary for a sound fitness program, to realize their individual fitness potentials.

Arthur Esslinger of the University of Oregon has aptly said:

It doesn’t make much sense to put so much effort and money into preparing fine
grams and aspects of education. Another example is the “Formula for Fitness” program that has been developed recently on specific aspects of the physical education program in the San Francisco Bay area. This is a series of 50 ten minute television programs designed for the purpose of emphasizing the need for improved physical fitness. Some 38 school districts and 500 pupils participate in the programs. The audience viewing the presentations will probably run well over a million.

Seeking and Giving Support

One of the great challenges of a community’s efforts toward self improvement is the development of a spirit of cooperation and coordination of appropriate efforts towards reaching established goals.

For the past few years a luncheon has been held in Long Beach during National Youth Fitness Week, with representatives from every organization and agency being invited to attend.

The City of Pasadena has an on-going community-wide committee on physical fitness. Representation on this committee comes from all facets and agencies of the city. The President’s Council on Youth Fitness in its new publication, Physical Fitness Elements in Recreation 1 offers a suggested plan for a Community Committee on Physical Fitness in Recreation.

Shared meetings, joint promotion, co-sponsoring or assisting with community events and participation on citizens committees are other means for improving a community’s efforts in coordination for strong support of health and fitness.

Basic to any program of mobilization is a carefully conceived, skillfully prepared plan. This should involve a complete inventory of present assets and a listing of improvements to be accomplished. Goals for immediate, short range or long range implementation should be clearly established.

A cooperative approach can be effective only if there is dedication of purpose, establishment of desirable understandings and relationships, and coordination of efforts under the strong leadership of competent personnel.

Major Objective

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scientists, doctors, lawyers, musicians, poets, philosophers, journalists, businessmen, and the like who cannot achieve their full potential because they lacked the strength, stamina, health and vitality to do so. . . . For all of our youth, physical education represents the best hope to develop the interests, skills, knowledges, and attitudes in regard to physical activities that will culminate in a strong, tough, fatigue-resistant physique that will bear up under the stresses and strains of the softness of our space age. 8

This tragic human waste need not happen. It can so easily be markedly reduced. Concerted effort among educators will certainly be met with willing cooperation by parents, the medical profession and other community groups so that “every American child (may have) the opportunity to make and keep himself physically fit—fit to learn, fit to understand, to grow in grace and stature, to fully live.” 9

* Address at the 1961 National Convention, American Association for Health, Physical Education, and Recreation.


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