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—1993-94—

THE President's Challenge

PHYSICAL FITNESS PROGRAM PACKET

FEATURED in this packet are the following 1993-94 President's Challenge Materials:

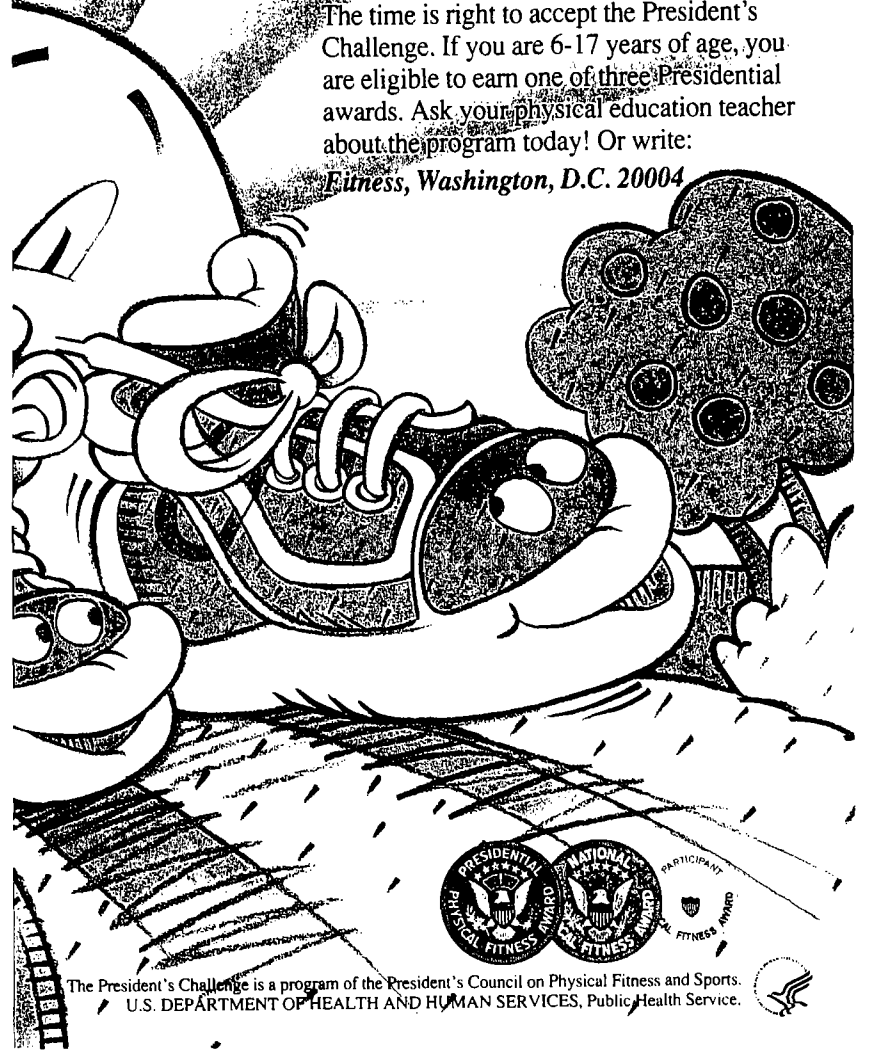
- Letter from President Bill Clinton
- Letter from Co-Chairpersons of the President's Council on Physical Fitness and Sports, Florence Griffith Joyner and Tom McMillen
- Test Manual
- Awards Listing, Order Form and New Awards
- State Champion Entry Form
- New Physical Fitness Scorecard
- Official President's Challenge Apparel Listing and Order Form (Instructor's Apparel and Student Award T-Shirts).

Also enclosed in the packet are a Get Fit Booklet, a **new** President's Challenge poster and a Presidential Special Edition Jacket Order Form.

START NOW!

ON THE ROAD TO FITNESS & HEALTH

The time is right to accept the President's Challenge. If you are 6-17 years of age, you are eligible to earn one of three Presidential awards. Ask your physical education teacher about the program today! Or write:
Fitness, Washington, D.C. 20004



The President's Challenge is a program of the President's Council on Physical Fitness and Sports. U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES, Public Health Service.



A Program of the President's Council on Physical Fitness and Sports



THE PRESIDENT'S CHALLENGE



NATIONAL • YOUTH • PHYSICAL • FITNESS • PROGRAM

A PROGRAM OF THE PRESIDENT'S COUNCIL ON PHYSICAL FITNESS AND SPORTS

FACT SHEET

WHAT IS THE PRESIDENT'S CHALLENGE?

The **President's Challenge** is a physical fitness testing program of the **President's Council on Physical Fitness and Sports (PCPFS)**. During the 1992-93 school year, approximately 28,000 schools nationwide participated in the program and over 2.0 million awards were distributed. The program is for ages six through 17, including those students with special needs.

WHAT ARE THE TEST ITEMS?

The test battery consists of five required components of physical fitness. These include: 1) a one-mile run/walk for cardiorespiratory endurance; 2) curl-ups for abdominal strength and endurance; 3) the V-sit and reach (or sit and reach) for muscular flexibility; 4) pull-ups for upper body strength and endurance; and 5) the shuttle run for body coordination.

WHAT ARE THE AWARDS?

Awards are based on three different levels of physical fitness exhibited: Presidential, National and Participant. The **Presidential Physical Fitness Award** for outstanding achievement is awarded to those who score at or above the **85th percentile** on all five test items. The students earning this award receive a Presidential certificate and a blue embroidered emblem. The **National Physical Fitness Award** recognizes those who score **at or above the 50th percentile** on all five test items. The students earning this award receive a National certificate of achievement, a red embroidered emblem or both. The **Participant Physical Fitness Award** recognizes those who attempt all five test items, but score **below the 50th percentile** on one or more of the five test items. The students receive either a Participant Certificate of Achievement, a white embroidered emblem or both.

WHO IS QUALIFIED TO ADMINISTER THE PRESIDENT'S CHALLENGE?

To qualify for awards, instruction and testing must be carried out by a certified physical education teacher/specialist. A certified physical education teacher/specialist is also required to modify the program for students with special needs, based upon individual limitations and abilities. Others who wish to administer the test must be assisted by a physical education teacher/specialist and have at least one student qualify for the Presidential Award. After the first testing and qualifying, the test administrator is certified to give further tests without the assistance of a certified physical education teacher/specialist.

HOW OFTEN CAN THE TEST BE ADMINISTERED?

The PCPFS recommends fitness testing at least twice each year, in the fall and spring. Before performing the test, all students should be taught the correct techniques for all components, including proper pacing and running style. There is no limit to the number of attempts students can have on each test item. All five test items are required and must be performed in order for a student to qualify for an award. Physical fitness testing is most effective when it is part of a comprehensive physical education program that supports testing with educational and motivational information.

WHAT IS THE STATE CHAMPION AWARD?

The State Champion Award is given to the schools with the highest number of students scoring at or above the 85th percentile. Three schools are selected in each state as State Champion schools based on total enrollment: category I—enrollment of 50 to 100; category II—enrollment of 101 to 500; category III—enrollment of 501 and above.

WHO IS ELIGIBLE TO EARN THE STATE CHAMPION AWARD?

Only schools will be considered for the State Champion Physical Fitness Award. Further guidelines and directions can be found on page 11 of the 1993-94 Program Packet. Modifications have been made this year, so please, take a moment to review these requirements.

WHEN ARE STATE CHAMPION SCHOOLS NAMED?

State Champion schools are named annually in the fall. The names of the winning schools are provided to the governor, superintendent of education/instruction and members of Congress for each state, along with a news release to the local media. The winning schools and participants receive a certificate signed by the President of the United States of America. School participation in this program is not required, but is encouraged.

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Physical Activity And Fitness Research Digest

★ ★

Series 1, No. 5

February 1994

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Produced quarterly by the
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Co-edited by Drs. Chuck Corbin
and Bob Pangrazi,
Arizona State University



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Readiness for Physical Activity

Current practice in physical education and sports medicine emphasizes the twin goals of reducing the risk of illness and increasing quality-adjusted life expectancy through the development of health-related fitness (Bouchard et al., 1990). The average city-dweller currently takes insufficient habitual physical activity to realize these goals, but involvement in a regular, well-designed program of aerobic training, supplemented by moderate resisted muscle exercises could satisfy both objectives (American College of Sports Medicine (ACSM), 1991; ACSM, 1993). What are the risks of engaging in such activity, and how can a person determine if they are ready to undertake such a program?

Risks of Exercise

Excessive physical activity can provoke a variety of musculo-skeletal injuries, but the big fear, highlighted by such events as the sudden death of Jim Fixx and other high-profile exercisers, is that the program will provoke a fatal heart attack. Studies from our own laboratory and elsewhere (Cobb & Weaver, 1986; Northcote & Ballantyne, 1984; Sadaniantz & Thompson, 1990; Shephard, 1974, 1981; Vuori et al., 1982) show that (at least in symptom-free men) the risk of fatal and nonfatal heart attacks during physical activity is from 4 to 56 times higher than it is while sitting at home reading a book. Maron et al. (1986) suggested that the main causes of sudden death in exercisers under 35 years of age were hypertrophic cardiomyopathy (48%: particularly a thickening of the septum between left and right ventricles) and unexplained enlargement of the left ventricle (18%). In those over the age of 35 years, 80% of exercise-related deaths were attributed to disease of the coronary arteries. The overall risk that vigorous physical activity will provoke a cardiac emergency is quite low, about one death per 400,000 hours of jogging (Thompson et al., 1982), and furthermore the risk seems even lower in regular than in occasional exercisers (Siscovick et al., 1984).

Implications for Pre-exercise Screening

Ideally, regular physical activity should be conceived as a simple, safe, and natural part of healthy living, a lifestyle to which the human body has adapted over many centuries of evolutionary struggle as a hunter and primitive agriculturalist (Shephard, 1993), rather than as a dangerous medical intervention that requires extensive, high-technology pre-exercise evaluation.

For a long period, physicians in the United States adopted a somewhat restrictive approach to exercise prescription, suggesting that a stress electrocardiogram was needed in all men over the age of 35 years who wanted to increase their habitual physical activity (Cooper, 1970). Their starting point was the now largely discredited assumption (Shephard, 1984; Siscovick et al., 1991) that a medically-supervised exercise stress ECG could predict and thus avert the occasional exercise-induced cardiac arrest. Northcote and Ballantyne (1984) have pointed out that it would cost \$13 billion to screen even current athletes over the age of 35 years; moreover, it would be neces-

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Physical Activity And Fitness Research Digest

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Heredity and Health-Related Fitness

A Note From the Editors

In the February Issue of the Physical Activity and Fitness Research Digest we noted the importance of heredity as a factor affecting the development of health-related physical fitness. We cited the research of Claude Bouchard and colleagues and indicated that a forthcoming issue of the Digest would deal with the influences of heredity on physical fitness in greater detail.

In this issue of the Digest readers have the opportunity to read a synthesis paper on "Heredity and Health-Related Fitness" written by the most prominent scholar in the area. While we have known for some time that heredity was a factor affecting fitness performances, it was not until Dr. Bouchard and his colleagues began their in-depth studies in the area that we began to really know the extent of hereditary influences.

Dr. Bouchard has studied families, especially families with twins, to learn how heredity affects fitness. Heredity (genotypes) affects different fitness components (phenotypes) in different ways. For example two people of the same age and sex with similar lifestyles could vary in health-related fitness just because of the genes they inherited. As noted later in this paper, the heritability for body fatness is 25%+, muscle fitness 20-40%, and CV fitness 10 to 25%.

But heritability only accounts for differences that heredity might make when comparing two people who have not trained. Bouchard and colleagues have been the pioneers who have demonstrated that not only do people differ in fitness based on heredity, but people of different genetic backgrounds respond differently to training. In other words, two people of different genetic background could do the exact same exercise program and get quite different benefits (see Figure 1). Some people get as much as 10 times as much benefit from activity as others who do the same program.

Though quite technical in some places, the following paper has many practical implications for teachers and professionals in physical activity and fitness. Some of these are listed below:

- Recognizing individual differences is critical in helping students, clients, and patients with fitness achievement. People do not enter our programs with similar backgrounds, nor do they respond similarly to training.
- Assumptions about a person's fitness cannot always be indicative of their current activity levels. The conclusion that the lower fitness of one person compared to another is a result of inactivity is a dangerous one. Those who do not adapt quickly to physical activity need encouragement to keep them involved, not discouragement associated with conclusions about their level of activity and effort.
- Different people (genotypes) respond differently to each part of fitness (phenotype). A person who has less hereditary predisposition to one type of fitness may respond well to another. For this reason we should be careful not to expect people to perform well on all health-related fitness tests just because they score well on one test.

Even those with little technical background can benefit from the paper that follows. Read on!

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Physical Activity And Fitness Research Digest

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Physical Fitness and Healthy Low Back Function

Introduction:

The initial issue of the *Physical Activity and Fitness Research Digest* (Series 1, No. 1) gave a general overview of the benefits of physical activity and how those benefits related to major lifestyle diseases and the Healthy People 2000 promotion and disease prevention priorities. This issue focuses on physical activity, physical fitness, healthy back function and low back pain.

The following key points are discussed in detail in this article:

- At some time in their lives, 60-80% of all individuals experience low back pain. The condition is disabling to 1-5% of this population.
- To have a healthy, well-functioning back, flexible lumbar muscles, hamstrings, and hip flexors and strong fatigue-resistant abdominal and back extensor muscles are necessary.
- The Healthy People 2000 goals aim to decrease disability from chronic disabling disease and to increase the proportion of the population who regularly perform activities to enhance muscular strength, endurance, and flexibility. In terms of low back health, the latter goal may be one way of achieving the former goal.
- Exercises to maintain or increase muscular function in the low back region are presented in Table 1.
- The anatomical logic (presented in Table 2) linking low back health and physical activity is stronger than the research evidence at this time.

Studies (see body of text) support the fact that individuals who have suffered low back pain (LBP) have weaker, more fatigable, and less flexible muscles in the trunk region even after the acute pain episode has subsided than do those who are pain free. Continued weakness, low endurance and restricted range of movement appear to be contributing factors to recurrent LBP. The ability to predict first-time LBP from muscular strength, endurance or flexibility values has not been established. Likewise, a direct relationship between LBP and cardiovascular or body composition fitness has not been established. On the other hand, with one exception which is noted in the following text, the studies reviewed have not shown that high levels of any of these fitness components are in any way linked as causal factors to LBP. Therefore, it appears prudent at this point to continue recommending a specific program of trunk muscular fitness as a part of a comprehensive physical fitness activity program. This recommendation is in accordance with the Healthy People 2000 goal, which states the aim of increasing to at least 40 percent the proportion of the population 6 years old and above who regularly perform physical activities that enhance and maintain muscular strength, muscular endurance, and flexibility (Public Health Service, 1990). A comprehensive program would, of course, utilize the entire body and, along with the trunk region, stress upper

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Physical Activity and Intrinsic Motivation

Introduction: Theory Development

Over the past 20 years, we have accumulated considerable evidence to document the health benefits of physical activity (see previous *Research Digest*). Researchers have established with a fair degree of confidence just how much physical activity is necessary to produce fitness improvement and benefits to health (ACSM, 1990). Given this rather clear picture of how to obtain desirable benefits, an obvious question is why do less than one quarter of the population engage in light-to-moderate physical activity? The answer to this question is found largely in the realm of psychology—specifically in the area of motivation. The task of this issue is to review current knowledge and to translate it into suggestions for enhancing physical activity. Specific guidelines for fostering intrinsic motivation toward physical activity are outlined in the final section.

Motivational studies have long focused on factors that initiate, influence and modify behavior. Early theories dealt essentially with the *deterministic* aspects of those factors; focusing on instinctual drives (e.g., Freud, 1923/1962), physiological drives (e.g., Hull, 1943), or environmental influences (e.g., Skinner, 1953, 1971). Although these theories had (and still have) considerable value, their apparent view of people as passive beings that are pushed and pulled around by their physiology or environment has given rise to concern and criticism. A different point of view was published as a monograph by (White, 1959) who proposed that people are driven by a need to be *competent*, or *effective* in mastering all aspects of our environment. He suggested that when attempts to master the challenges of our surroundings were successful, the result was positive—a “feeling of efficacy” (p. 329)—which, in turn, served to intrinsically motivate further behavior. White’s monograph led to a wealth of study on intrinsic motivation, and in that respect it can be seen as the foundation of subsequent studies that are described below.

Refinements of the Theory

A major development of White’s (1959) monograph is represented by the addition of a formal statement of *cognitive evaluation theory* (Deci, 1975; Deci & Ryan, 1985). Cognitive evaluation theory states that intrinsic motivation is driven by an innate need for competence and self-determination in dealing with one’s surroundings. The intrinsic rewards for the behaviors motivated by this need are satisfying feelings of competence and autonomy, positive emotions such as enjoyment and excitement, and possibly the sensation of flow (complete absorption in the activity). These feelings, in turn, serve to maintain or increase a person’s intrinsic motivation for the particular behavior.

In a nutshell (according to the theory), an individual’s desire to pursue a particular activity depends upon whether his or her feelings of competence, autonomy, and positive affect persist over time. Conversely, if an individual begins to perceive him or herself as incompetent at the activity and/or under external control to do it, then his or her intrinsic motivation is undermined. The outcome is then either a state of *extrinsic motivation* (the activity might continue dependent on the continuance of external rewards and/or coercion), or a state of *amotivation* (further activity unlikely because the perceptions of incompetence lead to a sense of futility).

Physical Activity And Fitness Research Digest

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Physical Activity And Fitness Research Digest

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The Health Benefits of Physical Activity

In 1990, *Healthy People 2000* was released by Dr. Louis Sullivan, Secretary, Department of Health and Human Services. The document elaborated national health promotion and disease prevention goals for the year 2000. A central goal of the document is to increase the span of healthy life for Americans. While improved treatment of disease to prevent premature death is an important concern, *Healthy People 2000* emphasizes the importance of prevention of illness/disease, especially lifestyle or chronic illnesses that have become the leading sources of death in our society. But perhaps most important of all, the goals focus on efforts to promote a quality of life and a sense of well-being associated with good health. Dr. Michael McGinnis, Director of the Office of Disease Prevention and Health Promotion, recently made the following statement.

...it is not through happenstance that the physical activity category is the first priority area of the *Healthy People 2000* effort. Physical activity is related to the health of all Americans. It has the ability to reduce directly the risk of several major chronic diseases as well as to catalyze positive changes with respect to other risk factors of these diseases. Dr. William Foege, former Director of the Centers for Disease Control, suggests that physical activity may provide the shortcut we in public health have been seeking for the control of chronic diseases, much like immunization has facilitated progress against infectious diseases (McGinnis, 1992, p. S196).

The inclusion of physical activity as an important lifestyle for promoting good health is now clear. But for those interested in the health benefits of physical activity, it is not easy to find a single source that summarizes these benefits. For this reason, we have attempted to provide a simple summary of the benefits in three sections: disease prevention and treatment; health promotion; and physical fitness development. Six principal sources are used for this summary. Readers are encouraged to consult these references and their sources for more complete details.

Disease Prevention and Treatment

Prior to 1940, the leading killers in the United States were infectious diseases. Improvement in public health practices, implementation of personal and public health education, and vaccines have greatly reduced the incidence of these diseases. As indicated in the early statement by Dr. Foege, "chronic diseases" are now our major health concerns. These chronic diseases are often referred to as "lifestyle diseases" because changes in lifestyle, including increased activity and fitness, can reduce the threat of early death and the incidence of disease. Table 1 lists several of the diseases for which regular physical activity can reduce risk, either of getting the disease or of dying from it. Also illustrated in Table 1 are some of the possible reasons why exercise reduces risk of these diseases.

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Walking for Exercise and
Pleasure [Booklet]

17 pages

Walking

for Exercise and Pleasure



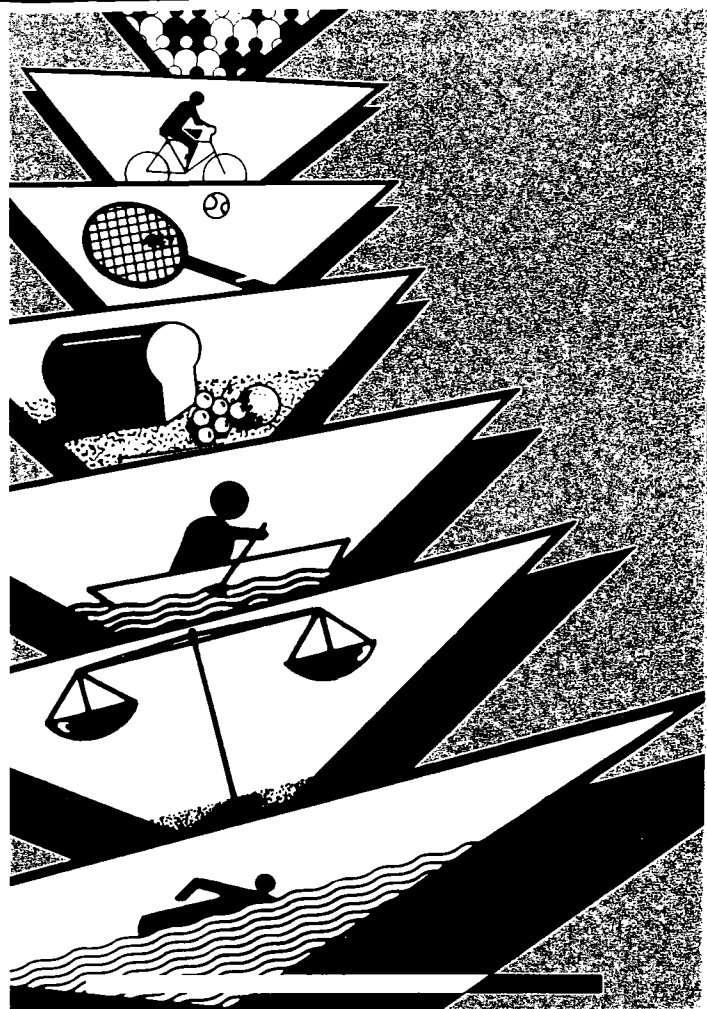
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Exercise and Weight
Control [Booklet]
20 pages



Exercise and Weight Control



The President's Council on Physical Fitness and Sports

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Wake Up! to Family Fitness
with the California Raisins
[foldout] 4 pages

WAKE UP!

TO FAMILY FITNESS WITH THE
**CALIFORNIA
RAISINS**



and



Kusti Yamaguchi

**President's Council on Physical
Fitness and Sports**

Date: _____



In the interest of better personal fitness, general health, and disease prevention, I prescribe the following exercise:

Name: _____

Address: _____

Rx *Aerobic*

- Walking/hiking** 30 minutes
- Easy jogging** two miles
- Swimming or water exercise**
20 minutes (continuous)
- Bike riding** 20 minutes
(moderate speed)

Muscle Strength

- Weight training** three sets, ten repetitions
- Calisthenics** Push-ups and sit-ups

Flexibility

- Stretching
- Range of motion

X _____ **per week**



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Introducing the Physician's

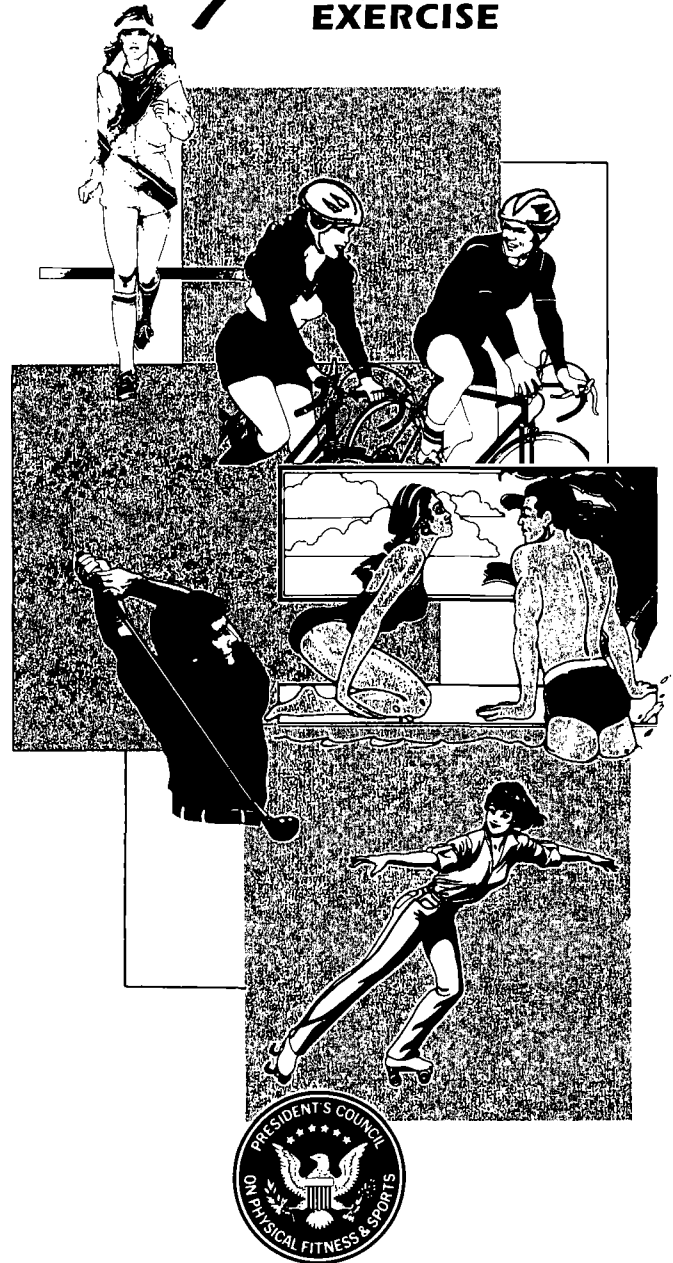
Rx: Exercise

[Foldout] 2 Pages

Introducing

the Physician's

***Rx* :**
EXERCISE



**Your own exercise plan for
a whole new you!**

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Physical Education A
Performance checklist
[Booklet] 8 pages

Physical Education

A Performance Checklist



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The Benefits of Regular
Exercise — IRSA The
Association of Quality Clubs
[Booklet] 16 pages

THE BENEFITS
OF REGULAR
EXERCISE



IRSA
The Association of
Quality Clubs



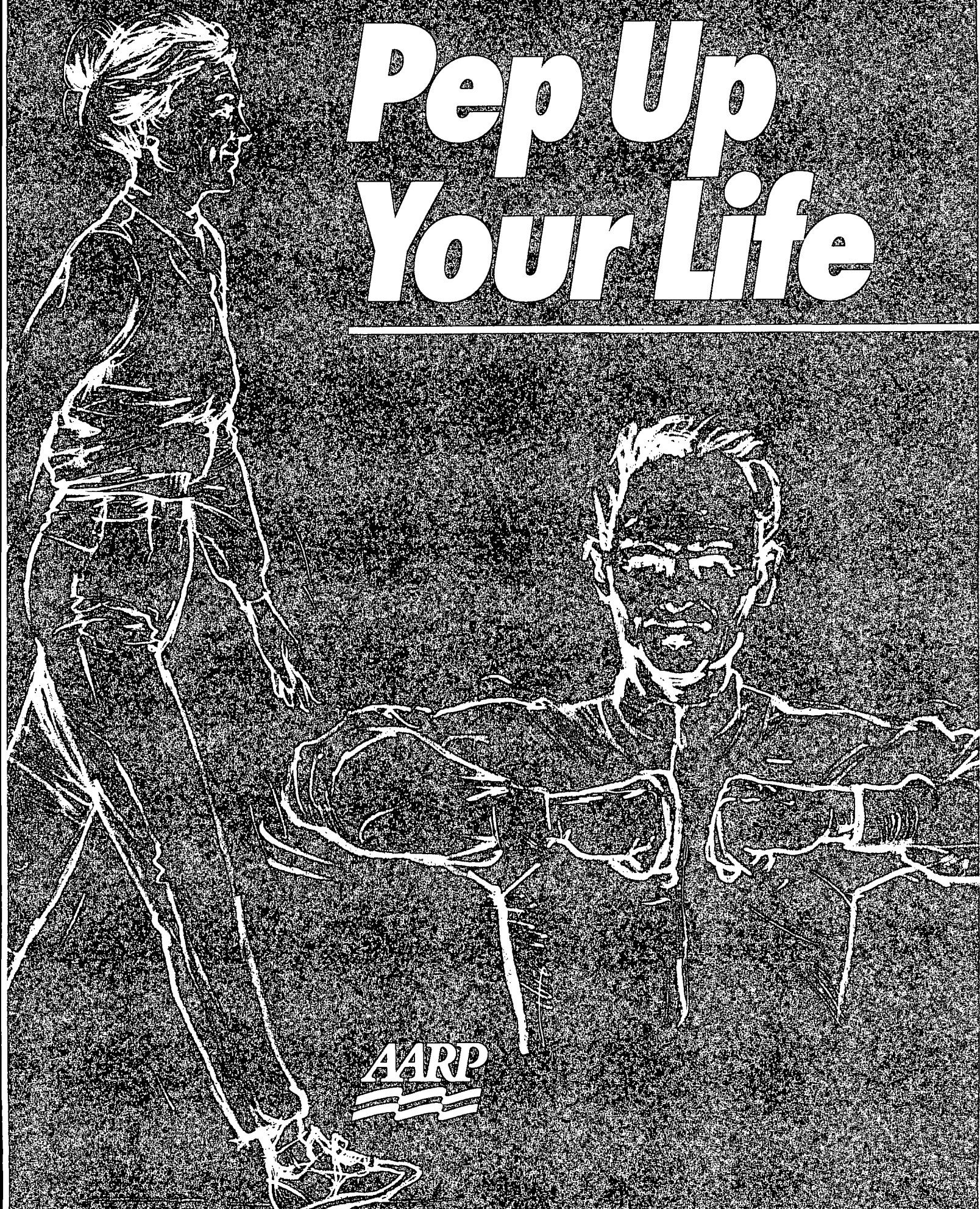
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Pep Up Your Life



AARP
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