



The status of health promotion programs of selected 1984 industrial Fortune 500 companies
by Robert E Holmes

A thesis submitted in partial fulfillment of the requirements for the degree of Master of Science in
Physical Education

Montana State University

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Abstract:

The purpose of this study was to determine the present status of corporate health promotion programs in American "Industrial Fortune 500" companies. The study was delimited to 125 randomly selected "1984 Industrial Fortune 500" companies. A questionnaire which was developed and designed by the investigator was sent to corporate headquarters, health promotion program directors, or chief executive officers.

Specifically, this study was designed to survey "Industrial Fortune 500" companies with respect to corporate health promotion programs and determine: (1) the percentage of "Industrial Fortune 500" companies that had health promotion programs; (2) management areas of health promotion programs which included program goals, benefits, program components, legal aspects, staff considerations, motivation techniques, facilities, and program costs; and (3) if corporate "Fortune 500" health promotion program management considerations coincide and/or adhere to guidelines created by professional organizations such as the President's Council on Physical Fitness and Sport (PCPFS), the Exercise Prescription Committee for the American Alliance for Health, Physical Education, Recreation, and Dance (EPC), and the American Heart Association (AHA).

Descriptive statistics were computed for qualitative and quantitative aspects from the questionnaires returned. A return rate for the study of ninety percent (113 of 125) was obtained. Results of the questionnaire support the following conclusions: (1) Many of the "1984 Industrial Fortune 500" companies which had health promotion programs were located on the east coast; (2) "Industrial Fortune 500" corporate health promotion programs were in compliance with the guidelines established by professional organization (PCPFS, EPC, and AHA); (3) "Fortune 500" companies had internally administered programs and utilized worksite facilities; (4) Cardiorespiratory endurance was stressed by corporate health promotion programs; (5) The majority of health promotion programs were not conducted on company time; (6) Corporate personnel medically tested participants to determine health status of participants; (7) The majority of corporate health promotion programs employed two full-time and one part-time staff member; (8) Evaluation techniques for corporate health promotions most commonly included cost-benefit and cost-effectiveness analysis.

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by

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of

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MONTANA STATE UNIVERSITY
Bozeman, Montana

August, 1986

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This thesis has been read by each member of the thesis committee and has been found to be satisfactory regarding content, English usage, format, citations, bibliographic style, and consistency, and is ready for submission to the college of Graduate Studies.

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VITA

Robert Edward Holmes was born in Appleton, Wisconsin on September 26, 1959, the son of Mr. and Mrs. William C. Holmes. He was educated in public schools throughout the midwest, graduating from Manitowoc Lincoln High School in Manitowoc, Wisconsin in June of 1978.

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ACKNOWLEDGEMENTS

The author would like to extend his appreciation to the administrators of the "Fortune 500" corporations throughout the United States who responded to and returned the questionnaire, making this study possible.

A special note of thanks to Dr. Gary F. Evans who served as the chairperson of the author's graduate committee and who provided the impetus and direction for this study.

Appreciation is also expressed to Dr. Curt Shirer and Ms. Nancy Colton, graduate committee members who assisted with the writing of this paper.

Additional gratitude is extended to Dr. Al Suvak, Director, Montana State University Testing Services, for his statistical assistance in processing and analyzing data.

A special note of thanks and appreciation also is extended to Mrs. Shelley Miller and Jon Weidenaar for their help in preparing and typing this thesis.

A special thanks is extended to Mrs. Nancy Baker for her initial support and faith in the author.

The author would also like to specifically thank Ms. Ann McGowan for her continued support and understanding.

The author would most especially like to thank his parents for their emotional, spiritual, and financial support.

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ABSTRACT

The purpose of this study was to determine the present status of corporate health promotion programs in American "Industrial Fortune 500" companies. The study was delimited to 125 randomly selected "1984 Industrial Fortune 500" companies. A questionnaire which was developed and designed by the investigator was sent to corporate headquarters, health promotion program directors, or chief executive officers.

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- (5) The majority of health promotion programs were not conducted on company time;
- (6) Corporate personnel medically tested participants to determine health status of participants;
- (7) The majority of corporate health promotion programs employed two full-time and one part-time staff member;
- (8) Evaluation techniques for corporate health promotions most commonly included cost-benefit and cost-effectiveness analysis.

CHAPTER 1

INTRODUCTION

The term wellness has been coined in a deliberate attempt to fashion a new way of thinking about a person's health status, and in the past decade, Americans have increasingly integrated the wellness concept into their culture (Dunn 1961, 5; Levy 1980). Bestseller lists contain a number of survival manuals on the how-to's and benefits of physical exercise, aerobics, weight loss, smoking cessation, health maintenance, and eating "right" (Pyle 1979a). The increasing sales of these books represent only a portion of the physical fitness and recreation market, a market which reached an estimated \$244 billion in 1983, \$77 billion dollars more than the United States spent on defense that same year (Conrad 1983). This increased awareness has not eluded American corporations, which pay nearly half the nation's health care bills (Pearson 1973; Hartman and Cozzetto 1984).

In recent years, the expense of covering increasing health care costs has had a severe impact on corporate America. In 1982, Americans spent over \$300 billion on health care, which constituted ten percent of the gross national product (GNP) (Rosen 1984). This figure represents an increase of health care costs by eleven percent, while inflation increased by only 3.9 percent the same year (Hartman and Cozzetto, 1984). Furthermore, a relationship exists between increasing health care costs, which have evolved

from a decrease in employee health status due in part to environment and lifestyles (Hartman and Cozzetto 1984).

Estimates have indicated that human muscles supplied approximately one-third of the energy to operate workshops, factories, and farms in 1850, whereas today technology has reduced that figure to less than one percent ("Employee Fitness" 1980). The average American workweek has also declined in the past twenty years. Due in part to advances in technology, most people are enjoying more than 120 nonworking days a year (Conrad 1983). According to Dr. Richard O. Keelor, director of program development for the President's Council on Physical Fitness and Sport (PCPFS), "two of the most serious occupational health hazards are the desk and the swivel chair." Keelor elaborated further: "They deprive working men and women of opportunities for needed exercise. The typical job in a modern office or automated factory requires less physical exertion than a hot shower" ("Health and Fitness" n.d., 2-4). With advances in technology and improved medical techniques, Americans are working less and living longer. These changes in the modern environment have brought about changes in the leading causes of death of Americans (Reed 1984). These changes have been away from infectious diseases at the turn of the century (tuberculosis and pneumonia) to chronic diseases of late (coronary heart disease, and stroke), caused largely by poor health habits (McCann 1981; Reed 1984). Eight out of ten cases of chronic illness, disability, and early death have been related to lifestyle and environment (Pearson 1983). These changes have had a staggering financial impact on rising employer health care costs. Many employers have been faced with twenty to eighty

percent increases in health care costs in the past two or three years (Reed 1984).

In order to combat the economic trend of one U. S. dollar out of every ten being spent toward health care and related services, many companies across the country have set up wellness programs (Hartman and Cozzetto 1984; Reed 1984). The Health Insurance Association of America (HIAA) defines wellness as "a freely chosen lifestyle aimed at achieving and maintaining an individual's good health" (Hartman and Cozzetto 1984). Health promotion's central theme is that no one takes better care of you than you do, and it is your personal responsibility to do so (Reed 1984).

Health promotion, corporate fitness, and/or wellness programs have increasingly become an integral part of corporate America (Levy 1980). The health promotion movement has become more than a corporate "bandwagon" (Pyle 1979a). The growth and interest of health promotion among U. S. organizations has been staggering. According to the President's Council on Physical Fitness and Sport (PCPFS), since 1973 the number of companies offering some type of fitness to executives and/or employees has increased from seventy-five to 750 (Hoffman and Hobson 1984). Workplace fitness programs have increased more than four thousand percent in the past decade and cost over two billion dollars annually (Conrad 1983). Today more than 400 major corporations--including Xerox, General Foods, and Johnson & Johnson--offer employees some type of fitness program (Hoffman and Hobson 1984).

More and more American corporations are seeking wellness programs due to their perceived cost-saving benefits (McCann 1981). Worksite

health promotion programs have undergone significant changes. Programs of health promotion were first introduced to industry in the 1950's with an emphasis on recreation; today's programs have expanded that focus to include components aimed at total health intervention. With a wellness program, corporate employees benefit directly through improved health, while companies benefit through reduced health care costs, absenteeism, turnover, recruitment, and related organizational problems. Simultaneously, participating corporations benefit with increased productivity and morale (Levy 1980; Hartman and Cozzetto, 1984). Recently, wellness has been specifically broken down into a four-step process, consisting of education, identification, elimination of risk factors, and maintenance of healthier lifestyles (Reed 1984).

There are about as many types of corporate health promotion programs as companies offering them. These programs can be classified into three general categories: (1) company sponsorship of outside program; (2) company sponsored and organized using an outside facility; and (3) company sponsored and organized with an in-house facility (Hoffman and Hobson 1984). However, regardless of the type of program, a company can boast of a health promotion program if it offers any or all of the following six benefits: health assessment, health education, health intervention, facilities, equipment, and/or incentives (Feuer 1985). However, does the fact that a corporation offers one or more of these components mean that that business has a total health promotion program? Or should a variety of management issues be considered and implemented before a company can claim wellness intervention? (Patton et al. 1986, 233).

Corporations are starting numerous health promotion programs throughout the United States, some with more enthusiasm than know-how. Corporations offering health promotion programs differ in size, business objectives, management preferences, number of participants, funding, available resources, and approach to the total wellness concept (Wilmore 1974; Patton et al. 1986).

Many articles have been published about American industry's involvement in the wellness program movement. But have U. S. "Fortune 500" corporations considered basic organizational and administrative guidelines and/or management issues of health promotion before or during program implementation? Management issues consist of legal aspects, program type, designing objectives, staffing considerations, motivation techniques, and evaluation processes. Organizational and administrative guidelines consist of management components which have been clearly and concisely developed by a variety of groups, such as the American Alliance for Health, Physical Education, Recreation and Dance (AAHPERD), the President's Council on Physical Fitness and Sport (PCPFS), and the American Heart Association (AHA), for people coordinating or contemplating the starting of a health promotion program (Wilmore 1974; Swengros, 1975, 195-235; American Heart Association 1984, 1-27).

Statement of the Problem

The general purpose of this study was to determine the status of corporate health promotion programs among "1984 Industrial Fortune 500" companies. Specifically, the study was designed to accomplish the following objectives:

1. Identify management issues of health promotion programs;
2. Survey with a questionnaire (Appendix A) a selected sample of 1984 "Fortune 500" companies in the United States (Appendix B) concerning various management issues of corporate health promotion programs;
3. Draw conclusions concerning the present status of American "Fortune 500" corporate health promotion programs;
4. Make recommendations from the conclusions drawn concerning planning and implementation of corporate health promotion programs.

Sub Problems

The following sub problems were formulated from the review of literature and from guidelines established by the President's Council on Physical Fitness and Sport, the Exercise Prescription Committee for AAHPERD, and the American Heart Association. Sub-problems were particularly established with regard to corporate health promotion management issues:

1. Did the popularity of health promotion programs vary among "Fortune 500" companies from region to region?
2. What was the relationship of corporate size to health promotion program implementation?

- 3a. Were corporate health promotion programs among "Fortune 500" companies administrated internally or externally by the corporation?
- 3b. Where were external corporate health promotion programs administered?
4. How many "Fortune 500" companies had worksite health promotion programs?
5. What is the average length of time the "Fortune 500" health promotion program had been in effect?
- 6a. Have "Fortune 500" companies which have health promotion programs directly benefited from those programs?
- 6b. How have these companies which indicated benefits of health promotion programs benefited?
7. Have health care costs changed since the implementation of the corporate wellness program?
8. What was the major goal of the corporate health promotion program?
- 9a. Were the characteristics of the population to be served by the health promotion program identified before the implementation of the program?
- 9b. Were participants surveyed as to the goals and objectives of the health promotion program once the program had been implemented?
10. Was the health promotion program promoted?
- 11a. How was the program financed?

- 11b. What was the cost of the health promotion program per year, per participant?
12. Were legal aspects considered before implementation of the health promotion program?
13. Was the corporate health promotion program conducted with medical supervision available and/or as an adjunct to the company's medical program?
14. Who and/or what implemented the health promotion program in "Fortune 500" companies?
- 15a. Was a portion of the corporate health promotion program conducted on company time?
- 15b. When did the employees participate in the health promotion program offered by the company?
16. What was the percentage of eligible employees who used the health promotion program among "Fortune 500" companies?
17. How were participants motivated to stay in the program?
18. What were the fitness factors stressed within "Fortune 500" health promotion programs?
19. What specific activities were offered through the corporate health programs of "Fortune 500" companies?
20. Were participants of the health promotion program encouraged to participate in competitive activities and/or recreational activities?
21. Were program participants encouraged to develop healthy lifestyle activities away from the confines of the corporate program?

22. What was the general program structure of corporate wellness programs?
- 23a. Was health and/or fitness education conducted through the health promotion program where appropriate?
- 23b. What type of education opportunities were available?
- 24a. Was testing and questioning performed specifically for the health promotion program?
- 24b. Was testing and/or questioning of participants performed within the corporate health promotion setting?
- 24c. If an outside agency was used to perform the testing and/or questioning of participants, what organization(s) were employed?
25. What type of testing and/or questioning was required for participation in the health promotion program?
- 26a. Were participants reassessed and/or evaluated after being involved in the program?
- 26b. If participants were reassessed or evaluated during the program involvement, when was the reassessment performed?
27. What types of facilities and equipment were available in the health promotion program?
- 28a. During the development of the health promotion program, were consultive services employed?
- 28b. What consultive agencies, if any, were employed?
- 29a. What general qualifications did "Fortune 500" companies consider important for a corporate health promotion program director?

- 29b. What academic qualifications did corporations consider important for a program director?
- 30a. Were program personnel required to upgrade skills through training and retraining sessions?
- 30b. How were personnel required to upgrade qualifications and skills?
- 31a. What was the number of full-time staff involved in a corporate "Fortune 500" health promotion program?
- 31b. What was the number of part-time staff involved in a corporate "Fortune 500" health promotion program?
- 32. By what department was the corporate health promotion program overseen?
- 33. What type of evaluation method was used for the total health promotion program?

Justification of the Study

Many health promotion programs are being started in corporations throughout the United States, some with more enthusiasm than know-how. To remedy this situation, a variety of management issues have been addressed by various health promotion experts and professional organizations (Wilmore 1974). The specific purpose of this study was to review management issues of "1984 Industrial Fortune 500" corporate health promotion programs. The study's intent was to determine management issues from health promotion professionals during the review of literature and from organizational and administrative guidelines established by professional groups such as the President's Council on

Physical Fitness and Sport (PCPFS), the Exercise Prescription Committee (EPC) for AAHPERD, and the American Heart Association (AHA) (Wilmore 1974; Swengros 1975, 195-235; American Heart Association 1984, 1-27).

Management issues outlined in organizational and administrative guidelines and other issues established by health promotion professionals enabled the corporate health promotion programs to be scrutinized in a variety of management areas.

Delimitations

This study was delimited to program directors and/or chief executive officers (CEO's) of 125 U. S. industrial corporations which were listed in "1984 Industrial Fortune 500" list ("The 500" 1984) (Appendix B). Data was gathered for this study by questionnaire (Appendix A). The questionnaire was sent by the investigator to randomly selected corporate program directors and/or CEO's in the spring of 1985. This study was conducted at Montana State University.

Limitations

This study was limited by the interpretation of the questionnaire by those respondents filling out the survey. The study was further limited by not knowing the specific names of all of the program directors to whom questionnaires were sent. Furthermore, the study was limited by the percentage of questionnaires returned: less than 100 percent.

Definitions of Terms

For the purpose of this study, the following terms were defined:

AAHPERD: A professional organization, "American Alliance for Health, Physical Education, Recreation and Dance."

AHA: A professional organization, the "American Heart Association."

AEROBIC: With air or oxygen.

ANAEROBIC: Without air or oxygen.

ASSESSMENT: Health screening of participants by medical personnel prior to program participation.

BODY COMPOSITION: The makeup of the body in lean body mass and fat mass. It is usually referred to as a percentage of fat and lean body weight.

CARDIORESPIRATORY ENDURANCE: The ability of the body system (particularly the heart and circulatory system and the lungs, but also the brain, kidneys, muscles, etc.) to maintain efficient functioning during and after exercise.

COMPREHENSIVE TESTING: Health screening of participants by medical personnel prior to participation in fitness program.

CORPORATE FITNESS: See "Wellness."

ENDURANCE: See cardiorespiratory endurance or muscular endurance.

"FORTUNE 500" CORPORATION: Denotes the largest and most financially successful American (Industrial) corporations listed in Fortune magazine.

HEALTH PROMOTION: See "Wellness."

IN-HOUSE PROGRAM: Denotes facilities that are fitness oriented on the jobsite.

INTERVENTION PROGRAMMING: See "Prescriptive Programming."

MAXIMAL OXYGEN UPTAKE (VO₂ MAX): The maximal rate at which a particular individual can consume oxygen. Terms used synonymously are maximal oxygen consumption, maximal oxygen intake, capacity for cardiorespiratory endurance, and aerobic power.

MUSCLE ENDURANCE: The ability of a muscle to continue activity requiring strength.

MUSCLE STRENGTH: The ability of a muscle to exert a force or move a particular heavy object one time.

NUTRITION: The bodily requirement for foods and a balance of caloric intake.

PAR COURSE: A fitness course which is set in a park and contains stations for stretching and calisthenic exercises, interspersed at prescribed points.

PCPFS: A professional organization: "President's Council for Physical Fitness and Sport."

PHYSICAL FITNESS: Physical fitness is defined as the ability to do work without undue mental or physical fatigue, and the absence of health problems that may prevent exercise.

PRESCRIPTIVE PROGRAMMING: Programs in which guidelines are established for the individual's safe participation in a fitness program.

PROGRAM DIRECTOR: Person who is knowledgeable in all areas of fitness; he/she coordinates and supervises the entire fitness program.

PROGRESSION: A principle which states that improvement in the components of physical fitness will come about only with a gradual increase in the level of exercise over a period of weeks and months.

REGULARITY: A principle which states that exercise for physical fitness must be carried on daily and throughout each week, each month, and all year.

STATUS (HEALTH PROMOTION): The status of programs involves a variety of management issues which consisted of objectives, funding, program type, program components, motivation, facilities, personnel considerations, legal aspects, and program evaluation techniques.

WELLNESS: Wellness is, a freely-chosen lifestyle aimed at achieving and maintaining an individual's good health (Hartman & Cozzetto, 1984).

WORKSITE PROGRAM: See "In-House program."

CHAPTER 2

REVIEW OF RELATED LITERATURE

The term high-level wellness is synonymous with the more familiar terms of robust health, excellent health, fitness, health promotion and simply, health. Wellness has been coined in a deliberate attempt to fashion a new way of thinking about a person's health status. Furthermore, the term wellness, or high-level wellness, has been denoted to describe the state of some humans who are operating at or near their potential because of lifestyles they have adopted (Dunn 1961, 5). A major component of wellness is physical fitness, which is defined as "the ability to carry out daily tasks with vigor and alertness, without undue fatigue, and with ample energy to enjoy leisure-time pursuits and meet unforeseen emergencies" (Clarke 1973).

Health promotion proponents have been particularly successful in recent years (mid-1960's to 1970's) in outlining contemporary corporate concepts, trends, and benefits concerning wellness to many business professionals (Levy 1980; Yuhasz 1979). Corporate wellness programs have been categorically credited with reducing a variety of organizational costs (McCann 1981). The increased wellness awareness by industry has resulted in many companies expressing concern for employee wellness (Levy 1980). This awareness, specifically over the past decade, has resulted in worksite health promotion programs to surge by over four thousand percent (Conrad, 1983).

However, wellness is not a contemporary concept. American employee health promotion had its origin much further back in U. S. history than the mid 1960's. In 1894, John H. Patterson, president of the National Cash Register Corporation (NCR), organized and instituted an employee fitness program. Patterson was influenced by various health groups and by celebrated health faddist John Harvey Kellogg, a Battle Creek, Michigan, physician. Patterson concluded that faulty workmanship was the result of a poor employee environment and employee health habits, and that a more robust individual was a more productive worker. National Cash Register's fitness program included ten-minute exercise periods twice a day, the distribution of health articles, and the opening of a company gym in 1904 and a 325-acre park in 1911. National Cash Register benefited from its fitness program through improved products and improved employee productivity ("An Office" 1978; "National Cash" 1980; Maryk 1982).

Not long after Patterson's program for employee wellness began, interest at other levels in American society was generated. In 1906, President Theodore Roosevelt, mindful of the economic loss to business and industry caused by illness, appointed a government committee to study "The National Vitality." After two years of study, the committee submitted recommendations to Congress and then-President Taft that an educational program be instituted to encourage people to have regular health examinations to detect disease before it became disabling, and also to correct unhealthful living habits (McCann 1981).

The recommendations of Roosevelt's committee and the ideas of Patterson did not, however, seem to be taken seriously in American business until the mid-twentieth century. In the late 1950's and early 1960's, several companies instituted employee recreational programs. Three of these companies were Phillips Petroleum, the Haloid Company, now named Xerox, and Western Electric. The early activities of these programs were recreational in nature and were developed to promote good health, intellectual improvement, and fellowship among employees, retired employees, and families through social, cultural, and physical recreation activities. Companies like Xerox, Phillips Petroleum, and Western Electric provided recreational activities for employees; however, few if any, of these programs offered any real fitness value (Arnold and Decarlo 1973).

During the past forty years, health promotion programs have undergone three phases. First generation programs were directed at recreation in the hopes of improved morale. Second generation worksite programs expanded this focus to include health benefits and risk factor identification, but were characterized by attention toward a single factor such as alcoholism or a single group such as executives. Finally, the third generation programs have become more inclusive to include a comprehensive base aimed at intervention of a variety of factors for a variety of people (Rosen 1984).

The oldest true venture into the fitness field was offered by the National Aeronautics Space Administration (NASA) in 1966. A storeroom in Federal Building No. 6 was renovated to make the NASA Physical Fitness Facility. NASA was the first to prove that employee fitness was a benefit to corporations through "bigger dollar dividends" (NASA 1980).

In 1974, "business athletics" (corporate wellness) received its formal start in the U. S. when the American Association of Fitness Directors in Business & Industry (AAFDBI) was organized ("An Office" 1978). Since the organization of the AAFDBI, many of America's top corporations ("Fortune 500" companies) have begun health promotion programs (Pyle 1979a). It has been estimated by the President's Council of Physical Fitness and Sport (PCPFS) that since 1974 and the formation of the AAFDBI--now named the Association for Fitness in Business (AFB)--the number of companies with over 750 employees offering some kind of health promotion program to executives and/or employees had increased from seventy-five to over seven hundred (Levy 1980). Today the AFB boasts a membership of more than three thousand (Patton et al. 1986, 57). These figures represent an increase of workplace wellness programs of over 4000 percent in the past decade (Conrad 1983).

Literature related to corporate programs of health promotion dwelled largely on benefits. The two major benefits noted of wellness programs were the potential corporate economic savings and the positive health effects for employees (Larson 1979). Many authors cited specific corporate benefits: decreased absenteeism, improved morale, increased productivity, increased retention, reduced health care costs, and improved recruitment (Maryk 1982; Hartman and Cozzetto 1984; Pearson 1984; Rosen; 1984).

The most detailed explanation of benefits was found in Promotion in the Workplace, by Michael P. O'Donnell and Thomas Ainsworth (1984, 11-14). O'Donnell, the director of Health Promotion Services at San Jose Hospital, cited that wellness program benefits can be categorized under four headings: improvement in productivity, reduction of benefit costs, reduction of human

resource development costs, and improvement in community and national images. (For a detailed discussion of O'Donnell's benefits, refer to Appendix C.)

During the past quarter century, worksite health promotion programs have undergone significant changes in terms of emphasis on corporate benefits (Rosen 1984). Over the years, proponents of wellness have claimed a wide range of benefits which have tended to vary according to the problems facing business and industry at the time. For example, during difficult economic times, improved morale and reduced absenteeism were stressed. When American corporations became obsessed with beating the Japanese, advocates predicted benefits of higher productivity and improved quality. Today, as health care costs escalate exponentially, corporations hope to see a return in their investments in terms of reduced premiums of employee health care coverage (Feuer 1985).

As with all saleable items, the cost of health has risen steadily since the 1930's. Health care costs have become a greater portion of the gross national product (GNP) every year for the last fifty-five years (Hartman and Cozzetto 1984; Rosen 1984). The most discouraging descriptor of health care costs to industry is that industry paid fifty percent of the total health bill for the nation (Pearson 1984). Health care costs in 1982 were \$300 billion, up from \$287 billion in 1981 (Gibson 1982). This figure represents eleven percent of the GNP (see Appendix D) (Hartman and Cozzetto 1984; Reed 1984).

The health care industry is now the second largest in the United States with an annual cost exceeding \$200 billion dollars, but only two percent of that money goes to prevention of illness. The national cost of illness due to lost

time and service is enormous; sick leave is estimated to cost industry three billion dollars annually, while premature death is believed to cause losses of nineteen billion dollars in terms of productivity (McCann 1981). Additional calculations for the cost of poor nutrition is thirty million dollars. Backaches annually result in losses of \$225 million dollars in worker's compensation claims and alcoholism and drug abuse is predicted to cost industry over twenty billion dollars in lost employee productivity (Patton et al. 1986, 4-5).

In 1977, American business and industry lost twenty-five billion dollars in the form of premature deaths and three billion dollars in illnesses of employees (heart attacks alone causing a loss of 132 million workdays) (Maryk 1982; Herbert et al. 1983, 1). In 1979, business paid out over twenty billion dollars for lost work days, hospitalization, and death benefits for executives, to say nothing of money lost to decreased production, recruitment, and retraining (Herbert et al. 1983, 1).

Assessments of the replacement costs for an industry executive of fifty years of age earning one hundred thousand dollars a year have been predicted to be more than a half million dollars (Maryk 1982). Business Week magazine estimated that American businesses spend over \$700 million dollars annually in costs of recruitment to replace executives who were heart attack victims (Patton et al. 1986, 4).

The primary contemporary benefit emphasis for corporations becoming involved in health promotion programs has been financial, in terms of health care costs. Brent W. Arnold, founder of the Xerox International Center for Training and Management in Leesburg, Virginia, expressed that the starting of corporate fitness program becomes a "corporate lifesaver" due to economic

benefits surrounding health care costs (Arnold and Decarlo 1973). The most widely reported reasons for rising health care costs include unhealthy lifestyles and specific behaviors related to health, such as medical care costs of chronic diseases, widely available insurance, inappropriate use of medical services, and an increased number of elderly (Patton et al. 1986, 11-12).

With modern changes in employee environment and lifestyle, the wellness concept has become more than a corporate "bandwagon" craze (Pyle 1979a). Due to the technological advances of industry in recent years, the physical activity required for most jobs has been dramatically cut. This shift away from physical activity is believed to lead to chronic or lifestyle related diseases (see Appendix E) (McCann 1981). Eight out of ten corporate cases of chronic illness, disability, and early death have been related to the lifestyle and environmental changes of our modern society (Hartman and Cozzetto 1984; Pearson 1984). Furthermore, lifestyle related chronic diseases account for seventy percent of the deaths suffered by American adult workers. (Patton et al. 1986, 4). With these statistics, the view that health is merely the absence of disease and depends only upon medical care is shifting toward the perception that optimal health can be achieved through changes in environment and lifestyle which will ultimately affect health care costs (Rosen 1984).

O'Donnell's (1984, 12) benefit component of "reduction of benefit costs" (health care costs) has received the greatest attention among authors reporting on current corporate wellness benefits. According to experts, a wellness program has the potential to reduce the total cost of health benefits paid by the employer. There were a number of potential areas cited in which health costs may be reduced which included reducing health insurance costs, lowering life

insurance costs, reducing worker's compensation claims, and providing welfare benefits. (For a further discussion of O'Donnell's benefit cost area, see Appendix C.)

Companies contemplating investing in a corporate fitness program often have difficulty, however, in justifying the expense of instituting and maintaining a wellness program. Corporations are not concerned with fads, which are defined as "a practice of interest followed for a time with exaggerated zeal," or "a fashion taken up with great enthusiasm for a brief period--a craze." (Ardell 1984, 4). But with employers paying nearly half of America's health bill, which has doubled from \$12 billion in 1950 to \$287 billion in 1981, health promotion programs have become justified as more than fads and are increasingly becoming an integral part of American corporate philosophy (Levy 1980; Reed 1984).

As expressed, American companies have currently been concerned with the potential cost saving benefits of health promotion. This interest is primarily targeted toward reducing corporate expenses which surround health costs or "the bottom line" (money). Daniel J. Fink, medical director of primary care for FHP, a southern California based multistate health maintenance organization, stated, "Business people take elaborate care of physical assets, such as equipment and buildings, to keep them in good working order and to maximize their usefulness. . . Why shouldn't we make a comparable effort for the greatest asset of all: the employee?" According to Fink, it should come as no surprise that corporations have started to exploit wellness benefits and commit significant resources (money) into a variety of health promotion programs in an attempt to reduce "the bottom line" ("Corporate Fitness" 1982).

Management Issues

The perceived cost saving benefits of an organization will ultimately become corporate goals and objectives. Some reported cost savings of corporate programs have been included in Appendix F. Health promotion programs should be compatible with the philosophies of the corporation in terms of the type of program administered. In the corporate setting, general management issues are usually internally solved with a blend of management and health/fitness objectives. However, when planning the corporate health promotion program, the goals and objectives of the sponsoring organization should be kept in mind at all times. Management's reasons (objectives) for the starting of a health program will dictate the type and direction of the program. A variety of management concerns and issues exist which include the following: objectives, costs, evaluations, facilities, staff considerations, specific program components, motivation, legal aspects, and organizational and administrative guidelines (Patton et al. 1986, 233).

Program Objectives and Goals

Objectives of any kind are established to provide a standard by which the outcomes of a program or project can be evaluated. Health promotion program objectives and goals will closely parallel the perceived benefits and reflect the corporation's philosophies (Rosen 1984). Some of the expected primary goals and objectives of corporate wellness programs include reduced illness, reduced absenteeism, reduced health insurance premiums, increased productivity, and more profits to stockholders. Secondary objectives include improved morale,

reduced turnover, greater ability of employees to cope with stress, and an improved corporate image (Patton et al. 1986, 15).

According to the Washington Business Group on Health surveys (and those of other organizations), some special concerns of companies are facilitating individual responsibility for health (IBM), focusing on high-risk populations (Campbell Soup), enhancing corporate image (Pepsico), tackling the largest health problem in the population (New York Telephone), improving employee job satisfaction (Johnson & Johnson), reducing turnover (Tenneco), creating a healthy corporate culture (Rodale Press), and affecting the bottom line (all programs) (Rosen 1984, 28).

For the most part, however, organizers of corporate fitness programs have failed to establish clearly defined objectives which reflect the corporation's total interest in wellness. Richard L. Pyle (1979b), a professor of business administration at Central New England College, has cited that corporate objectives should not be broadly stated goals or the same for all corporations. Program goals and objectives should match corporate perceived benefits and philosophies and be realistic and specific. Such broad goals as health care cost containment through individual health management, decreased turnover, or increase productivity are difficult to measure and attribute to the fitness program.

Realistic goals and objectives should have well-defined content and time periods. For example, a short term objective might be to reduce body weight by 10% in 40% of the employees involved in the program in six months. An intermediate objective might be to reduce absenteeism by 20% within one year. A long term goal may be to reduce health care costs by 5% in three years

(Herbert et al. 1983, 2). Through the proper definition of goals and objectives, corporations can clearly determine a relationship between the program costs and benefits derived. Furthermore, through clarification of the objectives, the proper evaluation tool can more easily be identified (Pyle 1979b).

Preliminary Surveys (Pilot Studies)

Once a corporation considers that a health promotion program complies with the corporate philosophies and goals, surveys prior to implementation at both the corporate and individual level are needed to determine potential program costs and if a positive employee interest exists. Primary assessments or surveys (pilot studies) are concerned with specific needs and interests of the company and its employees. (Sample assessments forms are presented in Appendix G.) The participant survey should not ask questions that might increase employee expectations beyond the capability of the organization. Participant questions should be limited particularly to preferences on time, days, activities, and programs which the company can offer. For example, if the company can only offer programs before or after work hours, employees should not be asked if they prefer noon time periods for activities. After surveying both the corporation and prospective participants, a health promotion plan can be effectively developed relative to the costs involved and the resources needed to carry out the plan (Patton et al. 1986, 221-222).

Health Promotion Expenses

It seems that most employees would be very enthusiastic if their corporation decided to invest in a wellness program complete with facilities

and knowledgeable health specialists. However, how well would the new program "sit" with the company controller, whose ultimate concern is the bottom line? The primary question to be ascertained by the controller and management in general is, will the costs equal the benefits? (Feuer 1985). The costs incurred in sponsoring a workplace health promotion program may not be any easier to estimate or control than the benefits that may be derived. The costs will be dependent upon two areas: the organization's financial status and the type of program the corporation wishes to invest in to meeting its goals and objectives (Rosen 1984).

Management is beginning to see the specific health benefits of the wellness concept in terms of corporate costs. Health cost considerations have fueled the development of many existing worksite health promotion programs with the assumption that a healthy employee is a more productive employee (Brennan 1981; Rosen 1984). An examination of some financial health statistics presents the cost factors clearly. Control Data, for instance, found that people with poor health habits are eighty-six percent more likely to miss work and 100 percent more likely to limit the work they do. Due to health care costs, Chrysler adds more than five hundred dollars to the price of each vehicle manufactured. Furthermore, about twenty-nine million workdays, or two billion dollars in earnings, are lost each year to coronary heart disease, and nineteen million dollars are lost annually in missed workdays attributed to drinking (Rosen 1984). As earlier expressed, benefits concerned with health cost savings have many corporations implementing wellness programs into their corporate philosophy. Most of the corporate costs of sponsoring a program can be

categorized into four basic types: organizational, administrative, program, and participant (O'Donnell and Ainsworth 1984, 14).

Organizational costs are potentially the greatest costs to the company which initiates any new project, but such costs often go unnoticed. These costs include impact on organization psyche, impact on working routines, opportunity costs, and long-term commitment for support of the program (O'Donnell and Ainsworth 1984, 15).

An organization's psyche consists of attitudes in the organization that make it operate successfully or unsuccessfully. Moving to a new location, shifting working hours, and altering the payment schedule all have an impact on the daily work routine. Most health promotion programs offer programs before, during, and after work. Some companies permit employees to work on flexible time, allowing participants to take advantage of the program at any time of the day. Since the program occurs during the workweek, the daily work routine is altered and the altering of the workweek probably affects productivity. However, the effect of altering workweeks is unclear at this time; it could be nothing more than a "Hawthorne Effect." The opportunity costs of sponsoring a health program are concerned with the loss of potential corporate benefits which might be derived from other uses of the same resources. Specifically, the investment in a health promotion project may inhibit investment in other projects that could utilize the same space, time, and funds. A decision to develop a health promotion project means a long-term commitment and the support of top-level management. If a facility is built to house the program, conversion of the space back to offices would be expensive, and withdrawing

the program could have an impact similar to that of pay cuts (O'Donnell and Ainsworth 1984, 14-15).

Administrative costs of health promotion programs require more extensive support from top-level management than most projects of comparable funding. In addition to supervision, development, staffing, and budgeting, top-level management must give consideration to flexible schedules to promote participation (O'Donnell and Ainsworth 1984, 15-16). Management must also coordinate peripheral departments working with the program and become active in the program which shows support (Conrad 1980). Administrative costs will not usually require additional funding, but such costs will require managers to spend less time on other work (O'Donnell and Ainsworth 1984, 16). There are payoffs however, to administrative costs. For example, it is estimated that it will cost a company \$500,000 to replace a key executive; having an executive involved in a fitness program, though, may keep him or her on the job longer, which will eliminate the costs of recruitment and training (Maryk 1982). Intrinsic payoffs further include increased exposure of top-level management to department heads and to all other employees, which may improve managers' understanding of important issues currently on the minds of other employees (O'Donnell, Ainsworth 1984, 16).

Program costs, including out-of-pocket operating expenses, are the set of costs which are the easiest to predict. O'Donnell expressed that operating expenses can be broken down into three cost areas: development, implementation, and operation expenses. O'Donnell's development cost area includes program design, facilities, programs, objectives, goals, and overall operating procedures. The implementation cost area overlaps that of

development and consists of facilities, equipment, staff recruiting, training, program initiation, and promotion. The final cost area is that of operating expenses which includes rent, staff, programs, promotion, and improvements. Even though operating costs seem to be the easiest to predict, many areas often are not identified and are therefore underestimated. (O'Donnell and Ainsworth 1984, 16).

An additional cost area of the health promotion programs expressed in the literature were expenses in terms of program participants, particularly per-year participant costs. Authorities indicated that participants' per-capita costs have ranged from fifty to one thousand dollars, but most in-house (worksite) program costs averaged four to five hundred dollars per person, per year (Hoffman and Hobson 1984). "Far from a singular concept, a "fitness program" represents anything from insignificant financial support for physical activity on up to 1,000 per year expense per selected participant in exclusive corporate facilities" (Pyle, 1979b, 36).

Corporate objectives will help to determine the total cost of the program. A cost analysis by month ranges from corporate participant support of zero to ten dollars per month upward to more than fifty dollars per month. Information pertaining to monthly costs has been presented in Appendix H (Patton et al. 1986, 222). Corporate costs will vary among individual companies. Campbell Soup, which has one of the most comprehensive health/fitness programs, spends approximately \$100.00 per participant per year; Control Data exceeds \$200.00; Kimberly Clark has a 2.5 million dollar physical fitness center and an annual cost of \$260.00 per participant; Mesa Petroleum of Amarillo Texas spends \$450.00 per employee; and Mesa further provides \$300.00 and \$700.00

health club memberships to divisional offices per year (Patton et al. 1986, 58-62).

The organization which implements a health promotion program needs to estimate the costs per participant, per year. The analysis of cost should be determined in terms of potential cost savings which are specific to the goals identified by the corporation (Patton et al. 1986, 221-222). An example of the cost saving factor of health promotion has been indicated by Mesa Petroleum. In 1982, Mesa Petroleum employees who participated in the wellness program averaged \$173.00 per person in medical costs, as compared to \$434.00 for non-participants. Mesa Petroleum noted that the difference in medical costs between participants and non-participants resulted in a \$200,000.00 reduction in medical expenses. Mesa further indicated an indirect relationship between activity level (frequency in using the wellness center) and medical costs, and between the activity level and absenteeism: the higher the activity level, the lower the medical costs and absenteeism (Hartman and Cozzetto 1984). The Campbell Soup Company has a corporate goal which specifically focuses on high-risk populations (Rosen 1984). With this primary goal, Campbell Soup reported that its employee colon-rectal cancer detection program saved the company \$245,000.00 (Hartman and Cozzetto 1984).

Before the implementation of a program, management must decide what it wants through identifying objectives and must be willing to spend and plan accordingly. The total developmental costs of a wellness program will be dependent upon the corporation's financial status, objectives aimed at cost savings, and health promotion program type (Hoffman and Hobson 1984).

Types of Programs

The types of health promotion programs instituted in a corporation are dependent specifically upon the corporation's objectives and financial status ("Corporate Fitness" 1982). Once a program is determined to fit into the corporate strategy in terms of philosophies, objectives, and cost, the type of program must then be addressed. Types of corporate wellness programs can be generalized into three categories: (1) company sponsorship of outside program; (2) company sponsored and organized using an outside facility; and (3) company sponsored and organized with an in-house, on-site facility (Hoffman and Hobson 1984).

A variety of endeavors are termed as being wellness programs--everything from simple blood pressure monitoring to total health intervention. Regardless of the type of program, a company can boast of a health promotion program, corporate fitness program, or wellness program if that program offers any or all of the following components: participant health assessment, health education, health intervention, facilities, equipment, and incentives (Feuer 1985). The most basic programs, however, consist of physical, psychological and social elements. A safe, effective and complete health promotion program should contain specific components of assessment, goal setting, intervention, education and evaluations of participants (Herbert et al. 1983, 3).

Health Promotion Program Components

Participant Health Assessment

The rationale for the inclusion of assessment in health promotion lies in motivation and accountability. If the purpose of the program is to improve the health status of the participant, then assessment prior to entry into the program and upon completion of the intervention will be a major factor in determining the effectiveness of the program. Furthermore, assessment motivates people because for the first time, the individual is confronted with an accurate assessment of his or her personal health status (Richardson, et al. 1985)

The importance of developing and implementing a safe, sound, and effective screening and fitness assessment program for corporate wellness program participants cannot be overestimated. According to the American Heart Association, for the sedentary individual there is a serious risk in the sudden, unregulated use of strenuous activities (Holtyn 1984).

Assessment provides both clinical and nonclinical information. Regardless of the age or apparent health of an employee, an assessment is needed for all participants. Individuals should understand the nature of the tests and the program and the potential risk that may be involved (Pollock 1976; Dedmon et al. 1979).

The ideal assessment process is concerned with obtaining certain preliminary information as well as administering a comprehensive testing (screening) program (see Appendix I). Preliminary information of employees includes such items as a health risk appraisal, blood lipid analysis, and dietary

records. The primary step of assessment involves obtaining a health risk appraisal (HRA) (Holtyn 1984).

The health risk appraisal is an inventory of an individual's health-related behaviors in order to estimate the individual's risk of dying within a specified time period (Wagner et al. 1982). The HRA provides an appraised physiological age and a compliance age, the latter being that age which may be obtained by making favorable changes in lifestyle, such as smoking cessation and losing weight. Three areas specifically comprise the blood lipid analysis: cholesterol, high density lipoprotein (HDL), and triglycerides. The third preliminary measurement is a dietary record. Employees record the types and quantities of foods and beverages consumed over a specified time period. The record may reveal dietary problems and form a basis for a nutritional prescription (Herbert et al. 1983, 3-4).

After the HRA, blood lipid profile, and dietary record are discussed with the individual, the physiological assessment is conducted. Height, weight, resting heart rate, and resting blood pressure are measured (Lohman 1982). Michael L. Pollock (1976, 15), director of research for the Institute of Aerobics Research, expressed that the basic physiologic testing program should include the following:

1. Cardiorespiratory fitness. Tests should include resting heart rate, blood pressure, a standard 12 lead electrocardiogram, and an exercise test to at least 85% of maximum predicted heart rate. The exercise test should be ECG and blood pressure monitored. An exercise stress test is important because of its diagnostic value in assessing the presence of coronary heart disease; it also gives the program director some baseline information for determining an

adequate exercise prescription. Testing is important because it serves as a base of comparison for later evaluations.

2. Body Composition--a determination of percent body fat as well as a subsequent determination of ideal weight.

3. Blood measures including serum cholesterol, triglycerides, and glucose values.

4. Muscular strength and endurance. Tests should relate to the major muscle groups of the body. A one-repetition bench press appears to be a good measure of total body strength. Also, maximum push-ups and timed, one-minute bent-legged sit-ups are used regularly for assessing muscular endurance.

5. Flexibility--a particularly important measurement. Because of the importance of the lower back region, the sit and reach test is recommended.

The aforementioned battery of tests offers a basic testing program for adults. If, however, time, money, and equipment were available, other tests could be included involving maximum oxygen intake (Dedmon et al. 1979). According to experts, the contemporary, primary physiologic measurement has become aerobic capacity. Maximal oxygen uptake, normalized for body weight, is the single most useful measurement for evaluating aerobic capacity (Mitchell and Bloomquist 1981). The relationship between heart rate and oxygen uptake with progressively increasing workloads is almost linear. For this reason, the electrocardiogram (ECG) along with the graded exercise test is used to evaluate aerobic capacity and form the basis for the exercise prescription. However, these tests are dependent upon people who can administer these tests as well as the available funds of the corporation. (Herbert et al. 1983).

Comprehensive wellness programs generally have two dimensions; one is assessment and the other is intervention. Assessment has recently expanded to include inexpensive, powerful microcomputer systems which can be used to analyze sophisticated biomedical data, psychometric data with programs which have been designed specifically for wellness program components. Only after undergoing adequate assessment (screening and evaluations) are participants ready for health promotion goal setting and an exercise prescription (intervention) (Richardson et al. 1986; Patton et al. 1984, 84).

Goal Setting

Goal setting should occur during a consultation with the participant before he/she begins the program. Using the information obtained from the assessment, a prescriptive program can be established which parallels the goals of the individual. The first step of the goal setting component is to establish participant goals or objectives which are observable and measurable. The participant should try and change only one behavior at a time and be aware of occasional setbacks as he/she progress. Individual goal setting follows the identification of health related problems. Example problems for an individual might include mediocre work performance, short temper, hypertension, and/or low energy level. Goal setting for this individual would address each problem area and might entail time management, stress management, diet and exercise, and aerobic exercise. Usually, if the goals of the individual participants are being met, it is an indication that the corporate goals and objectives are being met (Patton et al. 1986, 85-90).

Wellness Prescription (Intervention)

Once assessment data has been collected and evaluated in terms of individual needs, an appropriate wellness prescription and/or intervention program can be developed for each participant (Patton et al. 1986, 86). The depth and extent to which areas of intervention are covered within a program will be dependent upon the type of program implemented by the corporation (Feuer 1985).

The basic intervention or prescription guidelines are specifically dependent upon the individual participant's needs, goals, interests, physical and health status, and available personal time. Further considerations include equipment, facilities, staff, and the time availability of each (Pollock 1976).

A variety of prescription areas are addressed in a total health promotion program. These areas of intervention include stress management, nutrition, substance abuse, weight control, low-back-pain management, and exercise (fitness) (Patton et al. 1986, vii-x). Throughout the past decade, the most widely reported intervention component has been that of the exercise (physical fitness) prescription. The exercise prescription should follow basic prescription guidelines previously stated and, in addition, should not be contingent upon the weather (Herbert et al. 1983, 5). When prescribing a fitness program, several factors must be considered: frequency, intensity, duration of training, mode of activity, and initial level of physical fitness (Pollock, 1976; Dedmon, et al. 1979). According to the Institute for Aerobics Research, for the purpose of developing and maintaining a good cardiovascular system and keeping a body composition in proper proportions, the prescription should include a frequency of three to five days per week with an intensity level between sixty and ninety

percent of maximum heart rate and a duration length of fifteen to forty-five minutes (Pollock 1976; Cooper 1977, 90). Aerobic activities are recommended for total conditioning and include such sports as swimming, cross country skiing, bicycling, walking, running, and skating. An aerobic point system has been developed for rating the intensities for various activities with similar conditioning effects. The mode of activity for participants may vary as long as they are sustained endurance events such as fast walking, jogging, swimming, or bicycling (Cooper et al. 1976). The initial fitness levels of individuals is quite important when prescribing programs. Researchers over the past ten years have shown people with low fitness levels do not adapt as well to exercise and therefore should have programs of lower intensity but longer duration (Pollock 1976).

Regardless of how in-depth a corporate program is in terms of how many intervention programs it offers, whether one or more (nutrition, weight control, exercise, or substance abuse), the prescribing must remain dependent upon the basic intervention guidelines which consider the individual's personal assessment, needs, and goals (Pollock 1976; Herbert et al. 1983, 4-5; Patton et al. 1986, 89).

Education

Health promotion intervention in combination with educational programs have generally been found to cause the greatest behavioral changes in participants. The education and prescription combination can increase participation and adherence to the wellness concept which specifically addresses needed lifestyle changes (Reid and Morgan 1979; Feuer 1985).

Many of the required lifestyle changes discovered and identified will not come easily. But through education, the needed changes made will stand a better chance of remaining. According to Fink, the major elements of health promotion programs are educational in nature. Through educational awareness, the employees are provided with the understanding that leads to program commitments, personal evaluations which include medical examinations, or questions and physical tests to ascertain health levels ("Corporate Fitness" 1982).

The health promotion program has an incredible variety of learning techniques available, but none of them are "magic" in the sense that 100 percent of the participants will respond to any given technique. There is no single best way to assist participants in changing lifestyles to promote enhanced health and fitness. What educates one individual may not educate another. Some participants learn visually, some aurally, and some tactually. Most participants will respond to all three, but in varying combinations. Some participants will detest group work, while others will not respond to individual problem sessions. Therefore, the program must adapt itself to each individual. Researchers indicate that a variety of educational and behavioral experiences may be necessary. Individual counseling may prove effective for one participant, whereas group instruction might be best for another, and a combination may be required for a third (Patton et al. 1986, 87-88).

In practical terms, there are three types of individuals who will be involved in a health promotion program; these are the high, moderate, and low level adherers. The high level adherers are strongly self-disciplined and require

little motivation and education. These individuals are already sold on the idea of wellness and simply need to be exposed to a quality program. The recommended educational techniques for this type of person include lecture, mass media, programmed learning, modeling, behavior modification, and social actions. The high level adherer will generally become the long-term adherer to the program. The second type of participant is the moderate level adherer. This individual can go either way with regard to programming compliance. He or she requires a great deal of motivational support and benefits greatly from the education component, specifically individual programming. The best moderate level adherer techniques include audio-visual aids, individual instruction, peer-group discussion, and social planning. The final participant involved in health promotion is the low level adherer. Low level adherers have tried everything at least once but have rarely endured. They could benefit greatly from an individual approach to education. Within this type of approach, the main concern is motivation. Furthermore, monitoring and reinforcing progress are key elements along with demonstrating a concerned interest in the participant. The low level adherer will learn best using education techniques, including audio-visual aids, individual instruction, peer-group discussion, and social planning (Patton et al. 1986, 87-88).

The concept of education as a means for keeping people interested in preventive medicine and health cannot be overestimated (Pollock 1976). Explaining the reasons and benefits to the various participants is thought to be essential for permanent lifestyle changes (Patton et al. 1986, 88). Furthermore, it should be understood that the health promotion program which combines the

elements of education with intervention has the greatest opportunity to impact the health status (lifestyle changes) of its participants (Feuer 1985).

Reassessment-Evaluation

Each participant should be evaluated or reassessed periodically (for example, annually or quarterly) to measure lifestyle problems which have been determined by the assessment process and addressed through goal setting, intervention, and education procedures. Evaluation should be an ongoing facet of the health promotion program. A complete reevaluation can be performed at various intervals throughout the year, which shows the progress made during a given time period and can thus help motivate participants to adhere to the program (Richardson et al. 1986).

Generally the critical evaluation period is about every three months (quarterly). At this time, the participant has had time to adjust to the initial program and any changes and needs to be reinforced with his/her personal results. In fact, the motivation provided by the reassessment is probably more important to the participant than the data obtained (Patton et al. 1986, 104).

An example of the evaluation or reassessment procedure would be to obtain during the initial assessment phase the physiologic measurements of aerobic capacity, blood pressure, blood lipid levels, and body composition, which are particularly useful for comparison purposes during reassessment. The evaluation process will then specifically permit the resetting of goals, thereby leading to different intervention and education techniques (Pollock 1976; Patton et al. 1986, 104).

As can be seen, the components of health promotion programs establish a cycle which begins with the initial assessment and leads to goal setting, intervention, and education; the cycle completes itself with the evaluation and begins again with new problem identification and the goal setting phase. The reassessment or evaluation becomes the key factor which makes wellness a neverending and lifelong process. Besides being the end of the health promotion process, reassessment is also the beginning and allows for total program evaluation and scientific data collection (Herbert et al. 1983, 5-6).

Motivation Within Health Promotion Programs

Once a corporation decides to implement a wellness program, regardless of its scope, the corporation needs to concern itself with getting the employees involved. Motivation considerations within a corporate health promotion program have become major concerns to management. The fact alone that a corporation has a wellness program or considers the implementation of one does not always ensure employee participation. Therefore, the implementation of motivational aspects which encourage employees to get involved and continue with identified health promotion problems has become particularly important in achieving the corporate objectives of wellness program implementation (Wilcox 1983; Hoffman and Hobson 1984).

As noted, there are many types of corporate health promotion programs, and the motivational efforts among companies vary in type as well (Hoffman and Hobson 1984). There has been a great deal of time and money spent by corporations on the question of effective motivational efforts to ensure continuing adherence to exercise, diet, chemical control programs, and other

lifestyle changes (Dedmon et al. 1979). In programs across the country, motivation techniques are used successfully to acclimatize new users to facilities, to develop competence in an activity, to encourage regular exercise, and to promote the maintenance of lifestyle changes (Wilcox 1983). The promotion method used for motivation must, however, be structured to mesh with the corporation's financial status and objectives (Hoffman and Hobson 1984).

Marketing and promotion, particularly in the area of motivation, have definite roles in the establishment of a wellness program and the encouragement of employees to get involved and participate (Herbert et al. 1983). The ideal program should offer a variety of motivation considerations to attract a wide range of participants at various levels of health and fitness (Wilcox 1983). Motivation techniques which have been tried include money, achievement awards, health hazard appraisals, insurance premium reductions, subsidized YMCA or health club memberships, films, lectures, seminars, newsletters, and exercise breaks at work (Dedmon et al. 1979). Methods of motivation can be generalized into three basic groups, consisting of purely voluntary, monetary based (incentives), and mandatory types (Hoffman and Hobson 1984).

Purely voluntary motivation is the simplest, least costly, and most optimal method of motivation. It does, however, require an ideal situation if implementation is to be possible. Under the purely voluntary method, participants engage in the wellness program because they simply want to participate in pursuits according to their own self interests. Implementation of this type (purely voluntary) requires employees who are highly

self-disciplined (high level adherers) and self motivated. The theory behind the voluntary method of motivation is that once employees have been posed with the potential positive benefits of wellness, they will take it upon themselves to change unhealthy habits. The fact that subsequent benefits may also accrue to the organization is of secondary consideration in this type of motivation method (Hoffman and Hobson 1984).

As one moves farther down from top to bottom on Abraham Maslow's hierarchy of needs and their relationship to human health (see Appendix J), it becomes apparent that some people, if not most, can be motivated by monetary and incentive compensation. With this concept in mind, several companies have instituted various types of incentive reward systems (Hoffman and Hobson 1984; Patton et al. 1986, 212). One corporation in particular offers an incentive plan that pays employees to jog, walk, bicycle, and swim. Another company provides two hours' pay to any employee who has worked an entire month without being late or sick. Still another company is staging a weight-loss competition among employees. The company pays ten cents per pound lost to ten operational groups; the group with the highest average receives a bonus which is awarded to charity ("Corporate Fitness" 1982). This relatively new concept may have some real potential since it rewards actual achievement rather than superficial participation (Hoffman and Hobson 1984). Promoters of wellness, however, must ensure that employees do not lose sight of the intrinsic value of their health promotion program in the face of the extrinsic value values of prizes, cash, and other incentives awarded for adherence (Wilcox 1983). Incentives work in business, so they can also work in health promotion programs. Our society encourages us to act by evaluating

what we do and rewarding us for "good" behavior, and an incentive for an activity can increase the activity's perceived value among participants (Patton et al. 1986, 211).

Many reports have described intrinsic and extrinsic rewards. Some authors believe that if people are rewarded extrinsically, they will feel no intrinsic interest and will not maintain the change once the reward is removed. With health behavior, however, extrinsic rewards--especially those chosen by the participant--often have a reinforcing effect and the intrinsic reward follows naturally, for being healthier brings an intrinsic value: greater energy, greater feelings of self-worth, and a higher quality of life (O'Donnell and Ainsworth 1986, 84, 407).

Rewards need to be based on cultural variables and not competition. With regard to fitness, competition can be dangerous, especially if the wellness promoter tries to attract the novice. Also, activities such as aerobic exercise cannot be measured in competitive terms (Wilcox 1983; O'Donnell and Ainsworth 1984, 84-94). Participants can be rewarded with awards, citations, public praise, or even money. Employers have offered incentives in terms of a bonus or reduction to employees for evidence of improving personal health. Some experts cited that monetary rewards were seldom effective, while others stated that they were very effective (Hoffman and Hobson 1984; O'Donnell and Ainsworth 1984, 84-94).

The third method of motivation is one that is fairly controversial. It involves making wellness mandatory for all employees. In Japan, for instance, all employees are required to participate in daily calisthenics in order to promote health. This type of program does not seem feasible in the United

States, at least at the present time. However, once solid statistically significant evidence on the effects of wellness promotion has been obtained, and if that evidence indicates a positive correlation between health and organizational efficiency, the notion of mandatory health promotion may become a prerequisite for employment and retention of current employees (Hoffman and Hobson 1984).

Motivation techniques which have tended to be successful have included the areas of effective health promotion such as good supervision, proper intervention, goal setting, activity variety, education, desirable environments, and motivation (Pollock, 1976). According to the literature, the ideal and totally successful motivation formula has not yet been discovered. Success will probably be achieved only if these programs evolve into cultural changes in eating, exercise and other lifestyle habits of individual health (Herbert et al. 1983, 4; American Heart Association 1984, 15).

Facilities

Facility considerations depend on whether the organization wishes to use outside resources to deliver a health promotion program or develop its own facilities (Patton et al. 1986, 237-42). The workplace is an ideal setting for health promotion programs. When a corporate facility is included, it may have more of an impact than any other part of the program in attracting participants and achieving corporate benefits (Pearson 1983).

However, various corporations report turning to outside resources for help when a worksite program is not possible, which makes independent health/fitness clubs more popular ("As companies" 1978). The major

advantage of using an outside resource is the elimination of the cost of a company building and its maintenance (Patton et al. 1986, 237-42). Firms that lacked space or capital to install first rate programs sponsored memberships to health clubs or YMCA's or gained access to Boys Clubs, schools, universities and/or colleges (Conrad 1980; Levy 1980). Outside supervised programs, such as health clubs, have kept costs of fitness programs down since there are no facilities to maintain. Expensive facilities are nice investments, but the type of fitness program itself is much more important (Jacob 1981, 15). As stated, the program will probably cost the company less if an outside consultant is used rather than existing staff, because outside experts have already done much of the research and initial work required. The primary disadvantages of outside resources (off-site facilities) are that more time is required to travel to and from an off-site facility, thereby reducing participation; control over the program is also limited (O'Donnell and Ainsworth 1984, 595).

The prototype corporate fitness program has in-house facilities at the worksite (on site) (Pyle 1979a). When conditions and circumstances make it possible, the ideal means of stressing wellness in the business and industry is through worksite facilities. Experience has shown that employees are more willing to participate in health programs offered at the worksite than elsewhere. For example, ninety to ninety-five percent of employees will participate in various screenings at work, while identical community projects do well to get thirty percent participation (Pearson 1983). Use of facilities at the worksite are preferred for a number of reasons: (1) it shows that the company cares about employee fitness through the expenditure of money; (2)

it is easier for employees to use worksite facilities; and (3) the facility becomes a focal point (O'Donnell and Ainsworth 1984, 595).

Offering health promotion programs at the worksite capitalizes on the fact that the typical American employee spends thirty percent of his or her waking hours on the job. Additionally, providing a program at the worksite provides convenience, thus eliminating commuting time, travel costs, and the psychological barrier of stopping elsewhere (Pearson 1983).

Literature in the corporate fitness area suggests that a minimally equipped worksite facility include a large exercise room with an adjoining office for easy visibility of the participants, locker rooms with showers, and laundering and grooming facilities (Pyle 1979b; "Corporate Fitness" 1982). Furthermore, a program located at the worksite that includes a shower facility and towel service as well as exercise facilities eliminates many reasons adults have for not exercising regularly (Haskell and Blair 1980).

The most frequently described facilities have a resistive exercise or weight training area that includes treadmills and bicycle ergometers ("Corporate Fitness" 1982). Ideally, an exercise facility should provide an opportunity for each of the fitness components: muscle strength, muscle endurance, coordination, flexibility, cardiorespiratory endurance, and proper weight control (Patton et al. 1986, 237-42). Space allocations for facilities of health promotion have been provided in Appendix K (O'Donnell and Ainsworth, 1984, 599; Patton et al. 240). Facilities can range from merely setting up some backboards in a parking lot to putting jogging tracks on company property to fully equipping gym facilities or a par course ("Corporate Fitness" 1982).

Extensive and expensive facilities are not always important or needed for all health promotion programs. Facilities will be primarily dependent upon the number of participants and the type of corporate program. Corporate program size with relationship to facilities (resources) has been presented in Appendix L (American Heart Association 1984, 10). The facility may be of importance, however, if the program is specifically concerned with fitness or if a major goal is to improve the image of the employer to the employees (O'Donnell and Ainsworth 1984, 595).

An extensive facility may represent forty to sixty percent of the total cost of the program, even when these costs are spread over a twenty-year period (O'Donnell, Ainsworth 1984, 591). When corporations with in-house facilities were asked to approximate initial costs of starting fitness programs, the range was anywhere from \$250,000 to \$2.5 million. Many corporations view this information as confidential. However, it is estimated that an initial investment of \$10,000 or slightly less would be needed to start a good basic program, providing a building or room was already available (Dedmon et al. 1979).

As noted, types of programs are generalized into three categories which specifically correspond to facilities: (1) company sponsorship of outside program; (2) company sponsored and organized, using an outside facility; and (3) company sponsored and organized using a worksite facility (Hoffman and Hobson 1984). To restate, the choosing of the program type will be dependent upon corporate goals and anticipated program size (refer to Appendix K. (American Heart Association 1984, 11). A company sponsored and organized program at the worksite facility is the most extensive and is also the one gaining the most popularity among American organizations. The major

advantages of this type of facility include greater opportunity for employee involvement and corporate monitoring of participant progress. The biggest disadvantage noted is that business executives are wary of worksite facilities because they fear potential liability from an employee injury (Hoffman and Hobson 1984).

Qualifications of Staff and the Program Director

Leadership and supervision are extremely important in the implementation of a successful health promotion program. A wellness program will only be as strong as its personnel. Therefore, wise selection and proper training of personnel is critical. The lack of leadership is often the cause of the unsuccessful health promotion program (Herbert et al. 1983, 2; Patton et al. 1986, 251).

Health promotion staffing in a corporation usually is organized under supervision by the personnel, human resources, or medical departments. In rare instances is the health promotion program a stand-alone department, answering to only the chief executive officer (CEO). These four strategies are illustrated in Appendix M (Patton et al. 1986, 77). The health promotion professional needs preparation in a variety of roles to conduct a successful program. The types of practitioner roles include manager, planner, supervisor, educator, exercise leader, motivator, counselor, promoter, assessor, and evaluator. The characteristic duties of each role are described in Appendix N (Patton et al. 1986, 74).

Jerome Christina, director of the fitness center at Northern Natural Gas Company in Omaha, was coordinator of the American Association of Fitness

Directors in Business & Industry's Job Opportunity Center, which attempted to bring together corporations looking for personnel with qualified applicants.

Christina stated that the safest bet is to have personnel cover the following areas: (1) fitness training, (2) exercise physiology, (3) nutrition, (4) stress management, (5) business management, and (6) human relations ("The Fitness Professional" 1980).

Some of the descriptions of wellness positions have been adapted from the American College of Sport Medicine and the American Heart Association. The wellness position descriptions areas include project coordinator, program director, medical consultant, exercise specialist, exercise-test technologist, recreation specialist, promotion specialist, and support personnel (American Heart Association 1984, 11; Patton et al. 1986, 252).

The Project Coordinator is any person within the company who has made a personal commitment to wellness and has the ability to coordinate the available resources for program implementation (American Heart Association 1984, 11.)

The Program Director is a manager who is a wellness specialist and has knowledge and skills associated with all the practitioner roles (supervisor, planner, motivator, counselor). The management skills of health promotion in business and industry are very important to this individual's job description (American Health Association 1984, 11; Patton et al. 1986, 252.)

The Exercise Specialist is one who can apply the knowledge and skills associated with fitness testing and exercise prescription and lead participants into an exercise program (American Heart Association 1984, 11; Patton et al. 1986, 252.)

The Exercise-Test Technologist can demonstrate competencies in graded exercise testing, including knowledge of functional anatomy, exercise physiology, and psychology in order to perform such tasks as preparing test stations, screening participants, administering tests, recording data, interpreting data, and communicating test results to participants and other professionals (Patton et al. 1986, 252.)

The Recreation Specialist can demonstrate competencies and has skills associated with planning, supervision and administering recreation components into a health promotion program (American Heart Association 1984, 11; Patton et al. 1986, 252).

The Health Promotion Specialist should have skills and knowledge which include implementing assessments, goal setting, prescriptions, and evaluations of the program (American Heart Association 1984, 11.)

The Support Personnel are individuals including nutritionists, psychologists, and public relations specialists who can help implement and promote an effective and successful health promotion program (American Heart Association 1984, 11.)

The corporation starting a fitness program should look first at the type of program it wants before deciding on exactly what qualifications to consider in program personnel. A specialist will find it hard to fit into a wide based program as well as a person with a diverse background will find it hard to fit into a specialized program ("The Fitness Professional" 1980). The size of the program will determine the number of the staff and the specific qualifications needed. Most wellness programs in the corporate setting have a small number (one-five) of professional staff (Patton et al. 1986, 251).

A small company may require only a program director who can administer all aspects of the program, while larger corporations will need someone to direct and supervise a large staff of specialists. As noted, the size of the anticipated program will not only indicate resources (Appendix L) but size will also dictate the number of personnel (see Appendix O). For example, the Kimberly-Clark Corporation, which has become a leader in the corporate wellness movement, utilizes a staff of thirty-five full and part time persons. The staff's personnel include a physical director, an exercise physiologist, a program director, exercise leaders, two physicians, one nurse practitioner, seven registered nurses, seven technicians, and counselors, exercise specialists, secretaries, receptionists and lifeguards. Community participants in the program include a six-member physician advisory council, family practitioners, internists who help with exercise testing and physical examinations, and consulting cardiologist, radiologists, dieticians, and computer technicians (Dedmon et al. 1979).

According to the literature, the key individual in the health promotion program is the program director. The health/fitness program director is a manager of people and programs. Furthermore, the program director must be familiar with all the roles of the health practitioner (refer to Appendix N). Specific duties of the director include administering daily operations, designing and controlling programs, directing staff, purchasing equipment, maintaining facilities, regulating a budget, scheduling activities, communicating with staff and participants, and cooperating with other corporate departments (Herbert et al. 1983, 2; Patton et al. 1986, 74).

Regardless of the size of the wellness program, qualified staff need to be hired and trained and directed by a competent program director. The Conference Placement Center of the Association for Fitness in Business and Industry indicated that a program director typically possesses a master's degree in exercise science or related fields and must have a minimum of three years experience in the field. The wellness program director should have competencies in management and skills in administering the following program components: health education, exercise, nutrition, weight control, blood pressure control, stress management, evaluations, assessments, substance abuse elimination, and smoking cessation. Staff should have abilities to implement these program components under the guidance of the program director (Patton et al. 1986, 252). Just to hire qualified personnel is not enough; a safe and effective fitness program requires periodic evaluation and review sessions of knowledge to ensure personnel are abreast of new developments and to refresh skills ("The Fitness Professional" 1980).

Program Evaluation

Evaluations are the comparison of an object of interest against a standard of acceptability. The effectiveness of every health promotion program must be determined and presented to management (Pearson 1983). The worth of any program will always be determined in the final analysis by those paying the bills. Therefore, those persons should be involved in selecting the evaluation method (Herbert et al. 1983, 6-7). Two program evaluation techniques are the process method and the outcome evaluation method, presented in Appendix P. The process evaluation is the monitoring of the program implementation

procedures. The second type is outcome evaluation. Its purpose is to measure and interpret results based on the objectives of the corporation (American Heart Association 1984, 27; Patton et al. 1986, 228). An important aspect of any wellness program is to determine how the program will be evaluated. Evaluating the efforts of wellness programs has been a notoriously complex undertaking (Feuer 1985). The most commonly cited evaluation techniques of wellness programs were outcome evaluations such as a cost-benefit and cost-effectiveness analysis (Patton et al., 1986; Herbert et al. 1983, 7; Hartman and Cozzetto 1984; Patton et al. 1986, 20-21; Richardson 1986).

Cost-benefit analysis is an attempt to quantify the worth of a program in monetary terms (Hartman and Cozzetto 1984; Patton et al. 1986, 20). The cost-benefit analysis framework has been presented in Appendix Q (O'Donnell and Ainsworth 1984, 18). A perplexing problem which exists in the cost-benefit analysis is a lack of standardized criteria. For example, how much is a human worth? How can nontangible and indirect effects of a program be judged, such as a boost in morale? The field has not matured fully to accept any one method of cost-benefit analysis. For the time being, the only benefits which are readily measurable may be entered in the cost benefit analysis. Although fitness may prolong life, this benefit may not be easily demonstrated. An assay of medical costs, absenteeism, and productivity may be less exciting but are more verifiable. Therefore, the cost benefit analysis should be limited in quantifiable terms (Patton et al. 1986, 20-21).

When evaluating wellness programs, a cost-effectiveness approach is operationally preferable to a cost-benefit approach (Hartman and Cozzetto,

1984; Richardson et al. 1986). A cost-effectiveness approach requires that costs and results be identified (Hartman and Cozzetto 1984). Cost effectiveness studies determine how effectively and efficiently a program meets the goals of the corporation. The objectives and goals stated for the program should be measurable and the costs tied to the program.

Cost-effective studies determine to what extent the goals are met, how much it costs to meet goals, and whether another method which is less costly could be employed to meet the same goals (Patton et al. 1986 20-21).

Thus a cost-effective analysis might inquire, how much will it cost to increase knowledge about coronary risk factors by fifty percent, in eighty percent of all employees? A cost-benefit analysis might then answer the question, what is the benefit of increasing knowledge of coronary risk factors by fifty percent in eighty percent of employees, and is this benefit a positive one when cost is considered? (Patton et al. 1986, 20-21).

Cost-effectiveness analysis assumes that a certain objective is worth achieving and then seeks the least costly and most effective method of achieving it. Cost-benefit analysis assumes that a certain method is effective, but then evaluates the present and future cost efficiency of the method compared to the benefits achieved. A comparison of cost-benefit and cost-effectiveness analysis for wellness programs has been presented in Appendix R (Hartman and Cozzetto 1984, 112).

Evaluation studies of wellness programs are typically difficult and expensive to perform. Just as wellness programs come in all shapes and sizes, so do the evaluations. Currently evaluations run the gamut from the

cost-benefit and cost-effectiveness studies to simple physiological reports of program participants (Hoffman and Hobson 1984).

Legal Aspects

Each corporate wellness program creates its own liabilities when the program is implemented (Patton et al. 1986, 235). Fear of liability for injury has stopped many potentially exciting activities from being realized, yet many corporate wellness program directors have indicated no difficulty in this area at all (Wilson 1982). Those corporations offering a program should not be overly anxious about potential injuries associated with wellness (Patton et al. 1986, 235). For example, for twenty-two years Phillips Petroleum's sport and recreation program has not been subject to a single lawsuit (Wilson 1982).

As with any corporate undertaking, management must anticipate and provide safeguards against potential legal problems (Patton et al. 1986, 235). The avoidance of legal problems is primarily addressed through proper participant assessment, intervention, education and overall program planning ("Corporate Fitness" 1982).

The concern of legal liability not only includes the sponsoring organization but also the professional staff (Patton et al. 1986, 235). Legal liability can arise from two general areas, omission and commission. Omission is the failure to perform when performance could be reasonably expected. Commission, on the other hand, is performance of an action in a negligent manner (Herbert and Herbert 1984, 64). In general, negligence is defined as some type of conduct that falls below a standard established by law for the protection of others against the unreasonable risk of harm. Negligence is simply failing to do

something that a prudent and reasonable person would do, or doing something that a prudent or reasonable person would not do. The mere existence of risk alone is not the basis for negligence liability (Lowell 1977).

The risk of encountering legal problems associated with health promotion programs can be minimized by preparing carefully for potential problems. Being aware of legal liabilities, medical screening and consent of participants, selection of certified instructors, written guidelines for medical emergencies, informing participants about risks, providing a safe environment, and purchasing adequate liability insurance for staff are all necessary considerations for legal aspects of health promotion (Patton et al. 1986, 236).

William L. Horton, president of the Fitness Systems, Inc., a Los Angeles based corporate consulting firm, indicated that a company can reduce the risk of liability by making sure the activities are within the mainstream of corporate wellness programs. A list of criteria established by the President's Council of Physical Fitness and Sport can be used specifically for liability avoidance (Wilson 1982).

The criteria of the President's Council of Physical Fitness and Sport, stated that:

- The exercise program is an adjunct to the company's health program;
- It includes medically oriented screening as a criterion for participation;
- A person skilled in prescribing exercise directs it;
- Exercise is tailored to the individual and emphasizes progressive improvement;
- Activities are noncompetitive;
- A system of periodic evaluation is included to measure improvement and aid in program design;

In exercising reasonable care concerning recreation activities, it is recommended that professionals also have a checklist in preparing for an activity which should include the following:

- Is the facility safe and inspected?
- Has food service been carefully checked out?
- Is the entertainment safe for spectators and the area safe for the entertainers?
- Are traffic, roads, and parking conditions going to present any safety problems?
- Will there be maintenance of the facility before or after the activity?
- Will there be adequate supervision during the activity? (Wilson 1982).

One should remember that the law only requires that a person refrain from creating situations in which there is an unreasonable risk of injuring others. If a particular injury is unforeseeable or could not have been prevented by the exercise of reasonable care, it is termed an unavoidable accident. There must be an unreasonable risk that has not been eliminated for a program to be liable (Lowell 1977).

Many people are concerned and worried about the problem of liability, but in practice it just is not a problem. When strategic forethought is exercised and proper common sense precautions taken, obvious failures of omission and commission can be eliminated and successful health promotion programs can operate without the threat of liability (Wilson 1982).

Corporate Health Promotion: Organizational and Administrative Guidelines

Many health promotion programs are being started in corporations and communities throughout the United States, some with more enthusiasm than know-how. To remedy this situation, the Physical Fitness Council of the American Alliance of Health, Physical Education, Recreation, and Dance's General Division established a joint committee with the Research Council to become the Exercise Prescription Committee. The Exercise Prescription Committee was formed to create and investigate the general areas of health promotion and to create organizational and administrative guidelines for people coordinating or contemplating the starting of a health promotion program. The following guidelines were adapted from a paper presented by Jack H. Wilmore (1974), Chairman of the Exercise Prescription Committee.

The Exercise Prescription Committee specifically identified the following guidelines: (1) define the characteristics of the population to be served; (2) the program should have a medical advisory board, consisting of three to four members, including at least two physicians, one of whom should be appointed medical director; (3) the nature of the program will determine to a large extent the type of facilities; (4) consideration should be given to the time and days the program is conducted; (5) a budget must be established; (6) the program has to be publicized; (7) wise personnel selection and training of staff are critical factors, and program personnel should be trained in the fundamentals of exercise physiology, kinesiology, biomechanics, and athletic injuries; and finally, (8) each program should have some manner of testing or evaluating its subjects. The guidelines presented by Wilmore were basically established for

"normal" adults. In health promotion programs, however, these guidelines can be adapted to fit other populations, for example, cardiac rehabilitation individuals (Wilmore 1974).

The American Medical Association, in cooperation with the President's Council on Physical Fitness and Sports, has established an additional twelve guidelines for health promotion programs in business and industry (Swengros 1975, 195-235). These guidelines parallel closely those guidelines of the Exercise Prescription Committee presented by Wilmore. The organizational and administrative guidelines of the President's Council included the following:

1. Comply with current scientific and medical knowledge;
2. Programs should be conducted as an adjunct to the company's medical program, and policies pertaining to the development and management of the program should receive medical endorsement;
3. Operating policies for companies not having a medical director should be developed in consultation with appropriate medical and fitness authorities;
4. Consideration should be given to programs of physical fitness education, rehabilitation, training and maintenance of the needs of various individuals;
5. A portion or all of the program should be conducted on company time for the purposes of motivation and supervision;
6. Programs should be supervised by qualified physical fitness instructors and an exercise physiologist under the direction of the company's medical services;
7. Programs should encourage individuals to develop physical fitness activities outside of the company.
8. Health education should be conducted where appropriate;

9. Participants should understand the specific benefits of the program prescribed for them;
10. Competition should not be stressed;
11. Physical fitness should be the goal of the program;
12. Activities should be utilized that will develop adequate levels of muscular strength and endurance and cardiovascular efficiency (Swengros 1975).

Organizations differ in size, business objectives, management preferences, number of participants, funding, and available resources and facilities.

Organizations further differ in their approach to delivering wellness components (Patton et al. 1986, 233). Organizational and administrative guidelines have been established and presented by the Exercise Prescription Committee of AAHPERD, the PCPFS, and the American Heart Association (see Appendix S), in an attempt to simplify and clarify the criteria and management issues of corporation individuals coordinating or contemplating the implementation of health promotion programs (Wilmore 1974; Swengros 1975, 195-235; American Heart Association 1984, 1-27).

Summary

Companies contemplating investing in a Health promotion programs often have difficulty in justifying the expense of instituting and maintaining a fitness program ("Corporate Fitness" 1983). Few fitness programs have been in existence long enough to produce significant data about exact benefits that health promotion programs may provide to the individual and the company (Levy 1980).

Corporations are in an era when fitness programs are perceived to be a necessity for the corporation's own health and well being (Arnold and Decarlo 1973). The status of corporate fitness programs at the present time is important because of the increased growth in the field--by 4000 percent in the last decade.

Corporate health promotion programs are being started throughout the United States with great enthusiasm, but often with very little know-how (Wilmore 1974). Those individuals in the corporate health promotion area need to constantly ascertain if the programs that are being conducted by corporations are safe and effective for all those involved. In ascertaining this information, all aspects of the program must be considered, including organizational and administrative guidelines established by professional organizations. Organizational and administrative guidelines specifically consider prescriptive and incentive programs, comprehensive testing, program personnel, program objectives, and actual benefits derived from the program (Wilmore 1974; Swengros 1975).

CHAPTER 3

RESEARCH METHODOLOGY

This study was designed to determine the status of corporate health promotion programs in corporations listed in the "1984 Industrial Fortune 500" list (Appendix B). The status of the health promotion programs involved a variety of management issue areas which were discovered during the the review of literature and other issues specifically outlined in organizational and administrative guidelines of various professional groups such as the President's Council on Physical Fitness and Sports (PCPFS), the Exercise Prescription (EPC) for the American Alliance for Health, Physical Education, Recreation, and Dance (AAHPERD), and the American Heart Association (AHA). Examples of management issues were corporate program objectives, staffing considerations, legal aspects, program components, and evaluation techniques.

A questionnaire was used to determine the status of corporate health promotion programs (Appendix A). The questionnaire was mailed in the spring of 1985 to 125 randomly-selected industrial "Fortune 500" corporate headquarters, addressing various management issues. The questionnaire was developed by the investigator after a thorough search of related literature. Questions pertained to management issues of health promotion programs which were identified from articles by wellness professionals and from organizational and administrative guidelines developed by concerned health promotion professional groups such as the PCPFS, EPC for the AAHPERD, and the AHA.

Through thesis committee input, it was felt that a greater return rate percentage would be achieved if the study was sanctioned and/or had sponsorship by an interested professional organization. Five organizations were selected and contacted by letter by the investigator (Appendix T). The organizations included Fortune magazine, the Association for Fitness in Business (AFB), the American Alliance for Health Physical Education, Recreation, and Dance (AAHPERD), the American Productivity Center (APC), and the President's Council on Physical Fitness and Sport (PCFPS). It should be noted none of these organizations sanctioned this study for varying reasons, ranging from legal considerations to established policy and precedent standards. The organizations contacted did support the idea of the study; some asked for a copy of results upon completion.

Subject Selection

The population of this study was corporate fitness program directors and/or chief executive officers (CEO's) of 125 randomly selected 1984 "Industrial Fortune 500" corporations. The random selection of the corporations was achieved by drawing 125 numbers out of a hat, those numbers corresponding to the ranking on the "Fortune 500" list (Appendix B). After the selection of the 125 corporations, it was necessary to obtain specific names and addresses which to send the questionnaire, thereby insuring a high return rate. The names of

many of the corporate fitness program directors were obtained using various means such as 1984 Association for Fitness in Business newsletters, the 1984 NESRA directory, journal articles, and personal contacts in the corporate fitness field. For those corporations in which the names of program directors could not be obtained, the survey was sent to the corporate chief executive officer (CEO).

The CEO was selected because the review of literature revealed that the chief executive office oversees all corporate health promotion programs (see Appendix M). The CEO was asked to forward the questionnaire to the program director if a program existed or return the questionnaire upon completion of page one if no program existed. The names and addresses of the corporate CEO were obtained using the "Register of Corporations, Directors and Executives" (Standard and Poors 1985). It should be noted that only corporate headquarters were used in this study. Corporate headquarters were selected because many "Industrial Fortune 500" corporations have multiple locations, such as International Business Machines (IBM) and General Foods.

Tool Selection

A questionnaire was designed and developed by the investigator and utilized to obtain as much data as possible concerning management issues of corporate wellness programs in 1984 "Industrial Fortune 500" corporations. The questionnaire consisted of thirty-nine questions (Appendix A) pertaining to management issues of: resources, supervision, motivation, objectives, health care costs, and legal aspects (see sub problems).

Questions were developed from a review of related literature and encompassed guidelines for industrial health promotion programs established

by the President's Council on Physical Fitness and Sports, the Exercise Prescription Committee for the American Alliance of Health, Physical Education, Recreation and Dance, and the American Heart Association.

The questionnaire was reviewed by forty-one individuals, including professional associates, committee members, graduate students, and professional corporate wellness program directors through a pilot study which was completed on March 18, 1985. The pilot study was conducted in February of 1985, the purpose of which was to evaluate content, clarity, ambiguity, appropriateness, structure, and ease in which to complete the questionnaire. After each evaluation in the pilot study, comments and recommendations were considered and appropriate revisions made to the questionnaire.

Data Collection

The final questionnaire was professionally printed on light blue paper following completion of the pilot study. Since research specifically directed at surveys produced results which indicated the use of light blue paper enhances survey return percentages (Dillman 1978) The questionnaire was mailed from Montana State University by the investigator on March 29, 1985, to the randomly selected corporate program directors (CEO's). A cover letter accompanied the questionnaire explaining the researcher's background, the study, and its purposes (see Appendix T). The initial questionnaire packet included instructions for completion and a self-addressed, stamped envelope for easy return of the document. A follow-up packet was sent to those persons who had not returned the questionnaire from the first mailing on April 30, 1985. The follow-up packet included a new form of the same questionnaire with

instructions, a self-addressed stamped envelope, and a letter informing the participants of the study's importance (Appendix T). The collection of data was completed on May 21, 1985. A thank-you card was sent to those individuals returning the questionnaire on May 26, 1985. Of the 125 randomly selected corporations in this study, ninety percent (113) returned the questionnaire (see Table 1 for response breakdown). Of those corporations who returned the questionnaire, eight indicated that it was not possible to participate in the survey due to corporate policy.

Table 1: Responses of Survey

CLASSIFICATION	#	%
SURVEY TOTAL	125	100
RESPONSES TO SURVEY	113	90
NO RESPONSE TO SURVEY	12	10
RESPONSE BREAKDOWN OF THE 113 RESPONDENTS:		
CORPORATIONS WITHOUT PROGRAM	56	49
CORPORATIONS WITH PROGRAM	49	43
CORPORATIONS RETURNING SURVEY *	8	8

*(Policies prohibited participation)

Data Analysis

Tabulation of the questionnaires was begun after a minimum return rate was obtained (minimum return was set at seventy percent). The actual return rate was ninety percent. Informational data obtained from the survey was organized into three general categories: (1) corporations with programs; (2) corporations without programs; and (3) corporations which do not participate in surveys (see table 1). The data obtained from those corporations with programs, 49 percent (43) of the 113 returned, was analyzed to determine the status of industrial "Fortune 500" health promotion programs. Program status of this study was concerned with management issues of supervision, prescriptive programs, resources, objectives, expenses, program components, legal aspects and evaluations. The questionnaire data were specifically analyzed with regard to information obtained from articles by wellness professionals and from organizational and administrative guidelines established by professional organizations (PCPFS, EPC and AHA).

Responses of the questionnaires were calculated by the Montana State University Testing Services on a main frame computer, using a CP6 program, to determine percent of statistical information. Means and medians were calculated by the investigator where appropriate.

The data obtained from the questionnaire are presented in tabular and pie form in Chapter Four with an accompanying narrative explanation. The data are arranged by sub problems identified in Chapter One.

A Summary of this study, conclusions, and recommendations are presented in Chapter Five as a result of information obtained from the survey and the review of literature with regard to health promotion programs of "Fortune 500" companies. The data in this study were presented using organizational and administrative guidelines and policies established by health professionals (sub problems). By using these components, the investigator was able to draw conclusions and make recommendations concerning management issues of health promotion programs. By using established guidelines and policies discovered in the review of literature, the investigator was able to present data in terms of compliance of these various components.

CHAPTER 4

SURVEY RESULTS

Questionnaires were mailed to 125 1984 Industrial "Fortune 500" corporations. The questionnaires were used to survey individuals within the corporation about management issues of health promotion programs which were being implemented and conducted.

Two groups were established with regard to the survey: 1) those individuals representing corporations which responded to the questionnaire (113, or ninety percent); and 2) those individuals who did not respond to the questionnaire (twelve, or ten percent).

Three categories were identified from corporate individuals which returned the questionnaire: 1) corporations with a health promotion program (forty-nine, or forty-three percent); 2) corporations without a health promotion program (fifty-six, or forty-nine percent); and 3) corporations who returned the survey but did not participate in surveys due to policies prohibiting participation in surveys of any kind (eight, or eight percent). Refer to Table 1, page 67, for complete breakdown of respondents.

The data presented in this section (Chapter Four) were collected from corporate directors who indicated the operation of a health promotion program (forty-nine, or forty-three percent). The following is a brief summary of the responses to each of the sub problems identified in Chapter One. The sub problems were established with regard to organization and administrative

guidelines of professional groups (the PCPFS, the EPC for AAHPERD, and the AHA) and from experts who have reported on corporate health promotion programs.

Sub problem 1. Did the popularity of health promotion programs vary among "Fortune 500" companies from region to region?

The responding "Fortune 500" corporations have been divided into regions. Figure 1 has been provided to demonstrate the U.S. regional breakdown. Data relating to regional descriptions have been developed from corporations returning surveys which indicated "yes" or "no" to having a program (total, 105). Those individuals which indicated they do not participate in surveys were omitted (eight percent). (See Table 1, page 67.)



Figure 1: U. S. Regional Description; Source: NESRA Directory 1984.

Table 2 indicated that the largest regional category of corporations with a health promotion program was Region 1, the "East Coast," with thirteen (twelve percent). The East Coast region also recorded the highest number of "Fortune 500" corporations without programs (twenty-one, or twenty percent). The next highest region in terms of corporations offering health promotion programs was Region 6, the "South West" (eight, or eight percent). The remainder of the regional categories have been ranked by the investigator in descending order of corporations offering health promotion programs.

Table 2: Corporation Respondents Categorized by Region

Region	W/Program		W/O Program		TOTAL	
	#	%	#	%	#	%
1-East Coast	13	12	21	20	34	32
6-South West	8	8	0	0	8	8
3-Mid West	7	7	12	11	19	18
5-North West	6	6	2	2	8	8
2-Mid East	5	5	13	12	20	17
7-West	5	5	7	7	12	11
4-South	3	3	3	3	6	6
Total	49	47	56	53	105	100

Total Number of Responses = 105

Sub Problem 2. What was the relationship of corporate size to health promotion program implementation?

Table 3 expressed that corporations with an employee population of 1,001-5,000 employees, eighteen, or thirty-seven percent, were noted as having the most health promotion programs. The second highest category of health promotion program implementation was among corporations with an employee population of 5,001-10,000 (eight, or sixteen percent). Other corporation sizes with respect to program implementation have been recorded in Table 3 in descending order.

Table 3: The Relationship of Corporate Size to Health Promotion Implementation

Number of Employees	#	%
Less than 1,000	4	8
1,001-5,000	18	37
5,001-10,000	8	16
10,001-25,000	6	12
25,001-50,000	6	12
50,001-100,000	6	12
More than 100,000	1	2

Total Number of Responses = 49

Sub Problem 3a. Were corporate health promotion programs among "Fortune 500" companies administered internally or externally by the corporation?

Figure two noted thirty-two, or sixty-five percent, of corporate health promotion programs were internally administered by the company. Seventeen, or thirty-five percent, of corporate programs were externally administered.

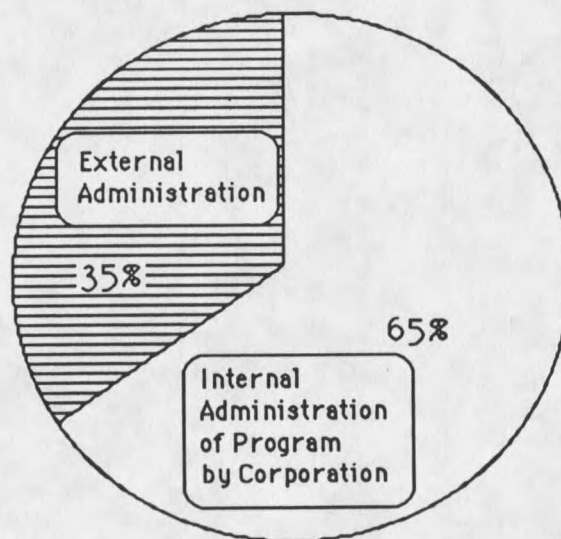


Figure 2: External Versus Internal Administration of Wellness Programs

Total Number of Responses = 49

Sub Problem 3b. Where are external corporate health promotion programs administered?

Table 4 is an analysis of corporate directors indicating that the wellness programs were administered externally to the corporation (seventeen, or thirty-five percent.) Thirteen, or twenty-six percent, indicated that the

program had been conducted through the YMCA. One, or two percent, noted that the program was conducted through a college or university and three, or six percent, indicated a fitness center or health club had been used for program administration.

Table 4: Site of External Corporate Health Promotion Program

Facility	#	%
YMCA	13	26
Fitness Center	3	6
College/University	1	2

Total Number of Responses = 49

Sub Problem 4. How many "Fortune 500" companies have worksite health promotion facilities?

Thirty-five, or sixty-five percent, of respondents indicated that the corporation utilizes worksite facilities to administer health promotion programs. Figure 3, page 76, is an analysis of corporations which have in-house, on-site facilities. There appeared to be a positive relationship between corporations which have internal program administration and in-house, on-site facilities, both noted as thirty-two, or sixty-five percent. Figure 3 also noted corporations

without worksite facilities were recorded as 14, or twenty-nine percent. Three directors, or six percent, omitted answering the question.

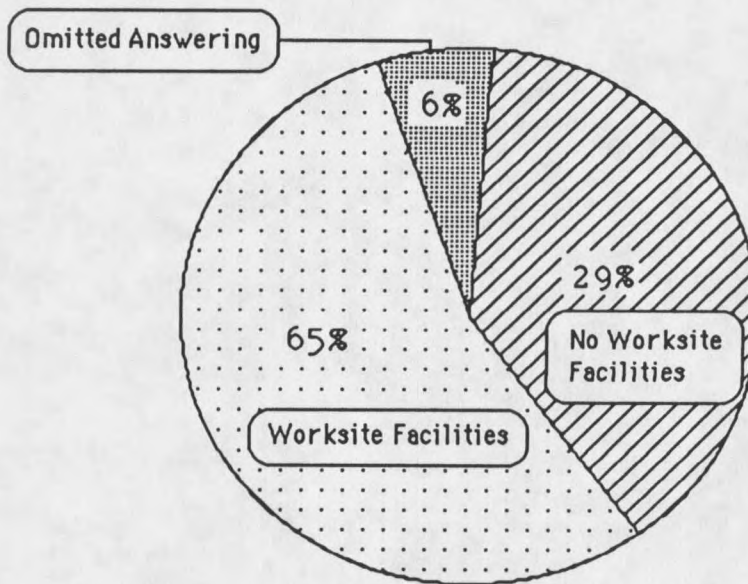


Figure 3: Worksite Health Promotion Programs

Total Number of Responses = 49

Sub Problem 5. What is the average length of time the "Fortune 500" health promotion program had been in effect?

The largest category of corporate health promotion program length was indicated as 1 to 2 years (thirteen, or twenty-seven percent). Program lengths ranged from eight, or sixteen percent, which have been in operation for less than one year to three, or six percent, which have been operational for 16 years or more. Program lengths have been arranged by the investigator in Table 5 in descending order of length of time.

Table 5: The Length of Time that Wellness Programs have been Operational

Time	#	%
1-2 years	13	27
3-5 years	12	24
6-10 years	10	20
Less than one year	8	16
11-15 years	3	6
16 years or more	3	6

Total Number of Responses = 49

Sub Problem 6a. Have "Fortune 500" companies which have health promotion programs directly benefited from the program?

Of corporate fitness directors responding to the survey, thirty-four, or sixty-nine percent, indicated that the corporation has benefited directly from the fitness program. Thirteen, or twenty-seven percent, indicated they were unable to state whether the fitness program caused or effected any benefits. Four directors (two percent) omitted answering the question.

Sub Problem 6b. How have these companies which indicated benefits of health promotion programs benefited?

Table 6, page 80, has been ranked by the investigator by using percentages of surveys returned. Of the fitness directors who indicated that the corporation had benefited directly from the fitness program, thirty-four, or sixty-nine percent, quoted better morale as ranking first, with twenty-eight responses (fifty-seven percent). Increased energy and vitality of participants was ranked second with twenty-five responses (fifty-one percent). Other benefits included better employee/employer relationships, with sixteen responses (thirty-three percent), and increased productivity and decreased absenteeism with ten responses (twenty percent).

Sub Problem 7. Have health care costs changed since the implementation of the corporate wellness program?

Forty-two of the directors, or eighty-six percent, indicated that they did not know, or felt more data should be compiled before a relationship could be made between fitness programs and the apparent health care cost change.

Data presented in Figure 4 indicates that of those directors responding to a change of health care costs, two, or four percent, noted no change had occurred in the cost of medical services since the program implementation. Two, or four percent, noted a rise in medical costs, and three, or six percent, indicated a decrease in costs since implementation.

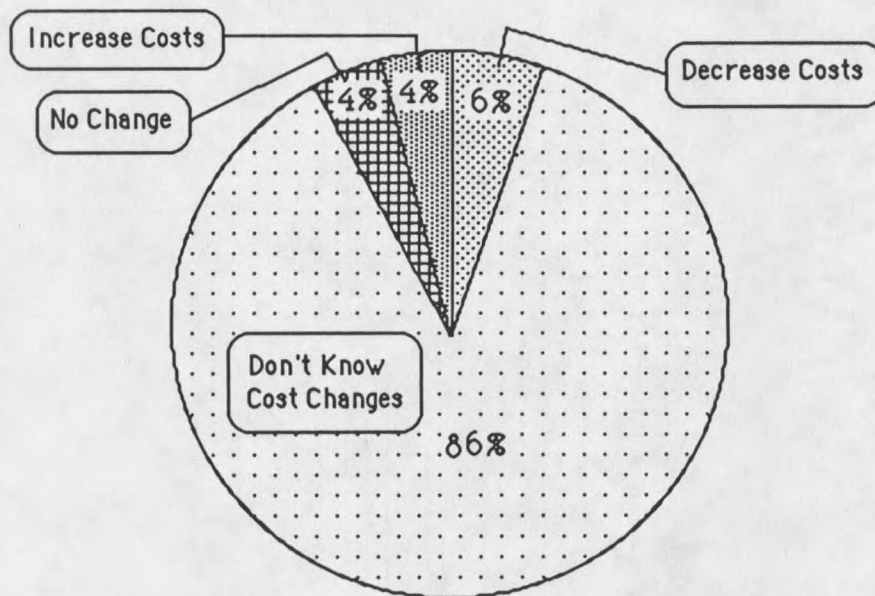


Figure 4: Health Care Cost Changes Since Wellness Program Implementation

Total Number of Responses = 49

Sub Problem 8. What was the major goal of the corporate health promotion program?

Corporations placed the majority of emphasis of their fitness programs on promoting better employee health, with forty-seven, or ninety-six percent, and the improvement of cardiovascular fitness, with thirty-nine, or eighty percent. Other program objectives have been ranked by the investigator in descending order of corporate health promotion program importance.

Table 6: Corporate Benefits of Health Promotion Programs

Rank	Corporate benefits	#	%
1	Better morale	28	57
2	Increased energy and vitality	25	51
3	Better employee/employer relationships	16	33
4	Increased productivity	10	20
5	Reduction in absenteeism	10	20

Total Number of Responses = 49

Sub Problem 9a. Were the characteristics of the population to be served by the health promotion program identified before the implementation of the program?

Thirty-five of the directors, or seventy-one percent, indicated that a pilot study had not been performed to determine the characteristics of the population. Fourteen, or twenty-nine percent, indicated that potential participants had been surveyed prior to program implementation through a pilot study.

Sub Problem 9b. Were participants surveyed as to the goals and objectives of the health promotion program once the program had been implemented?

Thirty-seven of the directors, or seventy-six percent, indicated that participants were questioned as to the goals of the program after implementation. Twelve, or twenty-four percent, of the directors noted that the participants were not surveyed as to the goals of the program.

Table 7: "Fortune 500" Corporate Health Promotion Program Objectives

Rank	Objectives/Goals	#	%
1	Promote Better Health	47	96
2	Improve Cardiovascular Fitness	39	80
3	Reduce Coronary Risk Factors	33	67
4	Decrease in Health Care Costs	32	65
5.5	Improved Relations	24	49
5.5	Aid Recruitment/Retention	23	47
7	Decrease in Absenteeism	20	41
8	Increased Productivity	19	39
9	Minimum Level of Fitness	19	39
10	Increased Muscular Strength	12	24
	Others	6	12

Total Number of Responses = 49

Sub Problem 10. Was the health promotion program promoted?

The largest category of wellness promotion indicated by directors were methods of bulletins or fliers by forty-three respondents, or eighty-eight percent. Posters, doctors' recommendations, and seminars followed respectively. Table 8 noted methods of promotion which were indicated by program directors to increase participant involvement. These responses have been ranked using the total percentage of responses. "Other" methods of promotion, which were indicated by physical directors in a write-in space on the survey, included (1) paycheck stuffers, (2) video tape displays, (3) T-shirts, (4) invitations, (5) presentations, and (6) journal and newspaper write-ups.

Table 8: Methods of Publicizing Corporate Health Promotion Programs

Rank	Promotion Technique	#	%
1	Bulletins/Flyers	43	88
2	Newsletters	42	86
3	Posters	39	79
4	Doctors' Recommendations	30	61
5	Seminars	17	35
6	Word of Mouth	14	29
	Others	3	6

Total Number of Responses = 49

Total Number of Responses = 49

Sub Problem 11a. How was the program financed?

An analysis of data presented in Figure 5 indicated twenty, or forty-one percent, of respondents had a separate fitness program budget. Twenty-five respondents (fifty-one percent) indicated the fitness program had a budget through another corporate department. Four of the directors, or eight percent, noted there is not a corporate budget established for fitness endeavors. Four, or eight percent, of the corporate fitness directors who indicated that they had a separate program budget stated that the budget was supplemented by vending machine sales. "Other" responses which were recorded in a separate write-in space included specific program fees of participants.

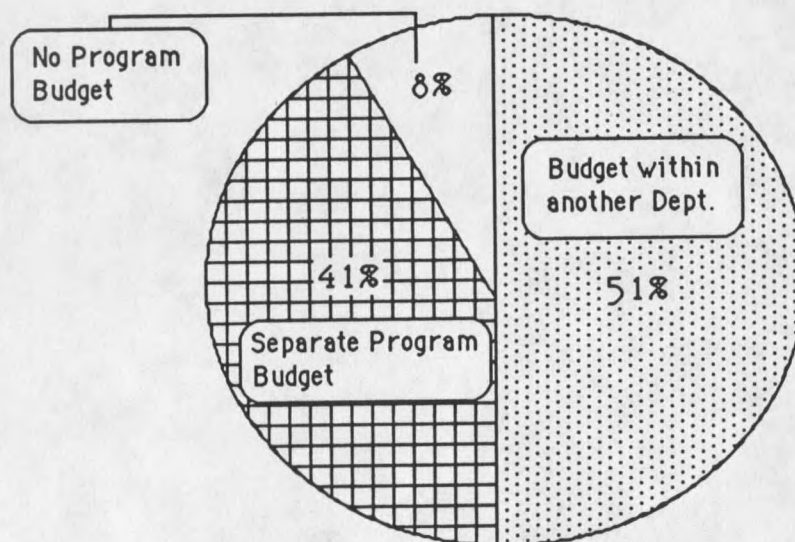


Figure 5: How were the Wellness Programs Financed?

Total Number of Responses = 49

Sub Problem 11b. What was the cost of the health promotion program per year, per participant?

Twenty-five of the directors, or fifty-one percent, indicated they did not know the program cost with regard to participants. The largest category of respondents who did know the cost of participant per year was \$26.00 to \$50.00, with six, or twelve percent. The second largest category of participant expense per year was \$101.00 to \$500.00, with five, or ten percent. The remainder of corporate health promotion costs per year, per participant have been ranked in descending order by the investigator.

Table 9: Approximate Cost of Wellness Programs Per Year, Per Participant

Cost per year, per participant	#	%
Don't Know	25	51
Less than \$25.00	4	8
\$26.00-\$50.00	6	12
\$51.00-\$100.00	2	4
\$101.00-\$500.00	5	10
\$501.00-1,000.00	4	8
More than 1,000.00	3	6

Total Number of Responses = 49

Sub Problem 12. Were legal aspects considered before implementation of the health promotion program?

Forty-one, or eighty-four percent, of the corporations which have wellness programs had taken legal aspects into consideration when organizing and/or administering the fitness program. The response frequency of programs which considered legal aspects have been ranked and recorded on Table 10, page 86. Properly trained personnel was indicated as being the greatest consideration among program directors, with thirty-six, or seventy-three percent, responding. Selection of proper equipment (thirty four, or sixty-nine percent), liability insurance and participant release forms, (thirty, or sixty percent), followed with the greatest legal consideration in program organization and administration. Additional responses with respect to legal considerations have also been recorded on Table 10. These responses include (1) emergency procedures, (2) informing of risks and hazards, (3) risk classifications, (4) comprehensive testing, (5) prescriptive programming, (6) First Aid/CPR certification, and (7) medical clearance of high-risk individuals.

Sub Problem 13. Was the corporate health promotion program conducted with medical supervision available and/or as an adjunct to the company's medical program?

Thirty-five, or seventy-one percent, of the health promotion programs were overseen by the corporate medical services. A staff physician provided medical supervision for fourteen (twenty-nine percent) and a physician on call was responsible for eighteen percent of the programs. Further data analysis noted

that a corporate nurse was available in twenty-one, or forty-three percent of wellness programs. Fifteen, or thirty percent, of the respondents indicated that emergency personnel was available and provided medical supervision and eight, or sixteen percent, indicated that the program was unsupervised. Medical supervision information has been recorded in Table 11, page 87.

Table 10: Corporate Directors Response Frequency of Legal Aspects

Legal Aspects	#	%
Properly Trained Personnel	36	73
Selection of Proper Equipment	34	69
Liability Insurance	30	61
Participants Release Forms	30	61
Emergency Procedures	29	59
Informing Participants of Risks and Hazards	20	40
Risk Classifications	18	37
Comprehensive Testing	15	31
Prescriptive Programming	15	31
Others	3	6

Total number of responses = 49

Table 11: Medical Supervision Available in Corporate Wellness Programs

Type of Medical Service	#	%
Company Medical Services	35	71
Nurse	21	43
Emergency Personnel	15	30
Physician on Staff	14	29
Physician on Call	9	18
Unsupervised	8	16

Total number of Responses = 49

Sub Problem 14. Who and/or What implemented the health promotion program in "Fortune 500" companies?

In the area of "who" was responsible for program implementation, fourteen, or twenty-nine percent, of the directors denoted that medical/health services were responsible for implementation. In the case of what influenced implementation, twenty-four, or forty-four percent, indicated employees were responsible. Medical services received a ranking of second with eight responses (sixteen percent) in the "what" category. Additional responses for the "who/what" of program implementation have been ranked and recorded in Table 12, page 88.

Table 12: Implementation of Wellness Programs with Regard to Who or What

Rank	What	#	%
1	Employees	21	44
2	Medical Services	8	16
3	YMCA	7	14
4	Union	5	10
5	AFB	1	2
6	Insurance Company	1	2
7	Other	6	12

Rank	Who	#	%
1	Medical Services	14	29
2	Employees	10	20
3	Executives	10	20
4	President	5	10
5	Insurance Agent	2	4
6	Board of Directors	1	2
7	Other	7	14

Total Number of Responses = 49

Sub Problem 15a. Was a portion of the corporate health promotion program conducted on company time?

Twenty-four, or forty-nine percent, of the responding corporate directors indicated that zero percent of the program was conducted on company time. Percentages of program offerings which are conducted on corporate time have been presented in Table 13, in descending order.

Table 13: Percentage of the Wellness Program Conducted on Corporate Time

Percent on Company Time	#	%
0%	24	49
1%-5%	6	12
6%-10%	1	2
11%-25%	3	6
26%-50%	4	8
51%-75%	3	6
76%-100%	8	16

Total Number of Responses = 49

Sub Problem 15b. When may employees participate in the health promotion program offered by the corporation?

Twenty-five, or fifty-one percent, of the respondents indicated that flexible scheduling ("flex time") of work hours was available for employees who desire to be a participant of the fitness program. Forty-two, or eighty-four percent, of the respondents indicated that employees had the opportunity to participate in the fitness program after work, and twenty, or forty percent, indicated employee participation before work. Table 14 noted when health promotion programs are available for participant involvement in descending order of availability.

Table 14: Availability of the Corporate Health Promotion Program

Time of Day for Participation	#	%
After Work	42	84
During Lunch	35	71
Flexible Scheduling	25	51
Before Work	20	40

Total Number of Responses = 49

Sub Problem 16. What was the percentage of eligible employees which used the health promotion program among "Fortune 500" companies?

Table 15 (page 91) notes data concerning the percentage of participants who used corporate wellness programs. The largest category of participants who used the fitness program in "Fortune 500" companies was 11-20% of eligible employees, or thirty-three respondents (sixteen percent). Other eligible employee percentage rates for fitness programs have been recorded in descending order of percentages.

Table 15: Percentage of Eligible Employees Using Corporate Wellness Programs

Percentage of Employees	#	%
11-20%	16	33
21-30%	10	20
16-70%	5	10
More than 71%	4	8
0-10%	4	8
31-40%	3	3
41-50%	3	3
51-60%	3	6
Omit	1	3

Total number of Responses = 49

Sub Problem 17. How were participants motivated to stay in the program?

Thirty-eight, or seventy-eight percent, of the directors rely on self-motivation of participants. Twenty-eight, or fifty-eight percent, used newsletters, and twenty-four, or forty-nine percent, used awards to motivate participants to continue with the health promotion program. Other methods of motivation have been ranked by the investigator and appear in Table 16.

Table 16: Corporate Health Promotion Motivation Techniques

Motivation Techniques	#	%
Self-Motivation	38	78
Newsletters	28	58
Awards	24	49
Special Recognition	20	40
Seminars	17	35
Health Hazard Appraisals	15	30
Films	13	27
Subsidized YMCA or Health Club Memberships	8	16
Exercise Breaks at Work	5	10
Insurance Premium Reductions	3	6
Other	13	26

Total Number of Responses = 49

Sub Problem 18. What were the fitness factors stressed within "Fortune 500" health promotion programs?

Forty-five, or ninety-two percent, of the responding directors indicated cardiorespiratory endurance as being the leading fitness factor. Thirty-one of the directors, or sixty-three percent, ranked weight control and muscular strength and endurance second. Following was joint flexibility, noted by sixty-one respondents, or thirty percent. Additional responses by directors with regard to fitness factors of health promotion programs have been recorded in Table 17.

Table 17: Health Promotion Program Fitness Factors

Rank	Fitness Factors	#	%
1	Cardiorespiratory Endurance	46	92
2.5	Weight Control	31	63
2.5	Muscular Strength/Endurance	31	63
4	Joint Flexibility	30	61
5	Stress and Relaxation	27	55
6	Coordination	12	24
7	Competition	7	14

Total Number of Responses = 49

Sub Problem 19. What specific activities were offered through the corporate health programs of "Fortune 500" companies?

Jogging was ranked first among corporate program directors returning the questionnaire with forty-three responses, or eighty-eight percent. Aerobic dancing followed with forty-one responses, or eighty-four percent, and calisthenics was third with thirty-eight responses, or seventy-eight percent. Additional responses to corporate fitness activities have been recorded in Table 18, page 95.

Sub Problem 20. Were participants of the health promotion program encouraged to participate in competitive activities and/or recreational activities?

Thirty-five, or seventy-one percent, of the respondents stated that participants were not encouraged to participate in competitive activities. Fourteen respondents, or twenty-nine percent, indicated that participants were encouraged into competition situations. With regard to recreational activities, forty-four, or ninety percent, of the directors indicated participants were encouraged to develop recreational activities through the program. Five respondents, or ten percent, noted that participants were not encouraged to develop recreational activities.

Table 18: Activities Offered to Health Promotion Program Participants

Activities	#	%
Jogging	43	88
Aerobic Dancing	41	84
Calisthenics	38	78
Weight Training	35	71
Swimming	30	61
Softball	27	55
Basketball	27	55
Volleyball	26	53
Family Activities	24	48
Raquetball/Handball	19	39
Golf/Skiing	18	37
Table Tennis	13	27
Walleyball	12	24
Badminton	10	20
Scuba	9	18
Tennis	8	16
Ballet	4	8
Others	37	76

Total Number of Responses = 49

Sub Problem 21. Were program participants encouraged to develop healthy lifestyle activities away from the confines of the corporate program?

Forty-four, or ninety percent, of the program directors indicated that participants were encouraged to continue with related program activities away from the physical presence of the corporate program. Five respondents, or ten percent of the directors, omitted answering the survey question which pertained to this sub problem.

Sub Problem 22. What was the general program structure of corporate wellness programs?

Thirty-eight, or seventy-eight percent, of corporate directors guided participants into individual workouts. Of that thirty-eight, twenty-eight, or fifty-seven percent, of the directors indicated that the participants' programs were supervised, and eighteen, or thirty-seven percent of them noted the programs were unsupervised. Other program structure areas included individual self motivated programs, group programs, recreational activities, competitive activities, and contracts. A complete breakdown of each category with regard to respondents answers has been provided in Table 19, page 97.

Table 19: Corporate Health Promotion Program Structure

Program Type	#	%
Individual Workouts	38	78
Supervised	28	57
Unsupervised	18	37
Individual (Self-Motivated Program)	31	63
Group Programs	23	47
Recreational Activities	23	47
Competitive Activities	14	29
Contracts	4	8

Total Number of Responses = 49

Sub Problem 23a. Was health and/or fitness education conducted through the health promotion program where appropriate?

Thirty-two, or sixty-five percent, of the directors indicated that education opportunities were available and twelve, or twenty-five percent, indicated that education opportunities were not available to program participants. Five, or ten percent, of the directors omitted answering the question in the survey which pertained to this sub problem.

Sub problem 23b. What type of education opportunities were available?

Thirty-two, or sixty-five percent, of the responding corporate directors indicated educational information and/or employee assistance programs were available. The types have been ranked using the total number of percents. Stress management, proper diet, and smoking cessation are given the greatest consideration in more than half the corporations with programs. Corporate directors had the opportunity to write in additional responses. Responses in the category of "other" included (1) healthy back classes, (2) cardiac rehabilitation, (3) alcohol awareness, (4) weight reduction, (5) CPR, (6) pre-natal care, and (7) fitness maintenance.

Table 20: Types of Health/Fitness Education Offered

Rank	Type of Program	#	%
1	Stress Management	36	73
2	Proper Diet	35	71
3	Smoking Cessation	33	67
4	ID of Risk Factors	23	47
5	Other	22	44

Total Number of Responses = 49

Sub Problem 24a. Was testing and questioning performed specifically for the health promotion program?

Forty-four, or ninety percent, of the program directors indicated that testing and/or questioning was done with specific regard to the health promotion program. Five directors, or ten percent, noted that neither testing nor questioning of participants had been performed for program involvement.

Sub Problem 24b. Was testing and/or questioning of participants performed within the corporate health promotion setting?

As noted in the analysis of sub problem 24a, forty-four, or ninety percent, of the program directors indicated testing and/or questioning of participants. Of the forty-four, thirty-two, or sixty-five percent, performed the testing and/or questioning within the corporate setting. Twelve, or twenty-five percent, of the directors indicated that the testing and/or questioning was performed through an outside agency.

Sub Problem 24c. If an outside agency was used to perform the testing and/or questioning of participants, what agency was used?

Of the twelve, or twenty-five percent, of directors who indicated that an outside agency was used to test and question participants, six, or twelve percent, indicated that "General Health" was used. Two, or four percent, denoted that the "National Wellness Institute" and "Health Evaluation Programs" had been employed. Responses to Sub Problem 24c have been recorded in Table 21, page 100.

Table 21: Outside Agencies used for Testing and/or Questioning of Participants

Agency	#	%
General Health	6	12
Health Evaluation	2	4
National Wellness Institute	2	4
Systems Fitness	0	0
Other	4	4

Total Number of Responses = 49

Sub Problem 25. What type of testing and/or questioning was required for participation in the health promotion program?

Thirty-four, or sixty-nine percent, of the corporate directors expressed that physical examinations were performed when assessing fitness levels. Twenty-four, or forty-nine percent, indicated the inclusion of a clinical chemistry analysis which was comprised of blood and urine tests. Twenty-four, or forty-nine percent, of directors indicated that electrocardiograms had been requested and administered. Twenty, or forty-one percent, obtained both resting and exercise electrocardiograph recordings. Anthropometric measurements were indicated by thirty-three, or sixty-seven percent. Of that percentage, thirty-three, or sixty-seven percent, recorded height and weight,

ten, or twenty percent, recorded skinfolds and four, or eight percent, recorded flexibility. Additional tests which were denoted by the fitness directors have been recorded and are included in Table 22.

Table 22: Types of Assessment Testing and Questioning

Testing and Questioning	#	%
Physical Examination	34	69
Personal Profile questionnaires	43	88
Clinical Chemistry	24	49
Blood	20	41
Urine	20	41
HDL	3	6
Cholesterol	3	6
Anthropometric measures	35	71
Height	33	67
Weight	33	67
Skinfold	10	20
Flexibility	4	8

Total Number of Responses = 49

Table 22, continued: Types of Assessment Testing and Questioning

Testing and Questioning	#	%
Strength Testing	21	43
Bench Press	10	20
Sit-ups	15	31
Push-ups	3	6
Stress Testing	17	35
Electrocardiogram	24	49
Resting	20	41
Exercise	20	41
Oxygen Consumption	13	27
Step Test	12	24
Bicycle Ergometer	16	33
Tread-Mill	15	30
Others	6	12

Total Number of Responses = 49

Sub Problem 26a. Were participants reassessed and/or evaluated after being involved in the program?

Forty-four, or ninety percent , of the directors indicated that participants were reassessed or evaluated after being involved in the program for a specific

period of time. Five, or ten percent , indicated that participants were not reassessed at a later date.

Sub Problem 26b. If participants were reassessed or evaluated during program involvement, when was the reassessment performed?

Data obtained from directors noted nineteen, or thirty-nine percent, of the programs have a no-set time frame in which feedback is given to participants. Twenty-six, or fifty-three percent, indicated that a set time frame had been established for participant feedback. The largest category indicated by responding directors was a time frame of quarterly, reported by thirteen directors, or twenty-seven percent. Evaluation time frame breakdown has been recorded on Table 23, page 105.

Sub Problem 27. What type of facilities and equipment was available in the health promotion program?

Forty-nine, or 100 percent, of the directors indicated that locker rooms were included in the health promotion facility. Forty-four, or ninety percent, indicated that an exercise room was also available to participants. With regard to equipment, stationary bicycles were indicated by forty-one, or eighty-four percent. Additional facility and equipment components of health promotion programs has been recorded on Table 24. In the area of "other" on the questionnaire, a wide variety of items were listed, too numerous to mention. Almost every type of apparatus was mentioned by at least one of the directors. For example: ice rinks, pool tables, archery/shooting ranges, and bowling.

Table 23: When was Health Promotion Feedback given to Participants?

Evaluation time frame	#	%
No Set Time Frame	19	39
Quarterly	13	27
Monthly	4	8
Weekly	3	6
Bi-Annually	3	6
Annually	2	4

Total Number of Responses = 49

Table 24: Facilities and Equipment Available in Corporate Wellness Programs

Responses	#	%
Locker Rooms	49	100
Exercise Room	44	90
Stationary Bicycles	41	84
Weight Room	35	71
Tread-Mill	32	65

Total Number of Responses = 49

Table 24, continued: Facilities and Equipment Available

Responses	#	%
Rowing Machine	27	55
Testing Room	26	53
Outdoor Track/Running Course	25	51
All Purpose Room	24	49
Gymnasium	19	39
Raquetball/Handball Courts	19	39
Saunas	18	37
Whirlpool	15	30
Pool	15	30
Outdoor Fields	14	29
Indoor Track	12	24
Tennis Courts	10	20
Par Course	8	16
Other	14	29

Total Number of Responses = 49

Sub Problem 28a. During the development of the health promotion program, were consultive services (agencies) employed?

Twenty-seven, or fifty-five percent, of directors noted consultative service organizations were employed when developing the fitness program.

Twenty-two, or fifty-five percent, indicated that consultive service organizations were not used during program implementation.

Sub Program 28b. What consultive agencies, if any, were employed?

Of those directors who indicated that consultive agencies were employed twenty-seven, or forty-five percent, and six, or twelve percent, indicated that the AFB and the YMCA had been employed. The PCPFS and the AMA were indicated by two, or four percent, of the directors. Consultive service organizations, which were employed by corporate health promotion programs, were recorded on Table 25, page 107. Additional consultive agencies, which were indicated by program directors in a write-in space on the questionnaire, have been recorded in Appendix U.

Sub Problem 29a. What general qualifications did "Fortune 500" companies consider important for a corporate health promotion program director?

Fourteen, or twenty-eight percent, of the directors indicated they did not know what qualifications were considered important for a corporate program director. Forty-one, or eighty-four percent, of the directors noted that physical appearance was the leading qualification for becoming a corporate health

experience of program directors were indicated by thirty-four, or sixty-nine percent, of responding directors as the second qualification areas. Business administration skills were also indicated as a favorable quality with thirty-two, or sixty-five, percent. A variety of skills were ranked and have been presented on Table 26, page 108.

Table 25: Which Consultive Agencies were used During Implementation?

Organization	#	%
Association for Fitness in Business	6	12
YMCA	6	12
President's Council on Physical Fitness	2	4
American Medical Association	2	4
Institute of Aerobics Research	0	0
Systems Fitness	1	2
Other	10	20

Total Number of Responses = 49

Sub Problem 29b. What academic qualifications did corporations consider important for a program director?

Specific academic qualifications were noted on Table 27, page 109. Five, or ten percent, of the directors had earned doctorates in exercise physiology. Seventeen, or thirty-five percent, had an MS or an MA in exercise physiology.

Table 26: General Qualifications of Corporate Program Directors

Qualifications	#	%
Physical Appearance	41	84
Human Relation Skills	34	69
Practical Experience	34	69
Business Administration Skills	32	65
CPR Certification	19	39
Don't Know	14	28
ACSM Certification	11	22
Nutrition Skills	8	16
YMCA Certification	4	8
Other	15	30

Total Number of Responses = 49

Table 27: Academic Qualifications of Program Directors

Academic Qualifications	#	%
BA/BS in Physical Education	18	37
MS/MA in Exercise Physiology	17	35
Doctorate in Physical Education	10	20
Doctorate in Exercise Physiology	5	10
MS/MA in Physical Education	3	6

Total Number of Responses = 49

Sub Problem 30a. Were program personnel required to upgrade skills through training and retraining procedures?

Thirty, or sixty-one percent, of the directors indicated that staff is required to upgrade skills and qualifications. Nineteen, or thirty-nine percent, indicated that staff personnel were not required to attend retraining procedures

Sub Problem 30b. How are personnel required to upgrade qualifications and skills?

For programs which require upgrading of skills, attending seminars and workshops were required by twenty-seven, or fifty-five percent. Fourteen, or twenty-eight percent, required renewal of certifications, and eleven, or twenty-two percent, required in-service training.

Table 28: How were Staff Skills Upgraded?

Responses	#	%
In service Training	11	22
Renewal of Certifications	14	28
Attend Seminars, Workshops, etc.	27	55

Total Number of Responses = 49

Sub Problem 31a. What is the number of full-time staff involved in a corporate "Fortune 500" health promotion program?

A weighted average (mean) was used to determine the total full-time staff members involved in fitness programs of "Fortune 500" companies. (See Table 29, page 111.) The mean of full time-staff members was eighteen. Since not all of the fitness directors responded to this question, the total number of responses used was forty.

Sub Problem 31b. What is the number of part-time staff involved in a corporate "Fortune 500" health promotion program?

A weighted average (mean) was used to determine total part-time staff members of "Fortune 500" companies. (See Table 30, page 112.) The mean for part-time staff members was twenty-five. The mean is only a representation of responses by fitness directors. More part-time fitness directors responded to

this question than full-time. This might be explained because some programs only employ part-time staff. A total response rate of forty-two was used to determine the average.

Table 29: Total Number of Full-Time Staff

No. of Companies	No. Full Time	%
7	1	18%
11	2	27%
4	3	10%
3	4	8%
5	5	13%
2	6	5%
2	7	5%
4	9	10%
1	15	3%
1	24	3%
9	OMIT	OMIT

Total Number of Responses = 40

Table 30: Total Number of Part-Time Staff

No. of Companies	No. of Part-Time	%
13	1	31%
10	2	23%
5	3	12%
4	4	10%
2	6	5%
1	8	2%
1	9	2%
2	10	5%
1	16	2%
1	38	2%
1	40	2%
1	99+	2%
7	OMIT	OMIT

Total Number of Responses = 42

Sub Problem 32. By what department was the corporate health promotion program overseen by?

Twenty-seven percent, or thirteen, of the responding directors indicated that the health promotion program was overseen by the personnel and medical

services department. Corporate human resources oversaw twenty percent, or ten percent, of the programs, and eight, or seventeen percent, had a separate health promotion department. Ten percent, or five, of the directors omitted answering the question.

Sub Problem 33. What type of evaluation method was used to evaluate the total health promotion program? How often was the program evaluated?

Twenty-eight percent of the corporate programs were evaluated by means of cost-benefit and cost effectiveness analysis. Forty-two percent, or twenty-one, of the directors omitted answering the question.

In terms of how often the total program was evaluated, twelve percent, or six, of the directors indicated quarterly, annually, and bi-annually. Four percent, or two, indicated long-term studies of three years or longer having been conducted to determine the effectiveness of the program. Fifty-eight percent, or twenty-seven, of the directors omitted answering the question.

CHAPTER 5

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

Summary

The general purpose of this study was to determine the status of corporate health promotion programs among 1984 Industrial "Fortune 500" companies. Specifically, this study was designed to: (1) survey with a questionnaire a selected sample of "Fortune 500" companies in the United States concerning various selected management areas of corporate health promotion programs; (2) compare the programs of corporations to information cited by experts, which was obtained through a review of literature and contained approved guidelines established by the American Medical Association in cooperation with the President's Council on Physical Fitness and Sports (PCPFS), The Exercise Prescription Committee for the American Alliance for Health, Physical Education, Recreation and Dance (EPC), and the American Heart Association (AHA); (3) draw conclusions concerning the present status of American "Fortune 500" corporate health promotion programs; and (4) make recommendations from the conclusions drawn concerning planning and implementation of corporate health promotion programs.

This study was delimited to a randomly selected sample of corporations cited in the "1984 Industrial Fortune 500" list. A questionnaire, designed and developed by the investigator and consisting of three written responses and thirty-five checklist-type questions pertaining to management issues of legal

aspects, program type, personnel, facilities, testing, objectives, motivation, program components, and benefits derived from health promotion programs, was mailed to 125 corporate headquarters. One hundred and thirteen, or ninety percent, of the corporations responded to the questionnaire. Of that number, forty-nine, or forty-three percent, provided a health promotion program for their employees. The data obtained from the forty-nine corporations that offer health promotion programs were used to depict current trends in corporate health promotion programs and to evaluate the programs in light of approved guidelines of experts in the field and professional organizations such as the PCPFS, the EPC, and the AHA. Percentages and means were used when appropriate to treat the data collected.

The review of literature suggested that corporate health promotion programs are increasing throughout America at an astounding rate. Experts and professional organizations in the health promotion field were reviewed with regard to current management issues, which included areas of supervision, objectives, legal aspects, program type, benefits, and program components of corporate health promotion programs. Because of the emphasis placed on the management areas of health promotion programs within the corporate sector, the investigator chose to survey leading companies in the United States, "Industrial Fortune 500" companies. A summary of the findings of this study follows.

Forty-three percent of the individuals returning the questionnaire indicated that their corporation offered some type of health promotion program. Of those corporations offering programs, thirty-two percent stated that the program was internally administered within the corporate structure. All thirty-two percent indicated that the programs were conducted at the worksite. Seventeen percent

indicated that the program was administered by an external organization. Of the seventeen percent which use an external organization, thirteen percent used YMCA's.

The length of time that corporations indicated involvement in employee health promotion programs varied from one year to more than sixteen years. However, the most extensive category with regard to the length of time corporate health promotion programs have been operational was from one to two years, which was reported by twenty-four percent of the companies questioned.

Sixty-five percent of the respondents felt that the health promotion programs directly benefited the corporation through better morale of employees and an increased energy and vitality of employees.

One of the major benefit areas for corporations becoming involved in health promotion programs cited in the literature was indicated as being a reduction of corporate health care costs. Of the directors returning the survey, eighty-six percent of the respondents indicated that they did not know if corporate health care costs had changed since program implementation.

Thirty-five percent of the respondents returning the questionnaire indicated that a pilot study had not been performed to determine the characteristics and needs of the participant population.

Program directors indicated that the main objectives of corporate health promotion program were to promote better employee health, to improve cardiovascular fitness of employees, and to reduce coronary risk factors of employees.

Publicizing of a corporate health promotion program was indicated by the program directors as an important aspect of the overall health promotion

structure. Eighty-eight percent of the respondents indicated that corporate health promotion programs were promoted through bulletins or fliers. Eighty-six percent reported the use of newsletters, and seventy-nine percent cited the use of posters.

Health promotion programs were indicated as being financed in two major ways. Fifty-one percent of the programs were financed within another department budget, and forty-one percent were noted as having a separate program budget. Fifty-one percent of the program directors indicated they could not state the approximate program costs peryear, perparticipant. Of those directors who indicated an approximate cost peryear, perparticipant, the most common expense category cited was \$25.00 to \$50.00.

The consideration of legal aspects was a major concern of a majority of health promotion programs. Eighty-four percent of the corporations which had health promotion programs had taken legal aspects into consideration when implementating the corporate program. Obtaining properly trained personnel, selecting proper equipment, and purchasing liability insurance were cited as the major corporate legal aspect areas.

Corporate medical services were responsible for the implementation of twenty-nine percent of all corporate health promotion programs. Corporate medical services were further cited by the directors as being involved in supervising seventy-one percent of all "Fortune 500" corporate health promotion programs.

Forty-nine percent of the program directors who participated in this study indicated that none of the corporate health promotion programs were conducted on corporate time. Eighty-four percent of the directors cited that the program

was available after work, and seventy-one percent noted the program was available before work.

The percentage of eligible employees who used corporate health promotion programs varied; the most common category of eligible employee use of the corporate program was cited as being eleven-twenty.

Motivation of participants was an important factor cited throughout the review of literature. Seventy-eight percent of the directors, however, indicated that the use of self-motivation of participants was preferred. Of those corporate directors who indicated the use of external motivation techniques newsletters, awards and special recognition were cited as being important.

Cardiorespiratory endurance was cited by ninety-two percent of programs directors as the major fitness factor of corporate health promotion programs. Eighty-eight percent of the directors indicated jogging, and eighty-four percent indicated aerobic dancing as being the major activities of the health promotion program.

Ninety percent of the directors participating in the study indicated that recreational activities had been encouraged to participants, and twenty-nine percent of the directors indicated that competitive activities had been encouraged to participants.

Seventy-eight percent of the directors cited that individual workouts had been the most common form of corporate health promotion program structure. Of that percentage, fifty-seven percent of the directors indicated that the programs were supervised. Group program health promotion program structure was noted as being available by sixty-three percent of the directors.

Sixty-five percent of the directors indicated that health and/or fitness education was available to program participants. Stress management was cited as being available in seventy-three percent of the programs, and proper diet counseling was available in seventy-one percent of the programs.

Ninety percent of the program directors indicated that testing and/or questioning had been preformed specifically for the health promotion program. Of that percentage, sixty-five percent of the directors cited that the testing and questioning had been performed within the corporate setting. Twenty-five percent of the directors indicated that testing had been performed by an outside agency. General Health performed the testing and/or questioning for twelve percent of those corporations using an outside organization.

Eighty-eight percent of the directors indicated that evaluations were performed on participants with the purpose of giving feedback on health progress. Of that percentage, thirty-nine percent of the directors indicated that there was no set time frame established for the evaluations. Twenty-seven percent of the directors indicated that the evaluations were performed quarterly.

The responding directors indicated that locker rooms were included in 100 percent of corporate health promotion program facilities. Ninety percent of the directors indicated that exercise rooms were available as part of the health promotion facilities.

Twenty-seven percent of the corporate health promotion programs were staffed by two full-time persons. Thirteen percent of the corporations had an additional staff of one part-time person. Thirty-seven percent of the corporations hired program directors with a BA or a BS in physical education. Eighty-four percent of the corporations generally considered physical appearance

an important general qualification for a program director, and sixty-nine percent considered human relation skills necessary for the job.

Twenty-seven percent of the program directors involved in this study indicated that the corporate health promotion program was overseen by either the personnel or medical service department.

Total program evaluations were cited as most commonly performed quarterly. The use of outcome evaluations of cost-benefit or cost-effectiveness analysis was indicated by twenty-eight percent of the study participants.

Conclusions

Within the limitations of this study and the population sampled, the investigator has drawn the following conclusions related to the sub problems outlined in Chapter 1 of this study: (Sub problems were formed through a review of literature and contained selected elements of established guidelines of professional groups such as the President's Council on Physical Fitness and Sport, the Exercise Prescription Committee, and the American Heart Association.)

1. The corporations who participated in this study complied with a majority of the selected guidelines of industrial and adult health/fitness programs established by the PCPFS, the EPC, and the AHA. The following is a breakdown of the selected guidelines used in this study, with an indication if the guideline was or was not complied with by a majority of corporations offering health promotion programs: (*) signifies "in compliance with an organization's guideline"; (-) signifies "not in compliance with an organization's guideline." (President's Council on Physical Fitness and Sports Guidelines):

- *Complies with current scientific and medical knowledge;
- * Programs should be conducted as an adjunct to the company's medical program and policies pertaining to the development and management of the program should receive medical endorsement;
- *Operating policies for companies not having a medical director should be developed in consultation with appropriate medical and fitness authorities;
- *Consideration should be given to programs of physical fitness education, rehabilitation, training and maintenance of the needs of various individuals;
- A portion or all of the program should be conducted on company time for the purpose of motivation and supervision;
- * Programs should be supervised by qualified physical fitness instructors and an exercise physiologist under the direction of the company's medical services;
- * Programs should encourage individuals to develop physical fitness activities outside of the company;
- * Health education should be conducted where appropriate;
- * Competition should not be stressed;
- * Physical fitness should be the goal of the program;
- * Activities should be utilized that will develop adequate levels on muscular strength and endurance and cardiovascular efficiency (Exercise Prescription Committee's Guidelines);
- Define the characteristics of the population to be served;
- * The program has to be publicized;
- * Each program should have some manner of testing or evaluation of its subjects (American Heart Association Guidelines);

- * Plan motivation strategies;
- * Document cost-effectiveness;
- * Provide education opportunities;
- * Provide feedback to participants;
- * Prescribe individual programs;
- * Select program director;
- * Decide to use outside or company facilities;

2. Of the companies responding to the questionnaire, forty-three percent of American "1984 Industrial Fortune 500" corporations offered health promotion program to employees.

3. The common characteristics of "Fortune 500" health promotion programs included (1) an east coast location, (2) a program internally administered by the corporation at the worksite, (3) an employee population of 1,001-5,000, (3) a program operation of from 1-2 years, and (4) a participation rate of 11 to 20 percent of all eligible employees.

4. A majority of the respondents indicated that the corporation had benefited directly from the corporate health promotion program.

5. "Fortune 500" corporate objectives of health promotion programs included the promotion of better employee health, improved cardiovascular fitness, reduced coronary risk factors, and decreased health care costs. However, the majority of the respondents noted they do not collect elaborate data concerning the effects of corporate health promotion programs on health care costs.

6. Corporation directors indicated that potential program participants were not surveyed to determine the characteristics of the population.

7. Corporate health promotion programs were promoted through bulletins, fliers and newsletters.

8. Over fifty percent of the program directors did not know the approximate cost of corporate health promotion programs in terms of cost to participants per year.

9. Directors responding to the questionnaire indicated that legal aspects were considered before and during implementation of the health promotion program.

10. Health promotion programs were conducted under the supervision of the corporation's medical service.

11. Corporate medical services and/or employees were responsible for the implementation of a majority of "Fortune 500" corporate health promotion programs.

12. "Fortune 500" corporations do not conduct a portion of the health promotion program on company time.

13. A majority of program directors did not motivate participants extrinsically to stay with the prescribed program.

14. The primary fitness factors were cardiorespiratory endurance, weight control, and muscular strength.

15. Corporate health promotion programs utilized activities that developed muscular strength, endurance, and cardiovascular efficiency.

16. Participants of corporate programs were not encouraged to participate in competitive activities, but were encouraged to develop recreational activities.

17. Few of the corporations which participated in this study offer employees a strict fitness program. Almost all of the programs included individual (self-motivated) workouts with an emphasis on recreational activities.

18. Health/fitness education was conducted where appropriate in corporate programs; corporate health promotion programs provide educational opportunities in the areas of stress management, proper diet, smoking cessation, and identification of coronary risk factors.

19. Corporate health promotion programs complied with current scientific and medical knowledge. Employees are medically tested specifically for participation in the corporate program in several areas which included, physical examinations, clinical chemistry, anthropometric measurements, and strength and stress testing.

20. A majority of corporate health promotion program participants were evaluated quarterly during the course of the program.

21. Facilities and equipment needs were dependent upon the needs of the corporation. Of those responding to the questionnaire, locker rooms were considered to be the most important aspect of the facility.

22. Consultive health promotion organization were employed by a majority corporations implementing employee health programs.

23. A majority of the corporate health promotion programs were supervised by a program director with a BA or a BS in physical education, or an MA or an MS in exercise physiology.

24. The most common corporate health promotion program had a personnel staff of two full-time and one part-time member.

25. Cost-benefit and cost-effectiveness analyses were equally noted by the study participants as being used for total program evaluation.

Recommendations

Based on the perceptions obtained through the directors who responded to the questionnaire and material from the review of literature, the investigator proposes the following recommendations:

1. That additional research be conducted concerning the impact of health promotion programs on employees and their corporation;
2. That a greater data base and a basis for comparison be provided; a study similar to this one should be done to determine the status of corporate health promotion programs in companies other than those listed in the "Fortune 500";
3. That to gain a more complete picture of corporate health promotion programs now available in the United States, a broader sample of organizations should be obtained;
4. That a full-scale experimental corporate health promotion program (case study) should be initiated for at least five years to determine the benefit factors of health promotion and cost effectiveness;
5. That more knowledge and information concerning the management areas of motivation and evaluation of corporate health promotion should be available to professionals working in the field;
6. That organizational and administrative guidelines should be updated and broadened to include all areas of health promotion in the corporate setting, not just in fitness areas;

7. That more conferences, workshops, seminars, and symposiums should be offered to review the implementation of corporate health promotion using external facilities;

8. That in-depth educational opportunities should be available to individuals interested in a career in the corporate health promotion field; such opportunities will specifically equip and train participants for endeavors in this corporate health area;

9. That future investigators of health promotion should delimit the areas of a study;

10. That to fill the need for more highly trained personnel in corporate health promotion programs, more educational opportunities of internships within corporations should be provided to interested individuals in order to prepare them for the field with practical experience.

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APPENDICES

APPENDIX A
Questionnaire

SURVEY OF PHYSICAL FITNESS PROGRAMS
IN
"FORTUNE 500" COMPANIES

Position Of Person Filling Out Questionnaire

Confidentiality : Information regarding the name of the corporation, respondent, etc... Will remain confidential.

General Instructions

1. Read and examine each question carefully
2. Place a check in appropriate blank(s)
3. Blanks are provided for additional information and any question that requires a written response.
4. Upon completion, please return the questionnaire in the enclosed envelope.
5. Return to:

Robert E. Holmes
Montana State University
Dept. Of Health, Physical Education & Recreation
Bozeman, Montana 59717
(406) 994-6331 (Office)
(406) 587-2751 (Home)

Does your corporation have a physical fitness program? ☐yes ☐no (Check One). If no, please return the survey in the enclosed envelope. If yes, please complete the remainder of the questionnaire.

STATUS OF CORPORATE FITNESS PROGRAMS
IN
"FORTUNE 500 COMPANIES"

1. Number of corporate employees? (Check One)

- (1) ☐ Less than 1,000 (2) ☐ 1,001-5,000 (3) ☐ 5,001-10,000
 (4) ☐ 10,001-25,000 (5) ☐ 25,001-50,000 (6) ☐ 50,001-100,000
 (7) ☐ More than 100,001

2. Is your program administered and conducted by the corporation itself?

☐ Yes, ☐ No, (If NO, please answer question #3, if Yes, please move on to question #4)

3. The program is administered and conducted by? (Check One)

- (1) ☐ YMCA (2) ☐ College or University (3) ☐ Fitness Center
 (4) ☐ Other (Please Specify) _____

4. Does your corporation have "in-house-on-site" facilities? ☐ Yes, ☐ No

5. What influenced your corporation to implement a fitness program? (Check One)

- (1) ☐ Personnel (2) ☐ Medical Services (3) ☐ Insurance Agency
 (4) ☐ Assoc. for Fitness in Business (5) ☐ YMCA or Similar Agency
 (6) ☐ Other (Please Specify) _____

6. Who initiated your fitness program within the corporation? (Check One)

- (1) ☐ President (2) ☐ Executives (3) ☐ Board of Directors
 (4) ☐ Employees (5) ☐ Medical/Health Services (6) ☐ Insurance Company
 (7) ☐ Other (Specify) _____

7. How long has your program been in effect? (Check One)

- (1) ☐ Less than 1 year (2) ☐ 1-2 years (3) ☐ 3-5 years
 (4) ☐ 6-10 years (5) ☐ 11-15 years (6) ☐ More than 16 years

8. Did your corporation conduct a pilot study before developing the program?

☐ Yes, ☐ No.

9. The corporate fitness program has and/or does take advantage of

consultative services? ☐ Yes, ☐ No, (If yes what service organization?)

- (1) ☐ Association for Fitness in Business
 (2) ☐ President's Council on Physical Fitness and Sports
 (3) ☐ American Medical Association (4) ☐ Institute of Aerobics Research
 (5) ☐ Systems Fitness (6) ☐ YMCA (7) ☐ Others (Please Specify)

10. Under which corporate department is your fitness program listed?

11. Has your corporation benefited from any results that can be directly attributed to your fitness program? ____ Yes, ____ No, (If Yes, please check all that might apply)

(1) ____ Reduction in absenteeism (2) ____ Increased productivity
(3) ____ Increased energy and vitality of participants (4) ____ Better morale
(5) ____ Better employee-management relationships (6) ____ Others (Please Specify) _____

12. Has employee health care costs changed since implementing your fitness program? (Check One)

(1) ____ Don't know (2) ____ No change, (3) ____ Increase in cost, (4) ____ Decrease in cost

13. How is your program promoted? (Check all that apply)

(1) ____ Bulletins/Flyers (2) ____ Newsletters (3) ____ Posters (4) ____ Seminars (5) ____ Doctor's recommendations (6) ____ Word of mouth (7) ____ Others (Please Specify) _____

14. What are the objectives/goals of your fitness program? (Check all that apply)

(1) ____ Promote better employee health (2) ____ Improve cardiovascular fitness
(3) ____ Obtain a minimum level of fitness for all participants
(4) ____ Reduced coronary risk factors (5) ____ Increased Endurance
(6) ____ Improved employee-management relationships (7) ____ Increase muscular strength (8) ____ Increased productivity (9) ____ Decrease in absenteeism (10) ____ Decrease health care costs (11) ____ Aid recruitment/retention (12) ____ Others (Please Specify) _____

15. What percentage of your program is conducted on company time?

(1) ____ 0% (2) ____ 1%-5% (3) ____ 6%-10% (4) ____ 11%-25% (5) ____ 26%-50%
(6) ____ 51%-75% (7) ____ 76%-100%

16. When may employees participate in your program? (Check all that apply)

(1) ____ Before work (2) ____ After work (3) ____ During lunch
(4) ____ Flexible scheduling allowed

17. How often does your program give feedback to participants in the areas of fitness and/or health?

(1) ____ Weekly (2) ____ Monthly (3) ____ Bi-Annually (4) ____ Annually (5) Quarterly (6) ____ No set time frame

18. Are employee assistance programs in health areas offered to participants?
 ___ Yes, ___ No, (If Yes, please check all that apply.)

- (1) ___ Proper diet (2) ___ Stress management (3) ___ Stop smoking programs
 (4) ___ Identification of risk factors (5) ___ Other _____

19. What percentage of eligible employees participate in your program?

- (1) ___ 0-10% (2) ___ 11-20% (3) ___ 21-30% (4) ___ 31-40% (5) ___ 41-50%
 (6) ___ 51-60% (7) ___ 61-70% (8) ___ More than 71%

20. How is your overall program structured? (Check all that apply)

- (1) ___ Individual workouts (___ supervised, ___ unsupervised)
 (2) ___ Guide individuals into personal, self-motivated programs
 (3) ___ Group programs (4) ___ Recreational activities
 (5) ___ Contracts (6) ___ Competitive activities (7) ___ Other (Please specify)

21. What type of facilities/equipment are available your participants? (Check all that apply)

- (1) ___ Testing room (2) ___ Exercise room (3) ___ Indoor track
 (4) ___ Outdoor track/running course (5) ___ Gymnasium (6) ___ Pool
 (7) ___ Weight room (8) ___ All purpose room (9) ___ tread mill
 (10) ___ Stationary bicycles (11) ___ Outdoor Fields (12) ___ Par Course
 (13) ___ Tennis courts (14) ___ Raquetball/Handball courts (15) ___ Rowing machine
 (16) ___ Sauna (17) ___ Whirlpool (18) ___ Locker rooms (19) ___
 Others _____

22. What type of activities are offered to your participants? (Check all that apply)

- (1) ___ Jogging (2) ___ Callsthenics (3) ___ Aerobic Dancing
 (4) ___ Tennis (5) ___ Weight lifting (6) ___ Swimming (7) ___ Softball (8) ___ Basketball
 (9) ___ Raquetball/Handball (10) ___ Volleyball (11) ___ Golf
 (12) ___ Table Tennis (13) ___ Karate (14) ___ Walleyball (15) ___ Skiing (16) ___ Badminton
 (17) ___ Ballet (18) ___ Scuba (19) ___ Family activities (20) ___
 Others _____

23. What type of medical supervision is available for your program? (Check all that apply)

- (1) ___ Company Medical Services (2) ___ Physician on staff (3) ___ Nurse
 (4) ___ Physician on call (5) ___ Emergency personnel (6) ___ Unsupervised
 (7) ___ Other _____

24. What type of testing/questioning is used to assess the fitness level of program participants? (Check all that apply)

- (1) Physical examination ☐ Yes, ☐ No
 (2) Personal profile questionnaires, ☐ Yes, ☐ No
 (3) Clinical Chemistry ☐ Blood, ☐ Urine, ☐ Other _____
 (4) Anthropometric measures ☐ Ht. ☐ Wt. ☐ Skinfold ☐ Other _____
 (5) Strength tests (Please Specify) _____
 (6) ☐ Stress testing (7) Electrocardiogram: ☐ Resting ☐ Exercise (8) ☐ Oxygen Consumption (9) ☐ Step test (10) ☐ Bicycle Ergometer (11) ☐ Treadmill (12) ☐ Others (Please Specify) _____

25. Is the testing and questioning done through corporate services ☐ Yes, ☐ No, If No, what outside agency is used for this purpose?

- (1) ☐ General Health (2) ☐ Systems Fitness (3) ☐ Health Evaluation Programs (4) ☐ National Wellness Institute (5) ☐ Other (please specify) _____

26. Do you survey participants as to individual goals, objectives and interests? ☐ Yes, ☐ No.

27. What fitness factors does your program focus on? (Check all that apply)

- (1) ☐ Muscular Strength (2) ☐ Cardiorespiratory Endurance
 (3) ☐ Coordination (4) ☐ Joint Flexibility (5) ☐ Weight Control
 (6) ☐ Stress & Relaxation (7) ☐ Competition (8) ☐ Other _____

28. How are your participants motivated to participate in the program? (Check all that apply)

- (1) ☐ Awards (Please Specify) _____
 (2) ☐ Health hazard appraisals (3) ☐ Insurance premium reductions
 (4) ☐ Subsidized YMCA or health club memberships (5) ☐ Films
 (6) ☐ Newsletters (7) ☐ Seminars (8) ☐ Exercise breaks at work
 (9) ☐ Self-motivation (10) ☐ Special recognition
 (11) ☐ Other _____

29. How is your program financed?

- (1) ☐ Vending machines (2) ☐ Within a department budget (3) ☐ Separate program budget (4) ☐ Other _____

30. What is the approximate corporate cost of the entire program per year, per person?

- (1) ☐ Don't know (2) ☐ Less than \$25.00 (3) ☐ \$26.00-\$50.00 (4) ☐ \$51.00-\$100.00 (5) ☐ \$101-\$500 (6) ☐ \$501-\$1,000
 (7) ☐ More than \$ 1,001

31. Were legal aspects taken into consideration when organizing your program?
☐ Yes ☐ No (If Yes, please check all that apply)

- (1) ☐ Properly trained personnel (2) ☐ Selection of proper equipment
 (3) ☐ Liability Insurance (4) ☐ Emergency procedures
 (5) ☐ Participants release forms (6) ☐ Risk Classifications
 (7) ☐ Comprehensive testing (8) ☐ Prescriptive programming
 (9) ☐ Informing participants of risks and hazards
 (10) ☐ Others _____

32. Are employees who participate in your fitness program encouraged to participate in competitive activities? ☐ Yes ☐ No.

33. Are participants involved in your program encouraged to develop recreational activities outside the prescribed program? ☐ Yes ☐ No

34. What is the total number of staff members involved in your program?
 Full time # _____ Part time # _____.

35. What are the qualifications that your corporation looks for in its Program Director? (Check all that apply)

- (1) ☐ Doctorate in exercise physiology or exercise science
 (2) ☐ MS/MA in exercise physiology or exercise science
 (3) ☐ Doctorate in Physical Education (4) ☐ MS/MA in Physical Education
 (5) ☐ BA/BS in Physical Education (6) ☐ ACSM Certification (7) ☐ YMCA Certification
 (8) ☐ CPR Certification (9) ☐ Business Administration Skills
 (10) ☐ Nutrition Skills (11) ☐ Human Relations Skills
 (12) ☐ Practical Experience (13) ☐ Physical Appearance (14) ☐ Don't Know
 (15) ☐ Other _____

36. Are program personnel required to upgrade qualifications and skills?
☐ Yes ☐ No (If Yes, please specify)

- (1) ☐ In service training (2) ☐ Renewal of certification
 (3) ☐ Attend Seminars, workshops etc...

37. How often is your total program evaluated? _____

38. How is your overall program evaluated?

Director of Program (Name) _____

Would you like a summary of the findings of this study? ____Yes ____No
(Please check one)

Name and address where you would like the summary sent

THANK YOU FOR YOUR TIME AND COOPERATION IN ANSWERING THIS QUESTIONNAIRE

Robert E. Holmes

Robert E. Holmes
Study Researcher

Montana State University
Department of HPER
Bozeman, Montana 59717

APPENDIX B
1984 "Fortune 500" List

1. Exxon (New York, N. Y.)
2. General Motors (Detroit, Mi.)
3. Mobil (New York, N. Y.)
4. Ford Motor (Dearborn, Mi.)
5. International Business Machines (Armonk, N. Y.)
6. Texaco (Harrison, N. Y.)
7. E. I. du Pont de Nemours (Wilmington, Del.)
8. Standard Oil of Indiana (Chicago, Ill.)
9. Standard Oil of California (San Francisco, Ca.)
10. Général Electric (Fairfield, Ct.)
11. Gulf Oil (Pittsburgh, Pa.)
12. Atlantic Richfield (Los Angeles, Ca.)
13. Shell Oil (Houston, Tx.)
14. Occidental Petroleum (Los Angeles, Ca.)
15. U.S. Steel (Pittsburgh, Pa.)
16. Phillips Petroleum (Bartlesville, Ok.)
17. Sun (Radnor, Pa.)
18. United Technologies (Hartford, Ct.)
19. Tenneco (Houston, Tx.)
20. ITT (New York, N. Y.)
21. Chrysler (Highland Park, Mi.)
22. Proctor and Gamble (Cincinnati, Oh.)
23. R.J. Reynolds Industries (Winston-Salem, N. C.)
24. Getty Oil (Los Angeles, Ca.)
25. Standard Oil (Los Angeles, Ca.)
26. AT&T Technologies (New York, N. Y.)
27. Boeing (Seattle, Wa.)
28. Dow Chemical (Midland, Mi.)
29. Allied (Morris Township, N.J.)
30. Eastman Kodak (Rochester, N.Y.)
31. Unocal (Los Angeles, Ca.)
32. Goodyear Tire & Rubber (Akron, Oh.)
33. Dart and Kraft (Northbrook, Ill.)
34. Westinghouse Electric (Pittsburgh, Pa.)
35. Philip Morris (New York, N. Y.)
36. Beatrice Foods (Chicago, Ill.)
37. Union Carbide (Danbury, Ct.)
38. Xerox (Stamford, Ct.)
39. Amerda Hess (New York, N. Y.)
40. Union Pacific (New York, N. Y.)
41. General Foods (White Plains, N.Y.)
42. McDonnell Douglas (St. Louis, Mo.)
43. Rockwell International (Pittsburgh, Pa.)
44. PepsiCo (Purchase, N.Y.)
45. Ashland Oil (Russell, Ky.)
46. General Dynamics (St. Louis, Mo.)

47. Minnesota Mining & Manufacturing (St. Paul, Mn.)
48. Coca-Cola (Atlanta, Ga.)
49. Consolidated Foods (Chicago, Ill.)
50. Lockheed (Burbank, Ca.)
51. Georgia-Pacific (Atlanta, Ga.)
52. Monsanto (St. Louis, Mo.)
53. W. R. Grace (New York, N. Y.)
54. Signal Companies (La Jolla, Ca.)
55. Anheuser-Busch (St. Louis, Mo.)
56. Nabisco Brands, (Perisppany, N. J.)
57. Johnson & Johnson (New Brunswick, N.J.)
58. Coastal (Houston, Tx.)
59. Raytheon (Lexington, Mass.)
60. Honeywell (Minneapolis, Mn.)
61. Charter (Jacksonville, Fla.)
62. General Mills (Minneapolis, Mn.)
63. TRW (Cleveland, Oh.)
64. Caterpillar Tractor (Peoria, Ill.)
65. Aluminum Company of America (Pittsburgh, Pa.)
66. Sperry (New York, N. Y.)
67. Gulf and Western Industries (New York, N. Y.)
68. Continental Group (Stamford, Ct.)
69. Bethlehem Steel (Bethlehem, Pa.)
70. Weyerhaeuser (Tacoma, Wa.)
71. Ralston Purina (St. Louis, Mo.)
72. Colgate-Palmolive (New York, N. Y.)
73. American Home Products, (New York, N. Y.)
74. Litton Industries (Beverly Hills, Ca.)
75. Hewlett-Packard (Palo Alto, Ca.)
76. Control Data (Minneapolis, Mn.)
77. Texas Instruments (Dallas, Tx.)
78. LTV (Dallas, Tx.)
79. American Brands (New York, N. Y.)
80. International Paper (New York, N. Y.)
81. Motorola (Schaumburg, Ill.)
82. Burroughs (Detroit, Mi.)
83. Archer-Daniels-Midland (Decatur, Ill.)
84. Digital Equipment (Maynard, Mass.)
85. Borden (New York, N. Y.)
86. Champion International (Stamford, Ct.)
87. Armco (Middletown, Oh.)
88. Esmark (Chicago, Ill.)
89. Diamond Shamrock (Dallas, Tx.)
90. CPC International (Englewood Cliffs, N. J.)
91. Time, Inc. (New York, N. Y.)
92. Deere (Moline, Ill.)
93. Bristol-Meyer (New York, N. Y.)

94. Martin Marietta (Bethesda, Md.)
95. Firestone Tire and Rubber (Akron, Oh.)
96. IC Industries (Chicago, Ill.)
97. North American Philips (New York, N. Y.)
98. Agway (DeWitt, N. Y.)
99. Pfizer (New York, N. Y.)
100. H.J. Heinz (Pittsburgh, Pa.)
101. NCR (Dayton, Oh.)
102. Pillsbury (Minneapolis, Mn.)
103. PPG Industries (Pittsburgh, Pa.)
104. International Harvester (Chicago, Ill.)
105. American Motors (Southfield, Mi.)
106. Borg-Warner (Chicago, Ill.)
107. American Cynamid (Wayne, N.J.)
108. Kerr-McGee (Oklahoma City, Ok.)
109. United Brands (New York, N. Y.)
110. FMC (Chicago, Ill.)
111. Emerson Electric (St. Louis, Mo.)
112. Dresser Industries (Dallas, Tx.)
113. Boise Cascade (Boise, Id.)
114. Warner Communications (New York, N. Y.)
115. Owens-Illinois (Toledo, Oh.)
116. Carnation (Los Angeles)
117. American Can (Greenwich, Ct.)
118. Reynolds Metals (Richmond, Va.)
119. Campbell Soup (Camden, N.J.)
120. Kimberly-Clark (Neehah, Wi.)
121. Land O' Lakes (Arden Hills, Mn.)
122. Celanese (New York, N. Y.)
123. Northrop (Los Angeles, Ca.)
124. Merck (Rahway, N.J.)
125. B. F. Goodrich (Akron, Oh.)
126. SmithKline Beckman (Philadelphia, Pa.)
127. Inland Steel (Chicago, Ill.)
128. Warner-Lambert (Morris Plains, N.J.)
129. Combustion Engineering (Stamford, Ct.)
130. Eli Lilly (Indianapolis)
131. Avon Products (New York, N. Y.)
132. National Intergroup (Pittsburgh, Pa.)
133. Burlington Industries (Greensboro, N.C.)
134. Textron (Providence, R.I.)
135. Teledyne (Los Angeles, Ca.)
136. Norton Simon (New York, N. Y.)
137. Abbot Laboratories (North Chicago, Ill.)
138. Eaton (Cleveland, Oh.)
139. Dana (Toledo, Oh.)
140. Kaiser Aluminum and Chemical (Oakland, Ca.)

141. St. Regis (New York, N. Y.)
142. Owens-Corning Fiberglass (Toledo, Oh.)
143. Levi Strauss (San Francisco, Ca.)
144. Crown Zellerbach (San Francisco, Ca.)
145. Republic Steel (Cleveland, Oh.)
146. Quaker Oats (Chicago, Ill.)
147. Whirlpool (Benton Harbor, Mi.)
148. Hercules (Wilmington, Del.)
149. Mead (Dayton, Oh.)
150. Interco (St. Louis, Mo.)
151. Penn Central (New York, N. Y.)
152. Swift Independent (Chicago, Ill.)
153. Tosco (Santa Monica, Ca.)
154. Times Mirror (Los Angeles, Ca.)
155. Singer (Stamford, Ct.)
156. Scott Papaer (Philadelphia, Pa.)
157. Murphy Oil (El Dorado, Ark.)
158. Kellogg (Battle Creek, Mi.)
159. Revlon (New York, N. Y.)
160. Allegheny International (Pittsburgh, Pa.)
161. Kidde (Saddle Brook, N. J.)
162. ConAgra (Omaha, Ne.)
163. Pennzoil (Houston, Tx.)
164. AMAX (Greenwich, Ct.)
165. Ingersoll-Rand (Woodcliff Lake, N.J.)
166. National Distillers & Chemical (New York, N. Y.)
167. Grumman (Belthpage, N. J.)
168. General Tire and Rubber (Akron, Oh.)
169. Gillette (Boston, Mass.)
170. American Standard (New York, N. Y.)
171. Wilson Food (Oklahoma City, Ok.)
172. Williams Companies (Tulsa, Ok.)
173. Fruehauf (Detroit, Mi.)
174. Englehard (Edison, N.J.)
175. McGraw-Edison (Rolling Meadows, Ill.)
176. American Petrofina (Dallas, Tx.)
177. Mapco (Tulsa, Ok.)
178. White Consolidated Industries (Cleveland, Oh.)
179. Avco (Greenwich, Ct.)
180. Uniroyal (Middlebury, Ct.)
181. Jim Walter (Tampa, Fla.)
182. Upjohn (Kalamazoo, Mi.)
183. Northwest Industries (Chicago, Ill.)
184. Sherwin-Williams (Cleveland, Oh.)
185. Olin (Stamford, Ct.)
186. J. P. Stevens (New York, N. Y.)
187. Ogden (New York, N. Y.)

188. Sterling Drug (New York, N. Y.)
189. Rohm and Haas (Philadelphia, Pa.)
190. Cooper Industries (Houston, Tx.)
191. Baxter Travenol Laboratories (Deerfield, Ill.)
192. Baker International (Orange, Ca.)
193. SCM (New York, N. Y.)
194. Schering-Plough (Kenilworth, N. J.)
195. Squibb (Princeton, N. J.)
196. Superior Oil (Houston, Tx.)
197. Ethyl (Richmond, Va.)
198. Gould (Rolling Meadows, Ill.)
199. Manville (Denver, Colo.)
200. Central Soya (Fort Wayne, Ind.)
201. Harris (Melbourne, Fla.)
202. Hershey Foods (Hershey, Pa.)
203. Gannett (Rochester, N. Y.)
204. Union Camp (Wayne, N.J.)
205. Emhart (Farmington, Ct.)
206. Cheesbrough-Ponds (Greenwich, Ct.)
207. A. E. Staley Manufacturing (Decatur, Ill.)
208. Crown Central Petroleum (Baltimore, Md.)
209. James River Corporation of Virginian (Richmond, Va.)
210. National Can (Chicago, Ill.)
211. Pitney Bowes (Stamford, Conn)
212. Air Products and Chemical (Allentown, Pa.)
213. American Hoechst (Sommerville, N. J.)
214. Hammermill Paper (Erie, Pa.)
215. U. S. Gypsum (Chicago, Ill.)
216. Cummins Engine (Columbus, Oh.)
217. Corning Glass Works (Corning, N. Y.)
218. Tribune (Chicago, Ill.)
219. Colt Industries (New York, N. Y.)
220. General Signal (Stamford, Ct.)
221. Koppers (Pittsburgh, Pa.)
222. Great Northern Nekoosa (Stamford, Ct.)
223. Lever Brothers (New York, N. Y.)
224. Cabot (Boston, Mass.)
225. Pacific Resources (Honolulu, Hi.)
226. R. R. Donnelley & Sons (Chicago, Ill.)
227. Wang Laboratories (Lowell, Mass.)
228. AMP (Harrisburg, Pa.)
229. Asarco (New York, N. Y.)
230. Alumax (San Mateo, Ca.)
231. Morton Thiokol (Chicago, Ill.)
232. Westvaco (New York, N. Y.)
233. Joseph P. Seagram & Sons (New York, N. Y.)
234. Knight-Ridder Newspapers (Miami, Fla.)

- 235. Marmon Group (Chicago, Ill.)
- 236. Lear Siegler (Santa Monica, Ca.)
- 237. International Minerals and Chemical (Northbrook, Ill.)
- 238. Goldkist (Atlanta, Ga.)
- 239. NL Industries (New York, N. Y.)
- 240. Armstrong World Industries (Lancaster, Pa.)
- 241. Geo. A. Hormel (Austin, Mn.)
- 242. PACCAR (Bellevue, Wa.)
- 243. Farmer's Union Central Exchange (St. Paul, Mn.)
- 244. Anderson Clayton (Houston, Tx.)
- 245. Witco Chemical (New York, N. Y.)
- 246. Zenith Radio (Glenview, Ill.)
- 247. Mid-American Dairymen (Springfield, Mo.)
- 248. Mattel (Hawthorne, Ca.)
- 249. Stauffer Chemical (Westport, Ct.)
- 250. Monfort of Colorado (Greeley, Co.)
- 251. Johnson Controls (Milwaukee, Wi.)
- 252. Mobay Chemical (Pittsburgh, Pa.)
- 253. Allis-Chalmers (West Allis, Wi.)
- 254. Crown Cork and Seal (Philadelphia, Pa.)
- 255. McGraw-Hill (New York, N. Y.)
- 256. Polaroid (Cambridge, Mass.)
- 257. Louisiana Land and Exploration (New Orleans, La.)
- 258. Blue Bell (Greensboro, N.C.)
- 259. Mack Trucks (Allentown, Pa.)
- 260. Brunswick (Skokie, Ill.)
- 261. Nhatonal Semiconductor (Santa Clara, Ca.)
- 262. Weat Point-Pepperell (West Point, Ga.)
- 263. Tektronix (Beaverton, Ore.)
- 264. Amstar (New York, N. Y.)
- 265. Black & Decker Manufacturing (Towson, Md.)
- 266. Libbey-Owens-Foods (Toledo, Oh.)
- 267. Hughes Tools (Houston Tx.)
- 268. G. Heileman Brewing (La Crosse, Wi.)
- 269. Square D (Palatine, Ill.)
- 270. National Gypsum (Dallas, Tx.)
- 271. Norton (Worcester, Mass.)
- 272. Intel (Santa Clara, Ca.)
- 273. Becton Dickinson (Paramus, N.J.)
- 274. International Multifoods (Minneapolis, Mn.)
- 275. Federal Co. (Memphis, Tn.)
- 276. Richardson-Vicks (Wilton, Ct.)
- 277. Miles Laboratories (Elkhart, Ind.)
- 278. Adolph Coors (Golden Co.)
- 279. Louisiana-Pacific (Portland, Or.)
- 280. VF (Wyomissing, Pa.)
- 281. New York Times (New York, N. Y.)

- 282. BOC (Montvale, N.J.)
- 283. U.S. Industries (Stamford, Conn)
- 284. Trane (La Crosse, Wi.)
- 285. BASF Wyandotte (Parsippany, N.J.)
- 286. Masco (Taylor, Mi.)
- 287. Willamette Industries (Portland, Or.)
- 288. CertainTeed (Valley Forge, Pa.)
- 289. Parker Hannifin (Cleveland, Oh.)
- 290. Cyclops (Pittsburg, Pa.)
- 291. Perkin-Elmer (Norwalk, Ct.)
- 292. Dover (New York, N. Y.)
- 293. Thomas J. Lipton (Englewood Cliffs, N.J.)
- 294. Crane (New York, N. Y.)
- 295. NVF (Yorklyn, Del.)
- 296. G.D. Searle (Skokie, Ill)
- 297. Chromalloy American (St. Louis, Mo.)
- 298. Stanley Works (New Britain, Ct.)
- 299. Apple Computer (Cupertino, Ca.)
- 300. Phelps Dodge (New York, N. Y.)
- 301. Penwalt (Philadelphia, Pa.)
- 302. General Instrument (New York, N. Y.)
- 303. AMF (White Plains, N.Y.)
- 304. Hartmark (Chicago, Ill.)..
- 305. Mitchell Energy & Development (The Woodlands, Tx.)
- 306. Tyler (Dallas, Tx.)
- 307. Cameron Iron Works (Houston, Tx.)
- 308. Ex-Cell-O (Troy, Mi.)
- 309. Hanson Industires (Iselin, N.J.)
- 310. Timken (Canton, Oh.)
- 311. National Service Industries (Atlanta, Ga.)
- 312. General Cinema (Chestnut Hill, Mass.)
- 313. Lone Star Industries (Greenwich, Ct.)
- 314. Clorox (Oakland, Ca.)
- 315. Ball (Muncie, Ind.)
- 316. Sundstrand (Rockford, Ill.)
- 317. Potlatch (San Francisco, Ca.)
- 318. EG&G (Wellesley, Mass.)
- 319. Quaker State Oil Refining (Oil City, Pa.)
- 320. Spring Industries (Fort Mill, S.C.)
- 321. Fairchild Industries (Germantown, Md.)
- 322. Storage Technology (Louisville, Co.)
- 323. Washington Post (Washington D.C.)
- 324. Lafarge (Dallas, Tx.)
- 325. Cluett Peabody (New York, N. Y.)
- 326. Dow Jones (New York, N. Y.)
- 327. Clark Equipment (Buchanan, Mi.)
- 328. CF Industries (Long Grove, Ill.)

- 329. Fleetwood Enterprises (Riverside, Ca.)
- 330. A.O. Smith (Milwaukee, Wi.)
- 331. Harsco (Wormleysburg, Pa.)
- 332. Interlake (Oak Brook, Ill.)
- 333. Dean Foods (Franklin Park, Ill.)
- 334. Tecumseh Products (Tecumseh, Mi.)
- 335. Data General (Westboro, Mass.)
- 336. Brockway (Brockway, Pa.)
- 337. CBI Industries (Oak Brook, Ill.)
- 338. E-Systems (Dallas, Tx.)
- 339. Vulcan Materials (Birmingham, Ala.)
- 340. HouseholdAvery International (Pasadena, Ca.)
- 342. Rexnord (Milwaukee, Wi.)
- 343. Lubrizol (Wilckliffe, Oh.)
- 344. Outboard Marine (Waukegan, Ill.)
- 345. Todd Shipyards (New York, N. Y.)
- 346. Freeport-McMoRan (New York, N. Y.)
- 347. Fort Howard Paper (Green Bay, Wi)
- 348. National Cooperative Refinery Assoc. (McPherson, Kan.)
- 349. Anchor Hocking (Lancaster, Oh.)
- 350. Amdahl (Sunnyvale, Ca.)
- 351. Hoover Universal (Ann Arbor, Mi.)
- 352. Wheeling-Pittsburg Steel (Pittsburg, Pa.)
- 353. Kane-Miller (Tarrytown, N.Y.)
- 354. Champion Spark Plug (Toledo, Oh.)
- 355. Dow Corning (Midland, Mi.)
- 356. Capital Cities Communications (New York, N. Y.)
- 357. Inspiration Resources (New York, N. Y.)
- 358. Varian Associates (Palo Alto, Ca)
- 359. National Starch & Chemical (Bridgewater, N.J.)
- 360. Midland-Ross (Cleveland, Oh.)
- 361. Magic Chef (Cleveland, Tenn.)
- 362. Reichhold Chemicals (White Plains, N. Y.)
- 363. Federal-Mogul (Southfield, Mi.)
- 364. Sun Chemical (New York, N. Y.)
- 365. McCormick (Hunt Valley, Md.)
- 366. Scovill (Waterbury, Ct.)
- 367. Fuqua Industries (Atlanta, Ga.)
- 368. NI Industries (Long Beach, Ca.)
- 369. American Greetings (Cleveland, Oh.)
- 370. Newmont Mining (New York, N. Y.)
- 371. Dayco (Daytonl, Oh.).
- 372. Gerber Products (Fremont, Mi.)
- 373. Bemis (Minneapolis, Mn.)
- 374. GAF (New York, N. Y.)
- 375. Smith International (Newport, Beach, Ca.)
- 376. Pabst Brewing (Milwaukee, Wi.)

377. Frederick & Herrud (Southfield, Mi.)
378. Collins & Aikman (New York, N. Y.)
379. Bell & Howell (Chicago, Ill.)
380. Southwest Forest industries (Phoenix, Az.)
381. Insilco (Meriden, Ct.)
382. Badische (Williamsburg, Va.)
383. Sonoco Products (Hartsville, S.C.)
384. Economics Laboratory (St. Paul, Mn.)
385. Three Big Industries (Houston, Tx.)
386. Figgie International Holdings (Willoughby, Oh.)
387. Hoover (North Canton, Oh.)
388. Interstate Bakeries (Kansas City, Mo)
389. Nalco Chemical (Oak Brook, Ill.)
390. Joy Manufacturing (Pittsburg, Pa.)
391. Stone Container (Chicago, Ill.)
392. Harcourt Brace Jovanaovich (New York, N. Y.)
393. Mohasco (Amsterdam, N.Y.)
394. Genesco (Nashville, Tenn.)
385. M/A-Com (Burlington, Mass.)
396. Kaiser Steel (Fontana, Ca.)
397. Scott & Fetzer (Lakewood, Oh.)
398. Idel Wild Foods (Worcester, Mass.)
399. Dennison Manufacturing (Farmington, Mass.)
400. Delux Check Printers (St. Paul, Mn.)
401. Ferro (Cleveland, Oh.)
402. MEI (Minneapolis, Mn.)
403. Briggs & Stratton (Wauwatosa, Wi.)
404. Sybron (Rocheater, N.Y.)
405. Sheller-Globe (Toledo, Oh.)
406. Brown-Forman Distillers (Louisville, Ky.)
407. Tyson Foods (Springdale, Ark.)
408. Arvin Industries (Columbus, Ind.)
409. Maytag (Newton, Ia.)
410. Coleco Industries (West Hartford, Ct.)
411. Armstrong Rubber (New Haven, Ct.)
412. M. Lowenstein (New York, N. Y.)
413. Raychem (Menlo Park, Ca.)
414. Wm. Wrigley Jr. (Chicago, Ill.)
415. Sanders Associates (Naushua, N.H.)
416. ACF Industries (New York, N. Y.)
417. Gulfstream Aerospace (Savannah, Ga.)
418. Handy & Harman (New York, N. Y.)
419. Tyco Laboratories (Eseter, N.H.)
420. Consolidated Papers (Wisconsin Rapids, Wi.)
421. Kellwood (St. Louis, Mo.)
422. Smithfield Foods (Arlington, Va.)
423. Federal Paper Board (Montvale, N.J.)

- 424. Bausch & Lomb (Rochester, N.Y.).
- 425. Rohr Industries (Chula Vista, Ca)
- 426. Nashua (Nashua, N.H.)
- 427. AM International (Chicago, Ill.)
- 428. Echlin (Brandford, Ct.)
- 429. A.H. Robbins (Richmond, Va.)
- 430. Michigan Milk Producers Association (Southfield, Mi.)
- 431. Dexter (Winsor Locks Ct.)
- 432. Dr. Pepper (Dallas, Tx.)
- 433. Cincinnati Milacron (Cincinnati, O.h.)
- 434. Bucyrus-Erie (South Milwaukee, Wi.)
- 435. Fieldcrest Mills (Eden. N.C.)
- 436. H.H. Robertson (Pittsburg, Pa.)
- 437. Westmoreland Coal (Philadelphia, Pa.)
- 438. Bangor Punta (Greenwich, Ct.)
- 439. Nucor (Charlotte, N.C.)
- 440. Datapoint (San Antonio, Tx.)
- 441. Shaklee (San Francisco, Ca.)
- 442. Foxboro (Foxboro, Mass.)
- 443. Eagle-Picher Industries (Cincinnati, Oh.)
- 444. Stokely-Van Camp (Indianapolis, Ind.)
- 445. Cessna Aircraft (Wichita, Ks.).
- 446. Flowers Industries (Thomasville, Ga.)
- 447. Sun-Diamond Growers of California (Stockton, Ca.)
- 448. Universal Foods (Milwaukee, Wi.)
- 449. Georgia Kraft (Rome, Ga.)
- 450. Oxford Industries (Atlanta, Ga.)
- 451. Prime Computers (Natick, Mass.)
- 452. Revere Copper & Brass (New York, N. Y.)
- 453. Media General (Richmond, Va.)
- 454. ROLM (Santa Clara, Ca.)
- 455. Illinois Tool Works (Chicago, Ill.)
- 456. Warnaco (Bridgeport, Ct.)
- 457. Easco (Baltimore, Md.)
- 458. Amsted Industries (Chicago, Ill.)
- 459. Royal Crown Companies (Atlanta, Ga.)
- 460. American Bakeries (New York, N. Y.)
- 461. Savannah Foods & Industries (Savannah, Ga.)
- 462. Roper (Kankakee, Ill.)
- 463. Coachman Industries (Middlebury, Ind.)
- 464. United Merchants & Manufacturers (New York, N. Y.)
- 465. Trinity Industries (Dallas, Tx.)
- 466. Rorer Group (Fort Washington, Pa.)
- 467. Palm Beach (Cincinnati, Oh.)
- 468. Guardian Industries (Northville, Mi.)
- 469. Ceco (Oak Brook, Ill.)
- 470. International Flavors & Fragrances (New York, N. Y.)

- 471. Liquid Air (San Francisco, Ca.)
- 472. Copper Tire & Rubber (Findaly, Oh.)
- 473. Phillips-Van Heusen (New York, N. Y.)
- 474. Snap-On Tools (Kenosha, Wi)
- 475. Worthington industries (Columbus, Oh.)
- 476. Copper Labs (Palo Alto, Ca.)
- 477. Prentice Hall (Englewood Cliffs, N.J.)
- 478. Ametek (New York, N. Y.)
- 479. Meredith (Des Moines, Ia.)
- 480. Wisconsin Dairies Cooperative (Baraboo, Wi.)
- 481. Peabody International (Stamford, Ct.)
- 482. Dorsey (Chattanooga, Tenn.)
- 483. Diebold (Canton, Oh.)
- 484. Holly (Dallas, Tx.)
- 485. Harte-Hanks Communications (San Antonio, Tx.)
- 486. Bairnco (New York, N. Y.)
- 487. Rubbermaid (Wooster, Oh.)
- 488. Hillenbrand Industries (Batesville, Ind.)
- 489. Macmillan (New York, N. Y.)
- 490. Harvey Hubbell (Orange, Ct.)
- 491. Pittway (Northbrook, Ill.)
- 492. Oak Industries (Rancho Bernardo, Ca.)
- 493. H.B. Fuller (St. Paul, Mn.)
- 494. Sealed Air (Muskegon, Mi.)
- 495. Tracor (Austin, Tx.)
- 496. Moore McCormack Resources (Stamford, Ct.)
- 497. Hyster (Portland, Ore.)
- 498. Riegel Textile (Greenville, S.C.)
- 499. Masonite (Chicago, Ill.)
- 500. Tandem Computers (Cupertino, Ca.)

Source: "The 500" 1985.

APPENDIX C
Potential Benefits of Health Promotion

POTENTIAL BENEFITS OF HEALTH PROMOTION

IMPROVEMENT IN PRODUCTIVITY

Reducing Absenteeism. Any reduction of absenteeism will result in greater output. Absenteeism may be reduced by a health promotion program through a decrease in the incidence of sick leaves required for illness, a decrease in the duration of each sick leave, or an increase in the employees' desire to come to work either to avoid missing a component of the health promotion program or because of an increased sense of responsibility.

Improving Morale. Providing a health promotion program for employees demonstrates that the employer is concerned about the well-being of his employees. This demonstration of concern can result in improved morale of employees. Employees with improved morale are likely to be more productive. The desire and willingness to put in a full day's work and extra hours, to produce high-quality products, and to cooperate with other units in the company will be increased.

Conserving Operating Costs. An employee who is dedicated to his employer is less likely to waste or steal organization resources and thus lowers operating costs (or in this discussion, increases productivity levels for the amount of resources used).

Improving Ability to Perform. The Health worker has a greater potential ability to perform. A healthy body allows for a full level of output for a full work day, decreased mental strain allows greater concentration on the work task, and nondependence on cigarettes and coffee eliminates the time normally spent in these rituals.

Developing Higher-Quality Staff. A higher-quality staff has a greater chance of producing higher-quality services. A health promotion program can expedite the development of a higher-quality staff by reducing the loss of key employees through resignation and illness and by improving the ability to attract new high-quality employees.

REDUCTION OF BENEFIT COSTS

Reducing Health Insurance Costs. For companies whose premiums are experience-related, decreased utilization of services will reduce premium costs. Utilization of services will reduce premium costs. Utilization can be reduced through more conscious and conservative use of the medical care system by more conscientious and better educated employees. Utilization should also drop because of a decreased need for medical services in the future as a result of improvement in the health and thus reduction of sickness of employees.

Lowering Life Insurance Costs. A number of life insurance companies offer reduced premiums to clients who practice healthy lifestyles. Such offerings are usually for individual policyholders, but they may in the future be extended to group (or employer) policyholders.

Reducing Worker's Compensation Claims. The cost of worker's compensation claims can be reduced by decreasing the number of claims, especially those covered by careless accidents, back injuries, alcohol-related injuries, and smoking-related fires. The cost per claim can be reduced by the quicker recovery time for a healthy person.

Providing Welfare Benefits. Health promotion programs, when provided for all employees, are considered a welfare benefit. A welfare benefit is a benefit that is totally tax deductible as a business expense to the employer and not a taxable benefit to the employee. Such benefits as memberships in social clubs, use of company cars, and provision of company-sponsored vacations are in part taxable to the employee because they are considered another form of income. A welfare benefit thus allows the employer to provide a benefit that has a higher net value to the employee at a lower net cost to the employer.

REDUCTION OF HUMAN RESOURCES DEVELOPMENT COSTS

Recruiting. Recruiting costs can be reduced by a health promotion program through decreased turnover resulting from fewer medical crises, establishment of a more satisfied and stable work force, and increased ability to attract high-quality staff when openings occur.

Educating and Training. Reduction of turnover will lower the total cost of training, both by decreasing the budget allocated to the education and training department (because fewer employees will need to be trained) and by decreasing the total number of paid hours away from the job spent in new employee training sessions (again because fewer employees will need to be trained).

IMAGE OF THE ORGANIZATION

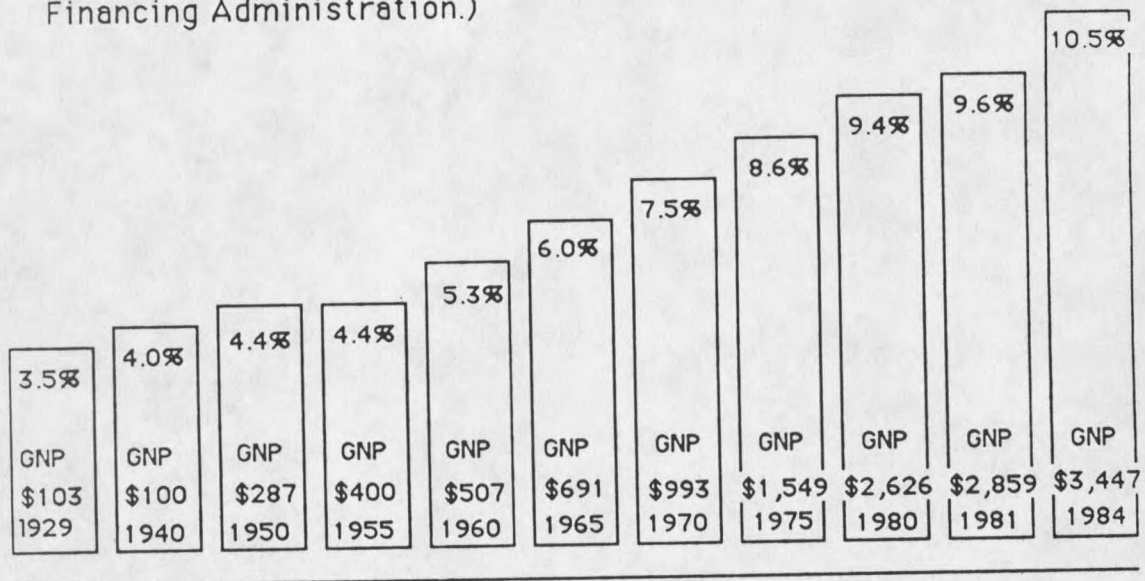
General Visibility. Stories about health promotion programs provide good group public relations for the organization. Stories can appear in company publications, local and national newspapers, trade and popular magazines, and local and syndicated television shows.

Specific Association to Products and Services. The association with health and fitness is valuable to an organization that provides products or services relating to health, fashion, entertainment, and many other general consumer areas.

Concerned and Responsible Employers. An employer that provides a health promotion program for its employees demonstrates concern for their well-being. Demonstration of concern and responsibility can have a positive impact, not only on internal operations and the recruitment and management of employees, but also on dealing with external groups, such as suppliers, competitors, union regulators, and clients.

APPENDIX D
Gross National Product Increases

Chart shows how, as gross national product (GNP) increases, the portion spent on health care rises. Figures in boxes show GNP for each year, rounded in billions of dollars. 1984 figure is for fiscal year ended September 30; all others are for calendar years. (Data from Health Care Financing Administration.)



Source: Patton et al. 1986, 11.

APPENDIX E

Percentage of Deaths in the U. S. by Cause

PERCENTAGE OF DEATHS IN THE UNITED STATES BY CAUSE

Cause	1900	1975	1980
Cardiovascular	21	52.5	48.5
Cancer	5	19.3	20.9
Accidents	6	5.4	10.7
Pneumonia and Influenza	19	2.9	2.7
Diabetes	7	1.9	1.7
Other	42	18.0	15.5

APPENDIX F
Reported Cost Savings

COST SAVINGS REPORTED FOR SOME EMPLOYEE-ASSISTANCE PROGRAMS

Company	Number Employees	Number Using Program	Rehabilitation Rate (%)	Annual Cost Savings ^a
University of Missouri	7,000	1,002	80	\$ 67,996 ^b
Scovill Manufacturing	6,500	180	78	186,550
Illinois Bell Telephone (family)	38,490	1,154	80	254,448 ^c
U.S. Postal Service	83,000	100	75	2,221,362
Kennecott Copper (with dependents)	7,000 28,000	1,200/yr.	0	448,400 ^d
New York Transit	43,000	?	75	2,000,000
E.I. Du Pont (with spouses)	16,000	176/yr.	70	419,200 ^e
New York Telephone	80,000	300/yr.	85	1,565,000

Source: Berry, C. A. An Approach to good health for employees and reduced health care costs for industry. Washington, D. C. Health Insurance Association of America, 1981, p. 21. Used by permission

a Number rehabilitated x average salary.

b Plus a 40% decrease in use of health benefits.

c 31,806 disability days were saved; off-duty accidents decreased 42.4% and on-duty accidents decreased 61.4%. There also were savings in health insurance utilization and job inefficiency.

d The total included absenteeism, sickness, and accident disability and health insurance use. Absenteeism decreased 53%, weekly indemnity costs (sick accident) 75%, and medical costs 55%. Rehabilitation rate not calculated as varies with type of case and definition. Plan to compare number discharged with number seen.

e Only alcohol program.

APPENDIX G

Assessment Forms (Corporate and Participant)

CORPORATE NEED ASSESSMENT FORM**I. Participants**

1. Total number of employees _____
2. Number of employees by job classification:
Executive _____
Middle-management _____
Supervisory _____
Labor _____
Clerical _____
3. Number of employees by sex and age (in years) categories:
Women < 30 _____
 30-39 _____
 40-49 _____
 > 49 _____
Men < 30 _____
 30-39 _____
 40-49 _____
 > 49 _____
4. Three-year projection of employee turnover _____

II. Current activities in health/fitness program

1. Medical screening
Number screened _____
Cost _____
2. Fitness testing
Number tested _____
Cost _____
3. Activity programs
Number active _____
Cost _____
4. Health education
Number contacted _____
Cost _____
5. Special events
Number involved _____
Cost _____

6. Facilities _____
Outside resources _____
Cost _____

III. Identification of need

1. Total cost of medical claims _____

2. Medical costs by category:

cardiovascular _____
respiratory _____
gastrointestinal _____
back _____
cancer _____
accident _____
other _____

3. Total sick days per year _____

4. Sick days by category:

cardiovascular _____
respiratory _____
gastrointestinal _____
back _____
cancer _____
accident _____
other _____

PARTICIPANT NEEDS AND INTEREST SURVEY

1. Rate your current level of general health.

Poor _____
Fair _____
Average _____
Good _____
Excellent _____

2. Rate your current level of cardiovascular endurance.

Poor _____
Fair _____
Average _____
Good _____
Excellent _____

3. Rate your current level of flexibility.

Poor _____
Fair _____
Average _____
Good _____
Excellent _____

4. Rate your current level of strength.

Poor _____
Fair _____
Average _____
Good _____
Excellent _____

5. How do you feel about your body weight and appearance?

Poor _____
Fair _____
Average _____
Good _____
Excellent _____

6. What is your energy level after work?

Poor _____
Fair _____
Average _____

Good _____
 Excellent _____

7. Check items you would like to improve.

Your health _____
 Your fitness level _____
 Your weight/appearance _____
 Your energy level _____

8. Are you currently involved in any regular activity or program designed to improve or maintain your health?

Yes _____
 No _____

If yes, describe _____

Your goals? _____

9. Would you participate in a company-sponsored health/fitness program on a regular basis?

Yes _____
 No _____

10. If you answered *yes* to #9, check the activities that interest you the most and indicate the best time of day for you to participate.

Walking _____
 Jogging _____
 Cycling _____
 Exercise classes _____
 Aerobic _____
 Weight training _____
 Raquetball _____
 Tennis _____
 Health-education seminars _____
 Other activities (please list) _____

11. Would you participate in other aspects of the program such as: (if yes, indicate best time of day to offer)

Blood-pressure screening _____
 Smoking cessation _____

Nutrition education _____
Weight-control classes _____
Stress management _____
Substance-abuse elimination _____
Back care _____
Cardiopulmonary resuscitation classes _____
First aid _____
Other (please list) _____

12. Would you be willing to share the cost of health/fitness programs?

Yes _____

No _____

If yes, what would you be willing to pay? _____

13. To what extent should your family members be involved in the health/fitness programs?

14. Would you participate in medical screening tests if offered?

Yes _____

No _____

15. Would you be willing to share the cost of medical screening tests?

Yes _____

No _____

If yes, what would you be willing to pay? _____

16. What other suggestions do you have concerning a health/fitness program?

APPENDIX H
Approximate Program Costs

APPROXIMATE COSTS FOR EXERCISE PROGRAM RESOURCES

Resources \$0-\$10 Per Month Per Employee

1. Self-help exercise programs
 2. Walk, jog, cycle routes
 3. Parks and recreation facilities
 4. Public schools and college/university facilities
 5. Community agency programs (social service/health)
-

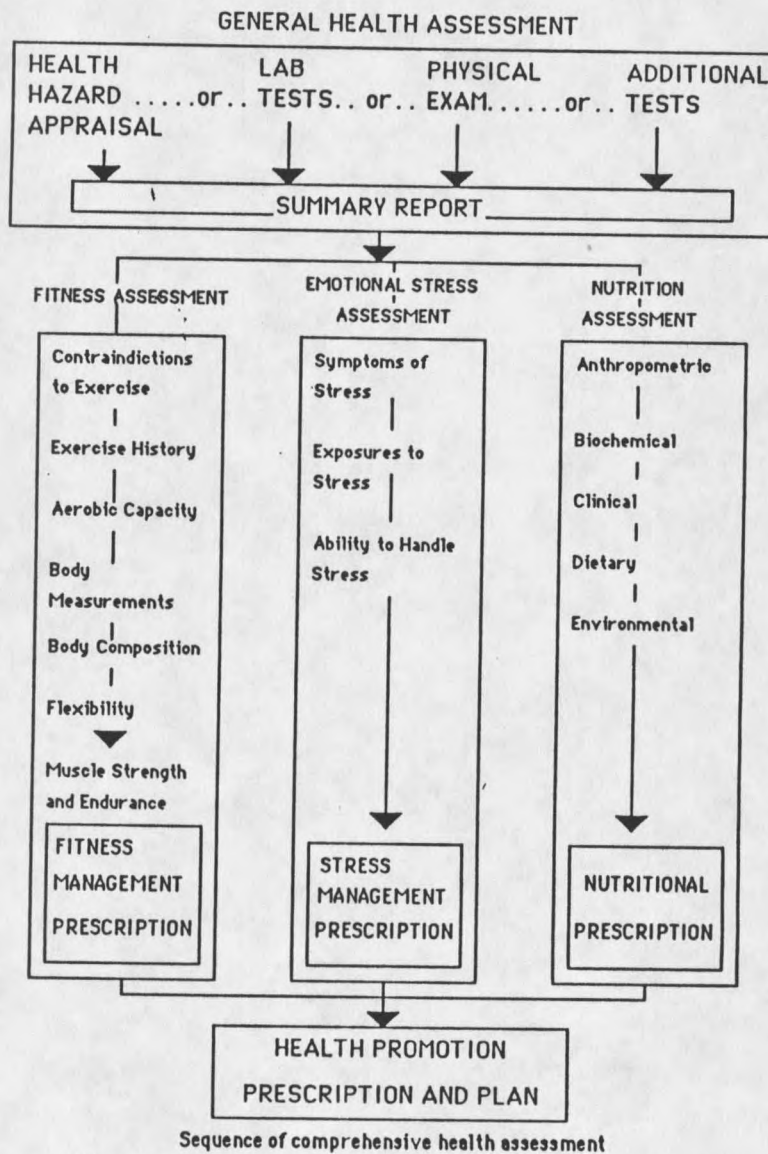
Resources \$10-\$50 Per Month Per Employee

1. Public school and college/university health and fitness programs
 2. YMCA facilities and programs
 3. Medical facilities and programs
 4. Contract exercise instructors
-

Resources More Than \$50 Per Month Per Employee

1. Private health and fitness facilities
 2. Dance/exercise studios
 3. Commercial health clubs
 4. In-house exercise programs
-

APPENDIX I
General Health Assessment Areas



Source: O'Donnell and Ainsworth 1984, 102.

APPENDIX J
Maslow's Hierarchy of Needs

Maslow's hierarchy of needs. (From Danielson, R.R. and Danielson, K.F.) Ongoing motivation in employee fitness programming. In Employee fitness "the how to...", Proceedings of the Ontario Employee Fitness Workshop. Seneca College, King City Ontario: Ministry of Tourism and Recreation, March 1979, p. 138.

EVIDENCE OF HEALTH STATE	CLASSIFICATION OF HEALTH	NEEDS TYPE	EVIDENCE OF NEED FULFILLMENT
• No long-lasting job-related fatigue • Good nutrition • Proper weight	Extreme Wellness	Meta needs for self-realization and self-actualization	• Realistic Orientation toward specific situations • Self-Acceptance • Spontaneity; simplicity; naturalness in behavior • Problem-centered rather than self-centered style of behavior • Privacy and detachment in social situations • Autonomous and socially independent behavior • Freshness of appreciation of many things • Identification with others as opposed to self • Democratic attitudes and values toward society • Creativity and transcendence in work
Neutral Point; no discernible illness or wellness			
• Obesity • Cardiovascular disease • Insufficiency of strength, power, flexibility • Unrelieved job-related fatigue • Excessive smoking • Excessive alcohol or drug abuse • Insufficient diet	Extreme Sickness	Needs for status and esteem Love and belonging needs Safety needs Psychological needs	• Achievement in job and social settings; feelings of independence; feeling of adequacy; feeling of success; self-confidence; feeling of freedom; prestige, recognition from others. • Existence of affectionate relationships; strong family bonds; satisfying group membership; satisfying team membership. • Feeling of life security; feeling of life stability; feeling of protection; sense of order; freedom from fear; feeling of job security. • Necessary amounts of food, air, water, vitamins, minerals.

Source: Patton et al. 1986, p. 213.

APPENDIX K
Space Allocations

SPACE ALLOCATIONS FOR AN IN-HOUSE HEALTH/FITNESS CENTER

Use	Percentage of Total Facility Space
Administrative	2-3
Exercise Circuits	35-45
Warm-up and cool-down	10-13
Classrooms	3-5
Locker rooms	20-25
Showers and drying areas	7-11
Lavatories	4-6
Storage	1-3
Laundry	1-3
Circulation	3-9

The space allocations for any facility will be directly dependent on the activities planned for the facility.

APPENDIX L
Guidelines for In-House Facilities (Size)

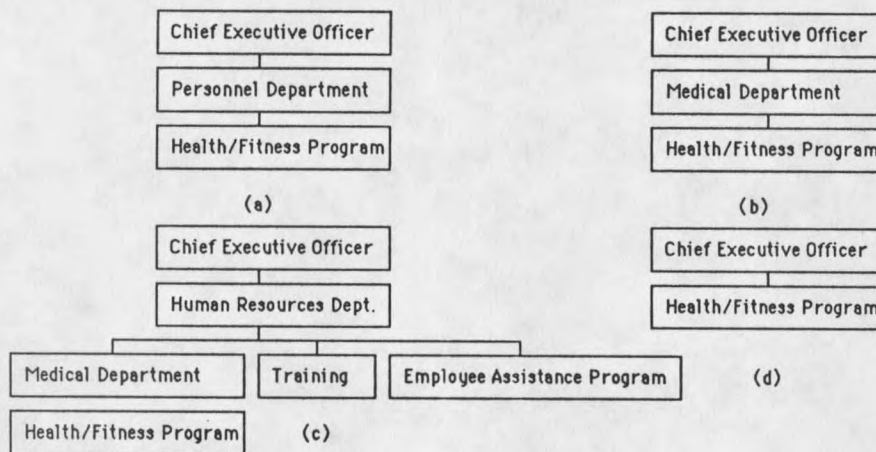
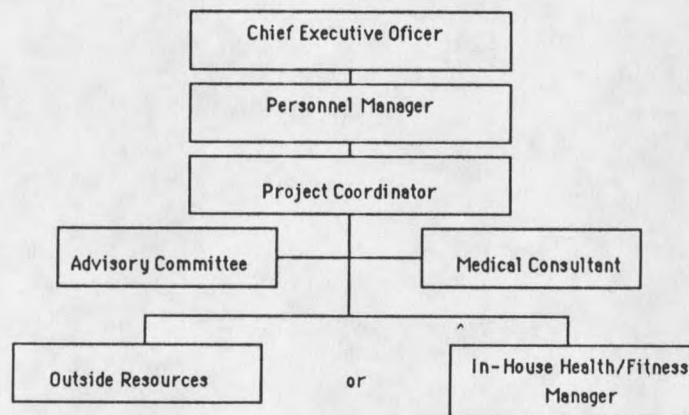
GUIDELINES FOR IN-HOUSE FACILITIES

Facility	Program Size (based on number of employees)		
	Small (50 or less)	Medium (50-1000)	Large (1,000 or more)
Existing space used as exercise class area (e.g., cafeteria)	X	X	X
Showers and dressing areas	X	X	X
Outdoor track		X	X
Exercise room with equipment		X	X
Indoor track			X
Multi-purpose gymnasium			X
Courts		X	
Swimming pool			X

Source: Patton et al. 1985, 240.

APPENDIX M
Organizational Strategies

FOUR ORGANIZATION STRATEGIES IN CORPORATE SETTINGS

SAMPLE HEALTH/FITNESS MANAGEMENT STRUCTURE
WITHIN A PERSONNEL DEPARTMENT

Source: Patton et al. 1986, 77.

APPENDIX N
Characteristic Duties of Health Practitioners

SOME CHARACTERISTIC DUTIES OF THE HEALTH/FITNESS PRACTITIONER

Manager

Administer daily operation
Design program activities
Control program
Guide and direct staff
Purchase equipment
Maintain facilities
Regulate budget
Schedule activities
Communicate with staff and participants
Cooperate with other departments

Planner

Assess organization needs
Establish goals for program
Design program
Organize resources
Arrange schedule

Supervisor

Hire and dismiss staff
Oversee program and staff
Coordinate staff and program
Motivate staff
Evaluate staff

Educator

Train staff
Instruct participants
Evaluate learning
procedure
Perform statistical analyses

Exercise leader

Guide participants
Conduct classes
Use safe techniques
Provide a role model

Motivator

Give impetus to program
Persuade participants
Influence participants
Induce changes in participants
Incite action

Counselor

Advise participants
Suggest changes
Express opinions
Judge effectiveness of actions
Recommend action
Consult with participants

Promoter

Design marketing techniques
Encourage participation
Advance program advantages
Use sales techniques

Assessor

Conduct participant tests
Interpret test results
Follow safe procedures

Evaluator

Design program-evaluation
Develop curricula
Interpret results
Analyze programs trends
Convey reports to management

APPENDIX O

Determining Staffing Needs to Program Size

DETERMINING YOUR IN-HOUSE STAFF NEEDS

Personnel	Program Size (Based on number of employees)		
	Small 50 or less)	Medium 50-1,000)	Large 1,000 or more)
Project coordinator	X	X	X
Fitness program director		X	X
Medical consultant		X	X
Exercise specialist			X
Health promotion specialist			X
Support personnel			X

Source: American Heart Association 1984, p. 13.

APPENDIX P

Evaluation Techniques (Process and Outcome)

EVALUATION TECHNIQUES

Two types of evaluation information can be helpful to decision makers as they monitor the effectiveness of an exercise program. Process evaluation is the monitoring of the program implementation procedures. The second type is outcome evaluation. Its purpose is to measure and interpret results based on the objectives of the program.

Process Evaluation

Process information can often be obtained from good record keeping systems. Recording information to answer the following questions may be helpful in assessing the program.

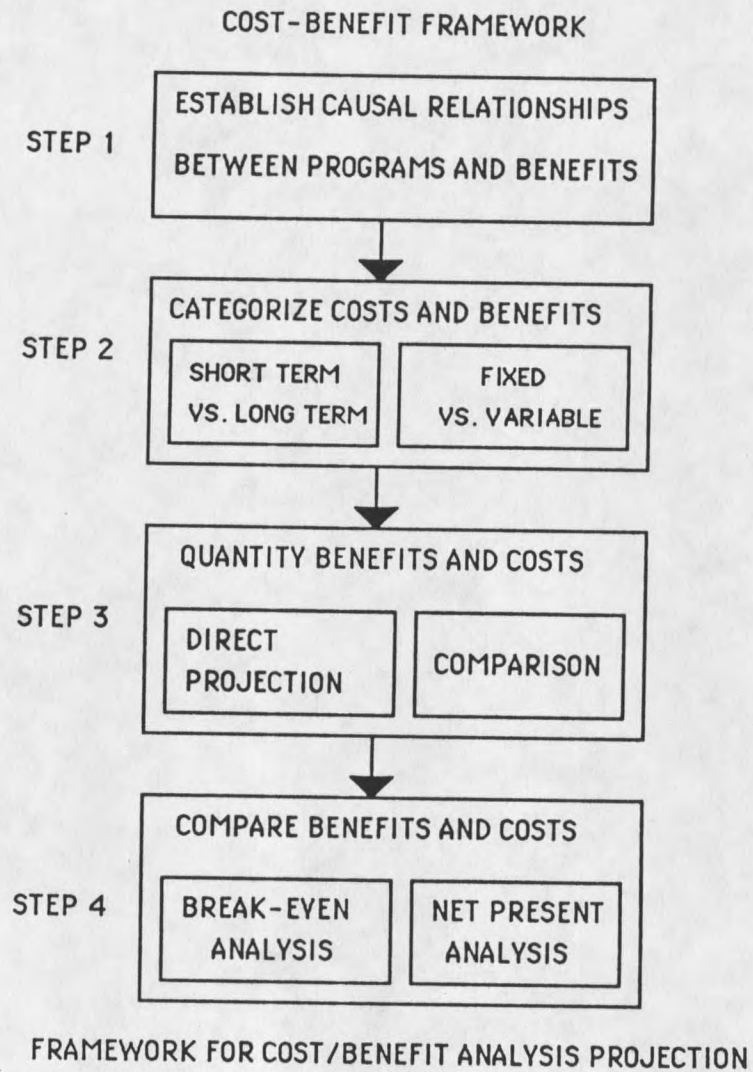
1. How was the program promoted?
 - a. What promotion materials were used and how were they presented?
 - b. Who was involved in the promotion and how much time did they need?
 - c. When was the program promoted?
 - d. How effective was the promotion in making employees aware of the program? In stimulating employee participation?
2. How was each activity implemented?
 - a. What was the schedule of events?
 - b. What personnel were involved in the implementation and how much time did they need?
 - c. What materials were used?
 - d. How did the scheduling of the activity fit into the company schedule? The employee's schedule?
3. What was the participation in the program?
 - a. How many employees participated?
 - b. What were the characteristics of participating employees compared to those of nonparticipating employees?
 - c. How did participation change over time?
 - d. What were the characteristics of employees who participated frequently compared to employees who participated infrequently?
 - e. What barriers to participation existed or occurred? (Examples: commuting after hours, bad weather, or a conflict with other events.)
 - f. What motivation techniques were used to enhance participation in the program?

Outcome Evaluation

Outcome evaluations should be designed to collect information about how you attained your program objectives. The long-term objectives of a program probably include projected changes in risk factors. Periodic reports summarizing the progress of employees in risk reduction can serve as a decision-making tool to management and as a motivational and learning tool for the employees. You can use the attached sample form to record exercise activity. Then use the total data to compare progress from month to month.

Source: American Heart Association 1984, 11.

APPENDIX Q
Cost-Benefit Framework



Source: O'Donnell and Ainsworth 1984, 18.

APPENDIX R

Comparison of Cost-Effectiveness/Cost-Benefit

Comparison of Cost-Effectiveness Analysis versus Cost-Benefit Analysis for Wellness Programs

COST-EFFECTIVENESS ANALYSIS		COST-BENEFIT ANALYSIS	
STEP	TARGET PROGRAM	STEP	TARGET PROGRAM
1	assign monetary value to program costs	1	assign monetary value to program costs
2	define immediate effect program outcome criteria in nonmonetary terms	2	define immediate effect and long-range (benefit) program outcome criteria in monetary terms
3	measure outcome levels in nonmonetary terms	3	measure outcome levels calculate in monetary value
4	implement program(s)	4	implement program(s)
5	measure outcome levels in nonmonetary terms	5a	measure immediate outcome levels - calculate monetary value
		5b	measure long-range outcome levels - post-calculate monetary value
6	calculate ratio: cost/amount change nonmonetary terms	6a	calculate intermediate cost/amount change monetary terms
		6b	calculate final ratio: cost-amount change monetary value
7	compare ratios among programs - lower ratio, higher cost-effectiveness	7	compare ratios among programs - lower ratio, higher cost-effectiveness
8	evaluate size of ratio according to available resources and priorities	8	evaluate size of ratio according to available resources and priorities
9	repeat steps 5 and 6 periodically	9	repeat steps 5 and 6 periodically

Source: Hartman and Cozzetto 1984, 112.

APPENDIX S
American Heart Association Guidelines

HEART ASSOCIATION GUIDELINES

Obtain management approval for initial needs and interest survey.

Appoint Project Coordinator.

Obtain management approval for program implementation.

Set goals for the program.

Select Fitness Program Director.

Appoint Advisory Group.

Arrange for medical guidance.

Survey personnel to assess needs and interests.

Analyze projected costs.

Utilize self-help group materials.

Decide whether to use outside or company resources.

Obtain necessary program personnel.

Complete appropriate medical and fitness evaluations.

Prescribe individual exercise programs.

Include educational efforts on other positive living habits.

Provide follow-up sessions for program participants.

Continue to provide ongoing education and communication efforts.

Plan unique motivational strategies to increase participation.

Document the cost effectiveness of the program and report back to management.

APPENDIX T
Letters of Transmittal



Montana State University
Bozeman, Montana 59717

Department of Health, Physical Education and Recreation
College of Education

Telephone (406) 994-4001

Name
Position
Address
City, State, Zip Code

Subject: Survey Pilot Study

Dear _____,

As a graduate student in Physical Education at Montana State University, I am currently working on research for a thesis in partial fulfillment of the requirements for a masters of science degree. The topic of my study is "The Status of Corporate Health Promotion Programs in 'Fortune 500' Companies."

At the present time I am in the process of conducting a pilot study on the validity of the study questionnaire. This questionnaire will be used to obtain as much data as possible concerning corporate health promotion programs. The study is directly concerned with management issues and information pertaining to: facilities, supervision, benefits, objectives, legal aspects and organizational and administrative guidelines.

I am contacting you in the hope that you might find a few minutes to evaluate the content of this questionnaire for clarity, ambiguity, appropriateness, structure, and ease in which to complete. I would greatly appreciate any comments and/or recommendations you might have. I have enclosed a self addressed stamped envelope for your convience.

Thank you for your time and consideration, I look forward to hearing from you in the near future.

Sincerely,

Robert E. Holmes
Study Researcher

Dr. Gary F. Evans
Thesis Committee Chairman



Montana State University
Bozeman, Montana 59717

Department of Health, Physical Education and Recreation
College of Education

Telephone (406) 994-4001

Physical Director's Name or CEO
Company Name
Address
City, State, Zip Code

Date

Dear _____,

As a graduate student in Physical Education at Montana State University, I am currently working on research for a thesis in partial fulfillment of the requirements for a masters of science degree. The topic of my study is "The Status of Corporate Fitness Programs of "Fortune 500" Companies.

At the present time I am in the process of conducting a pilot study on the validity of the study questionnaire. This questionnaire will be used to obtain as much data as possible concerning corporate fitness programs. The study is directed at information pertaining to: facilities, supervision, incentives, benefits, objectives, and organizational and administrative guidelines.

I am contacting you in the hope that you might find the time to evaluate the content of this questionnaire for clarity, ambiguity, appropriateness, structure and ease in which to complete. I would greatly appreciate any comments and recommendations you might have. I have enclosed a self addressed stamped envelope for your convince.

Thank you for your time and consideration.

Sincerely,

Robert E. Holmes

Robert E. Holmes
Study Researcher

Gary Evans

Dr. Gary Evans
Thesis Committee Chairman



Montana State University
Bozeman, Montana 59717

Department of Health, Physical Education and Recreation
College of Education

Telephone (406) 994-4001

Physical Director's Name or CEO
Company Name
Address
City, State, Zip Code

Date

Dear _____,

On March 29, 1985 you were mailed a questionnaire entitled "The Status of Corporate Fitness Programs of 'Fortune 500' Companies." As of yet I have not received your reply. This is a very busy time of year and you probably set the questionnaire aside for completion at a later date.

The survey results have been fair thus far with over fifty percent having been returned. I have enclosed another questionnaire in the event that you did not receive a copy or if the original has been misplaced. A return rate of 70% has been established, and I hope that you can find a few minutes to complete and return the questionnaire to help me achieve this goal. For your convenience, a self addressed stamped envelope has been provided.

It is my hope that your questionnaire will soon be received, a tentative deadline of May 21 has been established and with your help this deadline will be met. The information that you provide will contribute greatly to the effectiveness and validity of this study.

If no program exists within your corporation please indicate so on the questionnaire and return, as this information is also of importance. If you are interested in the results of this study please indicate so in the area provided on the last page of the questionnaire and the results will be sent to you upon its completion.

Understandably, in a survey of this type it was extremely difficult to find the correct and current names of all those persons in which to send the questionnaire, it is my hope that if a mistake was made the questionnaire will be forwarded to the correct party.

Thank you for your time and help. The value of this survey depends entirely on the cooperation of those involved. I look forward to hearing from you.

Sincerely,

Robert E. Holmes

Robert E. Holmes
Masters Candidate

Gary Evans

Dr. Gary Evans Ph.D.
Thesis Committee Chairman



Montana State University
Bozeman, Montana 59717

Department of Health, Physical Education and Recreation
College of Education

Telephone (406) 994-4001

Physical Director's or CEO's Name
Company Name
Address
City, State, Zip Code

Date

Dear _____,

I would again like to express my deepest thanks for your cooperation in filling out and returning "The Corporate 'Fortune 500' Survey." This study was designed to determine the status of corporate health promotion programs in companies listed in the "1984 Industrial Fortune 500" list. The status of the programs involved a variety of of management issue areas which were discovered and identified during a search of related literature and specifically outlined in organizational and administrative guidelines by a variety of professional groups such as: the President's Council on Physical Fitness and Sport, the Exercise Prescription Committee for the American Alliance for Health, Physical Education, Recreation and Dance, and the American Heart Association.

The survey became a huge success obtaining a return rate of over 90%, thanks in part to your participation. The survey was completed in May of 1985. I apologize for the delay in returning a copy of the results as the tabulation proved to be more involved and time consuming than previously anticipated.

Enclosed you will find a copy of the results which were obtained along with a copy of the original questionnaire. I would like to again thank you for your participation in this survey.

If you have any questions with regard to the survey or the results obtained please feel free to contact me at your earliest convenience.

Thanks Again!

Sincerely,

Robert E. Holmes

Robert E. Holmes
Study Researcher
Masters Candidate

Thank You Card Sent To Respondents

Robert E. Holmes
MSU
Dept of HPERD
Bozeman Montana 59717

Name
Corporation
Address
City, State, Zip Code

Subject: Corporate Survey

Dear _____,

I would like to thank you for participating in the corporate survey which was concerned with the status of corporate health promotion programs of "Fortune 500" companies. Thanks to you and many others, the study has recieved a return rate of over 90%.

I would like to take this time to thank you personally for your contribution, and consideration in filling out and returning the questionnaire. The results of the survey will be sent out as soon as they have been tabulated.

Again thank you for your time and cooperation.

Sincerely

Robert E. Holmes

APPENDIX U
Responses to Write in Questions

Consultive Organizations Used by Corporations

Fitness Finders, Inc.

American Red Cross

American Heart Association

Canadian Government, Ontario Ministry

Local Colleges and Universities

MONTANA STATE UNIVERSITY LIBRARIES
stks N378.H738 RL
The status of health promotion programs



3 1762 00513613 8

N378
H73
00512