



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

Robert E. Holmes

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of

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MONTANA STATE UNIVERSITY
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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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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).

