

Guidelines on Improving the Physical Fitness of Employees

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EUROPEAN HEALTH21 TARGET 13

SETTINGS FOR HEALTH

By the year 2015, people in the Region should have greater opportunities to live in healthy physical and social environments at home, at school, at the workplace and in the local community

(Adopted by the WHO Regional Committee for Europe at its forty-eighth session, Copenhagen, September 1998)

ABSTRACT

Low physical activity is a major public health issue despite the considerable health benefits that can be gained from regular activity. This document describes the rationale for keeping active and the major steps which may be undertaken at the workplace to facilitate wider involvement of staff and their families in physical activity. It presents the benefits for employers and gives examples of successful programmes in various enterprises. Ten steps covering all aspects of a workplace health programme devoted to physical activity are described in detail, followed by the important considerations in designing a programme.

Keywords

PHYSICAL FITNESS
OCCUPATIONAL HEALTH
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CONTENTS

	<i>Page</i>
Foreword.....	i
Review of workplace health policies	1
Comprehensive occupational health	1
Workplace health promotion	4
Good practice in health, environment and safety management in enterprises	7
Section 1. Programme background	9
Workplace health programmes	9
What is a programme?	12
What type of programme works?.....	13
Health benefits of regular physical activity	13
Factors that influence physical activity	14
What are the benefits to an employer?	15
Examples of company programmes and evaluations.....	16
Qualities of a workplace health programme	20
Some arguments for and against.....	21
Section 2. Programme planning: ten steps to implementation	22
Step 1. Influence decision-makers	22
Step 2. Adopt a company policy	23
Step 3. Establish a committee to implement the programme.....	24
Step 4. Carry out a needs analysis to assist programme design.....	26
Step 5. Determine the type of programme to initiate.....	28
Step 6. Identify human and financial resources	29
Step 7. Appoint programme staff and provide training opportunities.....	30
Step 8. Organize facilities and resources	31
Step 9. Programme development	32
Step 10. Promote, implement, evaluate and review the programme	35
Section 3. Designing a programme	36
General features	36
Screening, assessment and counselling	38
Encouragement	39
Health days, weeks and months	39
Activity breaks.....	40
Providing information.....	40
Cross the country, climb a mountain, swim a river	42
Lunch-time.....	42
Special programmes.....	43
Activity challenges	44
Week-ends away.....	45

Section 4. Facilities	46
Programme objectives	47
Changing facilities	47
Accessibility	47
Finance.....	47
Location	48
Additional considerations	49
Annex 1. Facts and fallacies.....	53
Annex 2. The walk-talk test	57
Annex 3. Eating and lifestyle habits questionnaire – prevention of cardiovascular disease	58
Annex 4. Planning model for a workplace health promotion programme	61
Annex 5. Programme action plan.....	63

FOREWORD

The main goal of the HEALTH21 policy for Europe in the 21st century, developed and advocated by the World Health Organization Regional Office for Europe (WHO/EURO), is to achieve full health potential for all. Two of the aims of the HEALTH21 strategy are to:

- promote and protect people's health throughout their lives, and
- reduce the incidence of the main diseases and injuries, and alleviate the suffering they cause.

To reach this goal and these aims WHO considers the workplace a priority setting for health protection and promotion in the 21st century. Like other settings where WHO has developed health-promoting initiatives (schools, cities, hospitals, market-places), the workplace can have a positive impact on the health and wellbeing of workers, their families, communities and society in general. However, in spite of demonstrated benefits, current workplace health promotion (WHP) efforts reach a limited number of workplaces and workers around the world.

The development of workplace health programmes has been hindered by a narrow definition of WHP by employers. Both employers and employees concentrate at present on protecting employees against occupational accidents and diseases, while most non-occupational causes of employees' ill health are not addressed. These causes, which might be alleviated by proper workplace health programmes, can be attributed to environmental, socioeconomic, lifestyle and cultural determinants of health. It is estimated that about 30% of total deaths and 30% of total loss of disability-adjusted life years in the WHO European Region are related to environmental and lifestyle factors which might be controlled or at least influenced

through health protection and promotion activities undertaken at the workplace. It is further estimated that physical inactivity is responsible for about 7–11% deaths and 3–5% of total loss of disability-adjusted life years.¹

The concept of the maintenance of working ability has been developed by innovative occupational health services to respond to the growing challenge caused by the ever-increasing cost of social security and the aging of the working force. To a certain extent it is a new interpretation of occupational health as defined by the Joint ILO/WHO Committee on Occupational Health in 1950 – “*a multidisciplinary activity which should aim at promotion and maintenance of the highest degree of physical, mental and social wellbeing of workers in all occupations.*” Such an interpretation would mean that the occupational health services should be more actively involved than hitherto in WHP without giving up the traditional tasks related to prevention of accidents and injuries linked with work. Only this would lead to comprehensive occupational health programmes.

In the period 1995–1999, WHO/EURO has undertaken several activities to support development of comprehensive occupational health programmes in European enterprises, mostly in countries of central and eastern Europe and the newly independent states. A Consultation on Building National Networks for Health Promotion at the Workplace was held in Copenhagen in May 1995. National seminars to support the development of national action plans for WHP were organized jointly with WHO collaborating centres in the Czech Republic (October 1995), Ukraine (December 1995), the Russian Federation (July 1996), Hungary (March 1997) and Bulgaria (September 1997). The Consultation on the Role of Occupational Health Services in the Promotion of Working

¹ Murray, C. & Lopez, A.D. *The global burden of disease*. Place, Harvard University Press, 1996, Vol. 1.

Ability and Health (Turku, November 1996) concluded that every Member State should develop national policies and programmes on the promotion of work ability and health as part of their comprehensive occupational health policy. The Third Ministerial Conference on Environment and Health (London, June 1999) also noted that WHP is an essential part of good practice in health, environment and safety management.

The preparation of these Guidelines on Improving Physical Fitness of Employees is a joint initiative of WHO/EURO's Occupational Health and Countrywide Integrated Noncommunicable Diseases Intervention (CINDI) programmes. It is expected that this resource will help to maintain employees' working ability and to reduce noncommunicable diseases among the adult population. The rationale behind this joint action was to use the knowledge and skills in prevention of cardiovascular diseases at the workplace. The contribution of Dr Igor Glazunov, former Regional Adviser for CINDI, is highly appreciated. Mr Frank Kelly, Regional Programme Manager, Health Promotion Agency for Northern Ireland, was asked to prepare a first draft. This was field-tested in Polish enterprises in collaboration with Professor Wojciech Drygas, CINDI Director for Poland and Head of the Department of Preventive and Social Medicine, Medical University, Lodz, Poland.

This document is intended to be used by employers and employees who, based on the analysis of existing data, come to the conclusion that a sedentary lifestyle at work reduces their working ability, is detrimental to the working culture and does not add to the efficiency of their enterprise. The document can also be useful to public health and occupational health officials and professionals, and health and social insurance institutions willing to involve workplaces in reducing overall rates of mortality and morbidity caused by noncommunicable diseases. It would be useful to all those who believe those employees'

participation in workplace health management is a good starting point for achieving better health for all.

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REVIEW OF WORKPLACE HEALTH POLICIES

Comprehensive occupational health

In the past, occupational health was a workplace health and safety programme devoted almost exclusively to prevention of occupational accidents and diseases. In practice, it was the only existing workplace health programme enforced by national health and safety legal regulations. The growing cost of social security, health insurance, aging working populations in Europe and global competition in business operations created a need for a broader concept of occupational health. This new comprehensive concept of occupational health includes the protection of workers' health against workplace risk factors and promotion of workers' health to counteract all non-occupational causes of ill health of employees.

Work-related and workplace-preventable non-occupational diseases and injuries place a significant economic and social burden on enterprises and the **national in** all WHO/EURO Member States. They are responsible for much preventable suffering and illness, shorter life expectancy, decrease in work ability and increase in rates of temporary and permanent work disability. They lead to premature retirement and premature death. The high rate and early onset of chronic diseases contribute to high expenditure for the national health care system and to high demands for disability pensions and compensation from social insurance.

About half the health gap between western and eastern Europe can be explained by differences in mortality rates due to cardiovascular diseases (CVD) and other noncommunicable diseases, which continue to increase (for example, in the Russian Federation) while declining in most western European countries and the United States [1]. Among different causes of death, cardiovascular diseases contributed 27.2% and external

causes (accidents, poisonings, assault and other) 20.7% to the decline in life expectancy in the group aged 35–64 years in the Russian Federation between 1992 and 1994 [2]. In 1970 mortality due to CVD was higher in Finland both among men and women than in the Russian Federation, but CVD mortality has recently decreased in Finland and is now two times lower than in Russia [1]. In western countries, CVD mortality has declined primarily because of efforts to prevent new cases of these diseases and, to a lesser extent, because medical care has improved [1–3]. The prevention of new cases is being achieved by a decrease in the prevalence of main risk factors for CVD such as smoking, alcohol abuse, sedentary lifestyle, diabetes mellitus, poorly managed hypertension, elevated blood cholesterol, and diet containing high levels of saturated fat and salt [1].

To achieve substantial occupational health gains in the countries of the European Region, particularly in the countries of central and eastern Europe (CCEE) and the newly independent states (NIS), the main health promotion efforts should be directed towards prevention of chronic noncommunicable diseases, mainly in enterprises, where a majority of the adult population work. This would require a major change in public health and occupational health policy in many countries. However, employees in many countries are, with the support of their employers, seeking advice about managing their health. This can include support in dealing with the problems listed above. Many companies are incorporating activities to meet these new needs in integrated health management programmes. Thus, the definition of occupational health has broadened considerably and there is a continuous transition from the strict concept of “prevention of occupational injuries” to protection and promotion of working ability and workers’ health.

Noting that comprehensive occupational health and a safe working environment are essential for individuals, communities and countries, as well as for the economic health of each enterprise, the 49th World Health Assembly (WHA) endorsed

the WHO Global Strategy for Occupational Health for All on 25 May 1996 (resolution WHA49.12). At action level this encourages occupational health institutions and experts to include health promotion as an element of occupational health programmes in enterprises.

Reflecting these changes, the 12th session of the Joint ILO/WHO Committee on Occupational Health in 1995 [4] stated that the focus in occupational health is on three objectives:

1. the maintenance and promotion of workers' health and working capacity;
2. the improvement of working environments and work to become conducive to safety and health; and
3. the development of work organizations and cultures which support health and safety at work and promote a positive social climate and smooth operation and may thus enhance the productivity of the undertaking; the concept of working culture is intended, in this context, to mean a reflection of the essential value systems adopted by an undertaking, as reflected in practice in the managerial systems, personnel policy, and principles for participation, training policies and quality management of the undertaking.

The timeliness of these initiatives is reflected in European Parliament Resolution A4-0050/99 of 25 February 1999 which, *inter alia*,

- considered that work must be adapted to people's abilities and needs and not vice versa, and noted that by preventing a disparity from arising between the demands of work and the capacities of the workers, it is possible to retain employees until retirement age and considered that new technologies should be used in order to achieve these aims;
- urged the Commission to investigate the new problem areas not covered by current legislation (stress, burn-out, violence

and the threat of violence by customers, and harassment at the workplace);

- noted that musculoskeletal diseases and psychosocial factors constitute the greatest modern threat to workers' health;
- drew attention to the problems resulting from a lack of autonomy at the workplace, monotonous and repetitive work and work with a narrow variety of content (typical of women's work in particular), and called for attention to be paid to the importance of ergonomics to the improvement of health and safety conditions at the workplace;
- drew attention to the health and safety at work of groups which now largely fall outside the scope of legislative protection, such as homeworkers and the self-employed; and
- recommended the principle of safety management whereby the management of risks in the working environment and development of the safety and welfare of workers are regarded as part of the normal activity of the workplace, and that this should be done in cooperation with the management and workforce.

Workplace health promotion

Health promotion is a key issue of the WHO Health for All policy and it reached conceptual maturity in the Ottawa Charter for Health Promotion [5]. Health promotion, as defined in the Charter, is the process of enabling people to increase control over, and to improve their health. The starting point is thus everyone's potential to do something to improve or maintain their own health.

The settings approach to health promotion is designed to initiate and provide scientific and managerial advice on how to organize and maintain organizational and social changes at a given workplace.

The principles set out in the Ottawa Charter adopted for workplaces are as follows:

- building healthy corporate policy
- creating a supportive working environment
- developing employees' skills which are conducive to health
- strengthening workforce action towards health, and
- reorienting occupational health services.

The essential quality of health promotion is promoting the direct involvement of people in maintaining or improving their own health. This is why the WHO Jakarta Conference on Health Promotion in 1997 [6] declared that health promotion, through investment and actions, acts on the determinants of health:

- to create the greatest health gain for people
- to contribute significantly to reduction of inequities in health
- to ensure human rights, and
- to build up social capital.

Health promotion at work has grown in importance over the last decade as employers and employees recognize the respective benefits. Working people spend about half of their waking hours at work; this provides an ideal opportunity for employees to share and receive various health messages and for employers to create healthy working environments.

The assessment of health promotion needs in an enterprise and the evaluation of work towards meeting them are the essential components of the management of workplace health promotion (WHP) [7]. For the development of this management, it is important to recognize the central role of empowering employees, in terms of competence and level of autonomy; to include a comprehensive understanding of health in company policies; to ensure the establishment of an enterprise-wide participatory infrastructure; and to enable employees at all levels to share their interests and expertise with the key players. Health promotion is a complementary strategy to occupational health, targeting different

health problems and their causes in the same population. It should not be used as a guise to shift responsibility for the protection of workers' health at the workplace from the employer to the individual worker. Health promotion is a voluntary activity, there is no legal requirement or mandatory infrastructure for enforcing health promotion in enterprises. However, in many leading enterprises occupational health multidisciplinary team uses this strategy.

WHP is the combined effort of employers, employees and society to improve the health and wellbeing of people at work. This can be achieved through a combination of:

- improving the work organization and working environment
- promoting employees' active participation in health activities
- encouraging personal development.

In the last few years, the European Union (EU) has paid serious attention to health promotion. A cornerstone of EU action in this field is the settings-based approach to health promotion at the workplace. The First Meeting of the European Union Information Network on Workplace Health Promotion was organized in Luxembourg in February 1996, and the November 1997 Luxembourg Declaration of the European Union Network for Workplace Health Promotion established the Liaison Office of the EU Workplace Health Promotion Info-Net at the Federal Institute of Occupational Health and Safety in Dortmund, Germany [8].

WHP is seen in the EU network as a modern corporate strategy which aims at preventing ill health at work (including work-related diseases, accidents, injuries, occupational diseases and stress) and enhancing health-promoting potential and wellbeing in the workforce.

Good practice in health, environment and safety management in enterprises

Many leading enterprises have recognized the relationship between health and the management of the working and ambient environment. As a result, health and safety audits are now combined with certain aspects of environmental audit into health, environment and safety (HES) audits. Good occupational health practice based on quality management should complement and support effective environmental management in enterprises and, in turn, be strengthened by dissemination of cleaner production technologies [9–13]. (Enterprise here means any public or private body which employs workers such as national or local government offices, private or public enterprises in any sector, non-profit organizations, etc.) It is important to remember that the socioeconomic framework created by national and local authorities determines to what extent and in what way the enterprises will have an interest in and a need to develop and implement adequate workplace health programmes. The possibility of externalizing the costs of work-related and workplace-preventable ill health by negligent enterprises creates a temptation among some employers to save money by lowering the standards of the working environment, failing to develop a health programme and avoiding contracting comprehensive occupational health services.

It may be expensive and is frequently unworkable to develop separate quality management systems in one company dealing with different aspects of overall management such as occupational health, health promotion, human resources management, product quality, production, budgeting, marketing and protection of the environment. An integral approach can provide companies with synergy and make it easier to implement all these aspects. Such a holistic and participatory approach to good practice in health, environment and safety management (GPHEM) in enterprises was prepared by WHO/EURO for the Third Ministerial Conference in

Environment and Health held in London in June 1999 (<http://www.who.dk/London99/Welcome.htm>) [14]. The London Declaration states:

We recognize the importance of instituting workplace measures to meet public health needs and goals, and the right of workers to be involved in the decision-making process on those measures. We will promote good practice in health, environment and safety management in enterprises, in collaboration with stakeholders in our countries such as local authorities, enforcement agencies, business (including small and medium-sized enterprises), trade unions, NGOs, social and private insurance institutions, educational and research institutions, auditing bodies, and providers of prevention services. We invite WHO and the International Labour Organization to work together to assist countries in developing processes, involving all stakeholders, for implementation of environmental practice which also promotes public health, and to develop close cooperation with the European Commission to assist the candidate countries for membership of the European Union to meet their obligations.

Good practice in HES management is a product of well defined policy and management in the areas of occupational health, WHP, environmental health and external environmental protection at the enterprise level. It also deals with the impact of the workplace on the health of the surrounding neighbourhood and with the health and environment impact of its products.

The prerequisites for GPHEM in the workplace are conscious and creative support as well as the fullest possible participation of senior management, employees and their trade union representatives. Management, working jointly with employees and their trade unions, needs to develop mutually agreed principles, processes and standards as the basis for the effective health, environment and safety management system. Management processes and procedures should be used as tools to achieve the objectives of GPHEM in enterprises. The adoption by industry of procedures for health and safety management and environmental management compatible with good management

standards can be helpful in GPHESM implementation. Some enterprises are already applying for, and obtaining, certificates to demonstrate that their managerial systems for environment and/or health and safety at work meet recognized management standards. However, there are alternative managerial methods of achieving high levels of GPHESM that do not require the adoption of formal quality management standards. GPHESM should be based on the voluntary and active participation of workers, their trade union representatives and managers in the development and implementation of its objectives, principles and processes with the technical assistance of appropriate experts. Such experts may be invited from, for example, occupational health services, environmental health services or health promotion agencies, preferably from occupational multidisciplinary preventive services. Workplaces should, however, regulate their own GPHESM by using voluntary auditing to certify that the reality agrees with declared policy statements and operational procedures as well as with applied quality standards.

SECTION 1. PROGRAMME BACKGROUND

Workplace health programmes

The promotion of working capacity and health at work should not be seen as something of interest only to individuals, to companies, or to workers in those companies. Health promotion at the workplace should be strongly supported by national health policies and programmes. Work ability and health promotion programmes at the workplace can be effective with little financial investment. The cost–benefits of such programmes are indisputable. This is why more enlightened companies have already understood that health promotion programmes are no longer a luxury but a necessity – a part of their basic strategy in improving productivity and efficiency.

The involvement of industry in demonstrating and proving good practice in health management could be a valuable supplementary measure in improving public relations with a surrounding community and with the general public. The adoption by industry of procedures compatible with GPHEM will, in fact, improve existing health protection and promotion practices.

Documented benefits for workplace health programmes include less absenteeism and cardiovascular risk, fewer musculoskeletal injuries and health care claims and lower turnover of staff, increased productivity and organizational effectiveness, and a potential return on investment [8,15–22]. However, these improvements are not necessarily long-lasting, and require the continuous involvement of employees, employers and society. The following findings have been made:

- Canada Life Assurance Company in Toronto showed a drop in absenteeism by 22%, i.e. 1.3 days per participant meaning a saving of about \$100 per employee [23];
- cardiovascular disease risk factors are reduced through regular exercise [17,23];
- the turnover rate is twice as high in sedentary as in physically active employees [20];
- by its second year, Du Pont's programme made a return of US \$2.05 for each dollar spent [18];
- the accrued benefits are short term and difficult to sustain over a long period, due to factors such as drop-out rates and changes in staff [23]; this suggests that companies should introduce programmes for the benefit of their staff rather than for financial reasons.

Health promotion is often caught in the wider health debate as to whether prevention or services should have the higher priority. The benefits of a health promotion programme that aims to modify risk factors are often judged by disease-specific outcomes only. In the present economic climate decisions are

made on the grounds of potential financial savings. This argument fails to recognize that health has an intrinsic value in itself and is worth paying for [24].

A number of models of “health” have been designed. For the purposes of this report, Collins’ conceptual model is the most appropriate [25]. It has two levels of health that are inter-related, individual and community:

1. at the individual level the psychosocial, microphysical, environment and behavioural environment and the work environment factors should be taken into account;
2. at the community level the political and economic climate, macrophysical environment, degree of social justice and equity, and extent of community control and cohesiveness should be included.

It is recommended that this model of health with its inter-related factors should be taken into consideration in the design of a workplace programme. The Prochaska and Di Clemente stages of change model should also be considered, as behavioural change should be one of the objectives of the programme [26].

Recognizing that participants in the programme will be at various stages of change, and linking the planned intervention to the community factors in the health model will increase the potential for a positive result. The stages of change model appears to be successful in producing short-term results, but clearly multiple levels of intervention that combine with social changes may result in long-term behaviour change for a greater number of people [26–31].

The benefits to employers and employees can therefore be summarized as follows:

to the employer

- increased productivity
- reduced absenteeism
- reduced health costs
- improved quality of work
- reduced turnover

to the employee

- opportunities for health
- job satisfaction
- increased self-esteem
- a feeling of wellbeing
- employability

The workplace provides a unique setting to promote a holistic approach to health within a supportive working environment. Employers should therefore be encouraged to adopt company policies on issues such as smoking, alcohol, physical activity and nutrition. Those that have taken account of health and safety directives should ensure that the working conditions are made as friendly and comfortable as possible.

They should also encourage their employees to take part in health programmes ranging from screening (cholesterol and blood pressure) to participatory programmes which could include seminars and organized events.

While the involvement and support of the employer is crucial to the successful introduction of a health programme, the role of occupational health professionals is equally important in its organization and implementation.

Quality workplace health programmes will make a significant contribution to reducing the incidence of coronary heart disease and help to address the inequalities in health caused by social, economic and environmental factors.

What is a programme?

A programme in this context is characterized by four important elements:

1. *it has written goals or objectives*: define the objectives before the programme is set up – without them, how can you know what you are trying to do?
2. *it has a person responsible for achieving the objectives*: a named person (s) responsible for the programme will ensure that its elements do not take place at random but as part of an agreed plan of action (annual performance appraisals can be used to monitor the work of the people involved in delivering the programme);
3. *it has a budget*: the programme needs organizational support and this should be clearly demonstrated by the allocation of an annual budget;
4. *it occurs more than once*: a health promotion programme is expected to have an impact on behaviour; one-off initiatives will not alter behaviour or working and living culture, so the programme should have continuity towards some definable outcome over a specified period of time.

What type of programme works?

Recent research in the United States compared the impact of different programme designs on cardiovascular risks. The study assessed the relative impact of different types of workplace health fitness programme on employee participation, regular exercise, and health risk factors. A control programme was compared to an equipment-based fitness programme, a counselling-based programme and a counselling plus organizationally supportive programme. The analysis indicated that the organizationally supportive programme had the best health outcomes [32].

Health benefits of regular physical activity

Evidence of the relationship between regular moderate physical activity and health has become irrefutable. Medical research has demonstrated the effectiveness of moderate levels of physical

activity in the promotion of long-term good health. The following are the most significant benefits. Physical activity:

- assists weight management: sensible eating and regular physical activity helps weight control;
- relieves stress and tension: there are significant psychological and physiological effects which improve mood and self-esteem and reduce anxiety and stress;
- helps maintain suppleness and flexibility: regular and varied physical activity involving different muscle groups contributes to flexibility;
- improves cardiovascular fitness: as fitness improves the heart rate is reduced, breathing is improved, the risk of coronary heart disease is lessened and hypertension may be reduced;
- increases endurance and boosts energy: regular moderate physical activity will develop endurance and provide reserves of energy;
- promotes mental relaxation: evidence shows that increasing stamina through regular physical activity will help an individual deal with stressful situations;
- delays the onset of osteoporosis: regular physical activity helps to strengthen bones and reduce the incidence of osteoporosis;
- promotes a feeling of wellbeing: even after a short time physical activity will help develop a feeling of wellbeing and a positive body image.

Factors that influence physical activity

A number of factors play an important role in our participation in physical activity.

The predisposing factors associated most with engaging in physical activity are motivation and confidence in ability to exercise. Predisposing factors possibly associated with a lack of

physical activity include lack of knowledge, the belief that exercise is unnecessary and negative attitudes towards exercise.

The enabling factors associated most with physical activity are flexible goal-setting, increasing daily physical activity and moderate, less strenuous exercise. Enabling factors possibly associated with continuing physical activity are accessibility to an exercise facility, low cost and environmental opportunities for physical activity.

Reinforcing factors associated with continuing physical activity include:

- positive exercise experiences that improve feelings of wellbeing;
- support from family and spouse;
- advice and recommendations by health care providers;
- advertising and media messages showing physical activity in a positive light.

What are the benefits to an employer?

Healthier employees mean a healthier workforce, raising real possibilities of:

- longer working life and healthy retirement for older staff
- reduced turnover of staff
- improved quality of work
- good public relations inside and outside the organization
- reduced sickness and absenteeism resulting in lower costs
- increased productivity and fewer accidents
- reduced stress among the workforce
- additional incentives when recruiting staff.

Examples of company programmes and evaluations

Blue Cross and Blue Shield of Indiana

Gibbs et al [33] compared health care costs for 667 participants in a comprehensive health programme with those of 892 non-participants at the same site. There was a 20% decline in absenteeism through illness by participants compared to the others.

Canada Life

Shepherd [34] compared results at the Canada Life Assurance company, which has implemented workplace health promotion, with a control company. There was a 22% decline in absenteeism through illness by Canada Life employees. Staff turnover was 1.8% among frequent participants compared with a company-wide average of 18%. Frequent exercisers had an absenteeism rate 22% less than that of others at the programme site or employees at the control site, and there was a gain in productivity of 7% at the company compared to 4.3% at the control site.

Du Pont

Bertera [18] compared changes in hourly workers' sickness days in the two years following implementation of a comprehensive health programme in 41 sites with 29 315 employees and 19 control sites with 14 473 employees.

In the second year changes over baseline showed a decline of 0.7 days per employee per year at the programme sites and 0.3 at the control sites.

Total programme costs averaged US \$48 per employee in the first year and US \$24 per employee in the second year. Savings were estimated by applying wage costs to the reduction in disability days, with the result that the programme was

estimated to have broken even in the first year and returned US \$2.05 for every dollar invested in the second year.

Johnson & Johnson

Johnson & Johnson's Employee Positive Health Programme "Live for Life" is designed to maximize employees' adoption of healthy lifestyles. While the primary goal is to reduce the cost of illness and operating costs its purpose is also to provide direction and resources to employees and their families that will result in healthier lifestyles.

Employees are introduced to the programme during a health screening. They can then attend a lifestyle seminar. Those who do, can go on to attend other lifestyle programmes which are offered in a variety of formats: group, individual consultation, self-help kits, etc. The programmes cover improved nutrition, weight control, fitness, smoking cessation, stress management and control of blood pressure. Non-monetary incentives are offered for sustained participation.

Holzabel et al [35] demonstrated significantly more favourable changes in employees' work-related attitudes (organizational commitment, working conditions, job competence) in participants in the "Life for Life" programme as compared to non-participants over a two-year period.

Tenneco Inc.

The goal of the Tenneco Health and Fitness Programme is to increase awareness of and commitment to positive health habits and to improve the quality of life in employees. The programme has six objectives:

- to increase employees' level of cardiovascular fitness;
- to increase employees' knowledge of positive health habits so as to reduce coronary risk factors;

- to obtain employees' ownership of the programme and promote responsibility;
- to motivate employees to improve and maintain their optimum standard of health;
- to develop these objectives in interested Tenneco divisions outside Houston;
- to encourage adherence to the programme by involving employees' families.

Thirty-six daily drop-in exercise classes are offered each week. Participants keep a log of their exercise activities through a computer-based system, recording the length and intensity of each activity and their body weight weekly. This system allows each employee to obtain a monthly report. Decreased participation is noted in the report.

Bernacki [36,37] found a statistically significant relationship between exercising and job performance among participants in the programme, and a trend for people who exercised to have fewer sick hours than those who did not.

Campbell's Soup Company

The "Turnaround Health and Fitness Programme" is open to all employees and their families. It includes a fitness programme, motivational programmes, behaviour management classes and lifestyle programmes. Everyone is screened before entering the programme for personal and medical history, blood tests, health risk assessment, lifestyle assessment, percentage body fat, flexibility, muscular strength and physical work capacity. The company has an incentive scheme including a monthly awards luncheon, and numerous department competitions. All programmes are offered at a fee that is subsidized by the company.

John Hancock Mutual Life Insurance Company

The “John Hancock Walkers” is a lunchtime walking programme for employees, their friends and families. The programme is designed such that members can either drop in or attend on a regular basis. The walkers are divided into slow, medium or fast, and each subgroup is led by a volunteer leader. The only expense is a pair of walking shoes.

Healthy People 2000: worksite objectives

In 1992 the National Coordinating Committee on Worksite Health Promotion in America carried out a survey to assess progress towards the achievement of the worksite objectives in Healthy People 2000: National Health Promotion and Disease Prevention Objectives [38].

The proportion of enterprises offering activities to promote exercise and fitness increased from 22% in 1985 to 42% in 1992. The targets for the year 2000 were established by size category. Worksites have already exceeded the physical activity and fitness objectives in each size category.

In 1992, the percentage of worksites with 50 or more employees that offered facilities, information or activities to promote physical exercise and physical fitness was as follows.

Worksites offering facilities:

- 24% offer changing rooms and showers
- 12% offer indoor areas for exercise and physical fitness activities
- 10% offer aerobic exercise equipment
- 9% offer strength training equipment
- 9% offer outdoor facilities.

Of the worksites offering any of the above:

- 10% charge employees to use facilities
- 41% offer information or activities to promote exercise or physical fitness

Of worksites offering information or activities:

- 20% offer fitness evaluation/testing
- 22% offer individual counselling
- 52% offer group classes, workshops, lectures, special events
- 61% offer recreational programmes
- 32% offer formal fitness challenges/campaigns
- 72% offer resource materials.

Qualities of a workplace health programme

To be successful, a workplace health programme needs to meet a variety of prerequisites:

- commitment from senior management to dedicate adequate resources (funding, personnel time, equipment and facilities); ideally, management should also show commitment by participating;
- commitment from employees to participate;
- a clear statement of philosophy, purpose and goals declaring the organization's commitment to motivate and assist its employees to practise healthier lifestyles;
- a process of assessing organizational and individual needs, risks and costs;
- leadership from well qualified health/fitness professionals in the programme's design and implementation;
- ability to address the specific needs of the employees and the organization;
- high-quality and convenience, motivating participants to achieve lasting organizational, cultural and behavioural changes;
- effective marketing to achieve and keep high participation rates;
- efficient operating and administrative systems;

- procedures for evaluating programme quality and outcomes;
- a system for communicating the results to all staff.

Even good programmes can fail:

- if there is a lack of commitment at any level of management
- if they are not accepted by the workforce
- if they are not appropriately resourced
- if they do not address the interests of the workforce
- if they do not result in behaviour changes.

Some arguments for and against

- **We can't afford it**

Can you afford not to? Sooner or later, avoidable health problems will prematurely end the careers of valued employees.

Perhaps you cannot afford a fitness suite. Elaborate equipment is not essential. Inexpensive lockers and showers are enough for a good exercise programme. Activities such as cycling or jogging require no facilities while (aerobic) exercise to music only requires suitable floor space.

- **Time off for physical activity will reduce productivity**

Research studies indicate that in fact the reverse is true: healthy employees work harder and produce more.

It may not be necessary for employees to take time off – some will exercise more outside work, in the evenings or at weekends, while others may come to work earlier or stay later to exercise.

- **None of the other employers in the area are encouraging physical activity programmes**

Why not take the lead? Companies around the world are becoming more interested in the health of their employees, which would not be the case if there were no advantages.

- **Only the fitness enthusiasts will participate**

Yes, enthusiasts will take advantage of facilities and opportunities offered by the company. However, they will be outnumbered if the needs of all employees have been taken into consideration in the planning. Good programming and word of mouth will lead others to get involved.

- **We might be liable for injuries or heart attack**

Everything a company does involves liability. Encouraging employees to become more physically active in a well planned, organized and staffed activity will minimize liability. Give quality advice to all employees and seek medical clearance for anyone who might be a potential risk.

- **Let's just tell them to keep fit**

The majority of adults exercise infrequently or not at all. Employers can provide the stimulus as well as the opportunity and do themselves a favour in the process. It is to their advantage to do so because sedentary living and its consequences cost a lot of money each year. Physical activity is a proved, inexpensive way to reduce those costs by improving the health of working people.

SECTION 2. PROGRAMME PLANNING: TEN STEPS TO IMPLEMENTATION

Step 1. Influence decision-makers

To be successful, a workplace health programme must have the support of senior management. However, in many cases the idea for a programme will originate with someone else either outside the company (government department, primary health care professional, occupational health officer, health or recreation professional or management consultant) or inside it (management, the occupational health or personnel department, an employee, the trade union or company sports club).

For the proposal to be accepted make sure that the important decision-makers support the idea from the start. This will require preliminary discussions with a number of people and departments and the drawing up of a proposal that will eventually be submitted to senior management.

Management must demonstrate a commitment to the programme and be prepared to respond to the major issues identified in the needs assessment and make sufficient resources (human, financial and material) available.

It is important that someone is identified very quickly inside the company who will drive the idea on and obtain management support and consultation. Such a person should have access to management, be well respected within the company, be a physical activity role model and be articulate and persuasive.

Step 2. Adopt a company policy

Employers who value the health of their workforce should declare their interest and commitment by adopting a company physical activity policy.

Many employers have already adopted health promotion policies covering areas such as smoking and alcohol. A physical activity policy should be a positive statement of intent in writing on behalf of the management. A simple policy statement would include:

- aims and objectives;
- a rationale for a physical activity policy;
- a statement of intent – for example: the company will:
 - promote and emphasize to staff the importance and benefits of regular, safe and appropriate physical activity;
 - expand and increase staff involvement in physical activity by (i) addressing employees' wishes for opportunities to exercise at work, and (ii) providing on-site exercise and shower facilities for staff;

- outline of the financial and human resources to be deployed by the company;
- outline of the way in which the company will undertake a continuous needs assessment, review programme design and content, and evaluate the success of the programme.

The policy should be drawn up by management following discussions with employees and their representatives. Every employee should receive a copy of the policy.

Checklist for steps 1 and 2

- | | |
|--|---|
| Is the company prepared to undertake the process necessary to establish a physical activity programme? | * |
| Is the company prepared to adopt a physical activity policy? | * |
| Is the company willing to undertake a needs assessment? | * |
| Is the company prepared to act on the results of the needs assessment? | * |
| Will the company adopt and publicize a policy on physical activity? | * |
| Will senior management play a visible role and participate in the programme? | * |
| Does the union (if applicable) support the programme? | * |

Step 3. Establish a committee to implement the programme

Irrespective of the level of intervention (see Step 5), the programme needs a coordinating committee to oversee its implementation. Good organization is crucial to the success of any programme so care must be taken to choose the right people. Select the committee to reflect the structure within the company but in general terms it should include the following:

- senior management;
- middle management;

- department representatives (e.g. maintenance, graphic design, occupational health, personnel);
- staff.

Roles must be clearly identified and decision-making routes agreed. Company policy will determine whether decisions affecting finance can be devolved to the committee or would require management approval. The committee will continually review the planning cycle:

needs analysis → programme design → implementation → evaluation.

Organize regular meetings so that problems can be solved quickly before they become major issues. A method of making day-to-day decisions should also be possible.

The committee is responsible for a number of tasks as the programme is implemented. These include:

- conducting a needs assessment;
- reviewing the results of the needs assessment;
- preparing a physical activity programme;
- developing, implementing and evaluating activities;
- communicating with management, union representatives and employees throughout the process;
- encouraging employees to get involved.

Checklist for step 3

- | | |
|---|---|
| Does the committee include members from all departments? | * |
| Does the committee meet on a regular basis? | * |
| Does the committee keep minutes? | * |
| Do the minutes include a record of decisions, actions, progress and budget? | * |
| Does the committee communicate with employees? | * |
| If yes, how? How frequently? | * |
| Are progress reports on programme activities given to management? | * |

How does this take place and how frequently?

*

Step 4. Carry out a needs analysis to assist programme design

It is important to have as much information as possible about a variety of factors before programme planning takes place.

Part 1

The company will have records that will be helpful in terms of levels of sickness/absenteeism, productivity and staff turnover. Analysis of this information may highlight departments which have particular problems and require specific programmes.

Information that can be obtained will include:

- about the organization
 - an organizational chart
 - location and number of company sites
 - departments/divisions
 - job categories
 - type of work
 - shift schedules
 - history of accidents and injuries
 - staff turnover
 - information on sick leave and long-term disability
 - grievances/disciplinary action;
- about the employees
 - sex
 - age
 - education
 - ethnic group
 - years of service.

Part 2

A survey should be undertaken to determine the needs and interests of the employees. Use this survey to determine present levels of awareness of issues such as nutrition and stress, current involvement in physical activity, preferred activities, location and method of delivery [41]. Some companies organize programmes which include families; identifying support for such an approach could be included in the survey.

To obtain the best information, ensure that the survey is voluntary and responses remain confidential. Care should be taken in drawing up the survey not to raise expectations, for example, if the company has decided to introduce a programme at intervention level 1, step 5, avoid questions that might lead employees to believe that a fitness centre will be provided. At least 50% of the employees should complete the questionnaire if the results are to be of any use.

Careful analysis of all the relevant information will help determine the content of the programme. Repeat the process regularly to make sure that programme content matches the needs of the employees.

Checklist for step 4

Before distributing the questionnaire, check progress against the following:

- Was the needs assessment questionnaire promoted among employees? Will the timing be affected by holidays, etc.? !
- Are special measures being taken to ensure that all employees (including shift workers) receive a questionnaire? !
- Did you identify communication methods for hard-to-reach audiences (e.g. employees who have a different first language)? !
- Has the questionnaire been endorsed by management? !

After distribution

Are you satisfied that the response rate is sufficient to validate the results? !

If the answer to any of these questions is no, the committee will have to decide whether to proceed to stage 5 or repeat stage 4.

Step 5. Determine the type of programme to initiate

This section deals with the levels of intervention possible and the resource implications rather than programme content. There are four levels of intervention that can be applied to workplace health programmes (Table 1).

Table 1. levels of intervention that can be applied to workplace health programmes

Levels of intervention	Examples of programme content	Cost
1 Communication and awareness programmes	Local physical activity events/ clubs/facilities Articles in company newsletter Posters Leaflets	Low cost
2 Screening and assessment programmes	Cardiovascular risk appraisal Fitness testing Cholesterol testing Blood pressure screening	Mid-cost approach
3 Education and lifestyle programmes	Seminars Exercise prescription Healthy back classes Aerobic classes Fitness contests	Mid-cost approach
4 Organizational, cultural and behavioural change support systems	On-site fitness centre Company sports teams	High cost

Level 1. Communication and awareness programmes

At this level employees are provided with information they can use to improve their health. The programme will raise awareness and generate further interest by giving a variety of messages promoting opportunities for activity. Posters, leaflets and newsletters can be used in addition to printed material, electronic mail, closed circuit television, PA systems, etc.

Level 2. Screening and assessment programmes

These programmes heighten awareness of health concerns by giving individuals personal profiles of their health and fitness habits. Assessments should be made at the start of a programme to identify employees who need specific activity programmes or medical advice.

Level 3. Education and lifestyle programmes

The third level provides solutions to the problems identified in the screening and assessment programmes. Participants receive individual advice which aims to ensure organizational, cultural and behavioural modifications – goal-setting, monitoring, problem-solving and social support.

Level 4. Organizational, cultural and behavioural change support systems

The fourth level deals with the company and how it can provide an environment which will support health and assist organizational, cultural and/or behavioural change. This includes both the corporate culture and the physical setting.

Step 6. Identify human and financial resources***Human resources***

When companies decide to introduce workplace health programmes they should be aware of the human resource implications. The company may already have expertise in a

variety of areas that would be beneficial to the project. Administration, finance, planning, design and occupational health are all areas in which most companies would already have staff.

Deploying staff to assist the programme will help to reduce costs and at the same time develop team spirit through bringing together staff who might not normally work together.

Financial resources

In the first phase, management should be prepared to make available sufficient resources to ensure that appropriate planning can take place. The level of funding will depend on the level of intervention. At level 1 the cost might be personnel time and programme materials only, which could be as low as 0.1–1% of the average monthly salary per employee. At level 4 the costs will be much higher and could include the involvement of external consultants and capital expenditure.

Step 7. Appoint programme staff and provide training opportunities

For a programme to succeed it is crucial that qualified staff are involved in organizing and implementing it. A named person should be responsible, supported by others who would form the Project Committee.

Staffing requirements are related to the level of intervention. A programme, which is aiming at making a behavioural change (level 4) will require more staff with a variety of expertise than an educational programme (level 1).

Some companies may have members of staff who could assume the responsibility for designing and implementing the programme. In most cases a suitably qualified person will not be available and a part-time consultant will need to be brought in who will also train other staff to take over. Ideally the person you are looking for will be a health or physical activity

professional with a knowledge of health education, nutrition, physical activity and recreation.

Large programmes will need the support of staff who can assist with the administration.

Freelance professionals can be brought in to deliver specialized sections such as stress management and weight management.

Step 8. Organize facilities and resources

The facilities and resources required for the programme will depend on the level of intervention, cost and programme content.

Level 1. Communication and awareness programmes

Human resources: staff to obtain and circulate relevant information, and design, write, produce and circulate company newsletter.

Facilities: access to company equipment and services, display areas to put up posters and printed resources and show videos, etc.

Level 2. Screening and assessment programmes

Human resources: staff qualified to carry out screening and assessment and able to offer counselling and advice.

Facilities: dedicated private area for screening and counselling.

Level 3. Education and lifestyle programmes

Human resources: staff trained to deliver the programme, with appropriate support in terms of leaflets, training charts, etc.

Facilities: suitably equipped dedicated activity space with changing and shower facilities nearby (avoid using space which will be used at other times of the day for work-related activities).

Level 4. Behavioural change support systems

Human resources: staff trained to deliver the programme, with appropriate leaflets, training charts, etc.

Facilities: an on-site fitness centre, dedicated activity space with changing and shower facilities – and a supportive environment throughout the company.

Checklist for steps 5, 6, 7 and 8

- | | |
|--|---|
| Has the programme clearly defined aims and objectives? | ! |
| Is the level of intervention in line with these aims and objectives? | ! |
| Have staffing needs been identified? | ! |
| Can they be met? | ! |
| If not, will appropriate action be taken? | ! |
| Are the financial resources appropriate? | ! |
| If not what action will be taken? | ! |
| Are the facilities available to support the level of intervention? | ! |

Step 9. Programme development

Ideas for programme content will be considered in section 3 but there are a number of important principles which should be addressed.

- The programme should be based on a needs analysis.
- Management should be committed and involved.
- Each employee will have different needs and interests so the programme should be varied.
- Look for ways to make the programme topical and seasonal.
- Get regular feedback from the staff.

-
- Do not raise expectations that the company cannot meet.
 - Only a few members of staff will take part at first so look for ways to attract more.
 - The programme should be marketed for fun and health, and not perceived as threatening or competitive.

Programme activities should contain the following components:

Component 1: Awareness

Awareness programmes can increase an employee's level of knowledge and/or interest in a programme. Awareness activities include:

- distributing printed information (leaflets, posters)
- providing self-test questionnaires
- publicizing activity groups in the company or the community
- organizing short talks to staff on a variety of topics.

Component 2: Skills development

Once their interest in physical activity has been aroused, it is important that staff are given the opportunity to develop the skills necessary to improve and maintain living and working cultures that promote healthy behaviour. Skills development can include:

- workshops in specific health topics;
- instruction in how to take part in a physical activity (such as walking programmes) in a fun and safe way;
- training in relaxation techniques.

Component 3: Maintaining healthy behaviour

Maintaining healthy behaviour depends on the existence of a supportive environment where individual advice is available and where groups develop for specific activities. Goal-setting and

awards/rewards are important elements in a successful programme.

Practical tips for programme development

Ask yourself whether the programme:

- has meaning – it should respond to identified needs;
- is easy to manage – it is simply and easily administered;
- is simple – its objectives, content and delivery are straightforward;
- is flexible – it offers activities to suit the location of staff and shift times;
- is efficient – time is crucial so activities must start on time;
- motivates participants – programmes will not work unless people are motivated;
- is fun – taking part in physical activity should be fun;
- involves the participants – staff should be involved in designing activities.

Checklist for step 9

- | | |
|---|---|
| Is the programme based on the needs assessment? | ! |
| Does the programme include activities that will be implemented immediately as well as more long-term plans? | ! |
| Has the programme been approved by the Project Committee? | ! |
| Did management approve the programme and allocate resources? | ! |
| Has the programme been marketed to the employees? | ! |

Step 10. Promote, implement, evaluate and review the programme

Promotion

Promotion is key to the success of a programme. Take care in deciding how you will promote the programme. Effective promotion will take into account the age of the workforce and how much they know about physical activity. Various methods can be used: internal mail, an insert in the monthly pay packet, posters, leaflets, department meetings, video, word of mouth, etc. Keep people informed and interested.

Implementation

Once the programme is up and running continuity is important. Avoid changing or postponing activities. This could occur if for example the Board Room was being used for an activity session at lunch times and was needed for a meeting. Give staff regular information on when and where activities are taking place.

Evaluation

Make sure that the programme content matches the needs and interests of the staff and adjust it accordingly. Evaluation is a vital part of the commercial side of the company and is equally important for the workplace health programme. Make sure that staff are also kept up to date with the evaluation as this will reinforce the value of the programme.

Two forms of evaluation should be employed.

- 1 *Process evaluation.* This applies to the programme as it is happening and enables the project committee to answer questions such as whether the programme is well managed, how many people are involved, and whether the facilities are suitable. This information can be obtained from attendance lists and evaluation forms.
- 2 *Outcome evaluation.* Evaluating the impact the programme has on the participants will enable the company to look at

changes such as health practices, company policies, absenteeism rates and staff turnover. This information can be obtained by surveying staff and monitoring company records.

Review

The committee should periodically review the progress of the programme to ensure that it is operating satisfactorily and that employees' needs are being addressed.

At least once a year the committee should review steps 4 to 9.

Checklist for step 10

- Is the company management still committed to the programme? !
- What is the status of the committee? Are members still attending regularly? !
- Is it time to carry out another needs assessment? !
- Have there been any significant changes that warrant a change in the level of intervention or programme content? !

SECTION 3. DESIGNING A PROGRAMME

General features

Before looking at ideas for programme content, you should consider some general features.

- Everyone should be encouraged to participate at his/her own level of ability and knowledge.
- Participation should be emphasized over competition.
- Participation should be recognized by incentives and awards.
- Spouses/partners and family members should be involved when appropriate.

-
- The focus should be on increasing physical activity as part of daily living.
 - Only realistic expectations should be created.
 - People should be educated about ways to exercise and avoid injury.
 - Community facilities should be used.
 - Specific risk factors (e.g. those for heart disease) should be targeted.
 - Occupational health staff and doctors should be involved.
 - Programmes should be modified to suit the abilities and health status of individuals.
 - Individual counselling should be provided to address specific concerns.
 - Special times should be scheduled for people with medical problems.
 - Group activities should be included in addition to individual activity.
 - There should be a wide variety of programme options.
 - The organizational environment should be changed to encourage participation i.e. flexible lunch and break times for employees to exercise.
 - Liability issues with the organization's insurance company should be addressed.
 - Use should be made of programme staff with a background in the health and fitness field and who have strong motivational and organizational skills.
 - Easily accessible physical activity facilities should be provided.
 - The company should be permanently committed to the programme.

Screening, assessment and counselling

Screening

Programme planners should consider using some simple and easy methods to administer health screening tools covering areas such as nutrition, alcohol, smoking and physical activity. Screening will help staff to get an overall picture of their health and what they need to do to improve it. Screening tests should be administered by a trained health or exercise professional who can give any counselling that might be required [40].

Assessment

Physical fitness assessments will help to identify staff who need specific activity programmes or medical advice before starting an activity programme. Fitness assessments involve aerobic capacity, flexibility, muscular endurance, and muscular strength and body composition.

Based on the results of the fitness assessment an employee can be given specific advice in terms of any areas of functional decline. Re-testing is recommended at regular intervals to measure progress and as a way to motivate the person.

Counselling

Individual counselling should be available to each employee following a screening and assessment programme. A counselling session should result in the development of an individual programme for the person concerned which takes into consideration the activities that are available, the time and interests of the person and the barriers to participation which he/she might face. Repeat counselling should be available to measure progress and review the recommended programme of activity.

Encouragement

A little encouragement might be all that is required. Here are some suggestions that will motivate people to get started and to continue.

Name an activity/programme

Ask staff to suggest a name for the programme or activities, then ask them to select the best one; use this in publicity material, for example on T-shirts.

Programme rewards

Give awards to employees for achieving set goals, such as for accumulating a set distance over a number of weeks by jogging, walking or swimming.

Employee who participates the most

Develop a points system for staff based on the activities they undertake as members of the programme.

Employee of the month

Recognize the contribution that an employee makes to the programme – display their photograph, award a certificate, etc.

Health days, weeks and months

Throughout the year there are a number of (inter)national health days and weeks such as World Health Day, No Smoking Day, Alcohol Awareness Week and Healthy Eating Week. Find out when they take place and build them into the programme by holding an exhibition, providing information or organizing special events.

Alternatively, decide for yourself a theme for each month and develop the programme to focus attention on each topic.

Activity breaks

Being active regularly is the key to good health. This does not only mean jogging and aerobics. Find five minutes each day to stretch and release the tensions of a long meeting or day at work.

Exercises will help people to relax and stretch tense muscles. They can be organized as a group or individual activity.

Group workout – Stretches can be taught by a voluntary leader in an office or on the factory floor during a break or at lunch-time.

Individual workout – Employees can be given workout sheets, or if they use a computer terminal it could be provided as a visual programme on the screen.

Providing information

Keeping staff informed about activities and motivating them to be involved is vital to the success of the programme. There are a number of ways to maintain communication. Here are examples which your company might use.

Programme newsletter

If finance is available, a monthly newsletter is the most successful method of mass communication. You could choose different themes for each month or week and make them the focus for each newsletter. You could also include exercises to do at home, low calorie recipes, news of forthcoming events and recognition of good achievements by participants.

Posters

Posters are an obvious method of communication. They should be well designed, colourful and displayed in a prominent place, particularly if they have to compete with other company notices.

Information boards

Put up information boards for the programme in strategic places around the company. Keep the information up to date by regularly checking and replacing posters and flyers.

Pay packets

Include programme information in employees' pay packets.

Staff meetings

Include an information item on agendas for all meetings held in the company.

Videos

Get hold of some educational videos and play them in the canteen or in areas of the workplace where the employees spend free time.

Seminars

An effective and low-cost approach to encouraging healthier lifestyles is to organize short information seminars for staff. These could be held at lunch-time or during the day if staff were allowed to attend. A variety of subject areas could be considered such as:

- healthy living
- care of the back
- healthy eating
- weight management
- stress management
- smoking cessation
- alcohol levels
- advice on exercise.

Although some people may not want to enter an activity programme straight away they might attend a seminar and be willing to get involved at a later stage. For example, a person

might have lower back pain, attend the back care seminar and then decide to enter the activity programme in order to get help in strengthening his or her back.

Cross the country, climb a mountain, swim a river

Develop a programme in which participants record the distance they exercise in terms of travelling across the country or around the world, climbing a mountain or swimming up a river. Set a number of kilometres for each kilometre of activity undertaken e.g. 5–12 minutes walked = 1 kilometre. Put a map on the notice board so that individuals can see how far they have got. Give rewards or incentives when people reach intermediate targets, such as laces for training shoes, a sweat band, a T-shirt, a sweat shirt, certificate or a free swim at a local swimming pool.

This type of programme is particularly good for motivating people to exercise a number of times a week rather than once. Try to devise a scheme which allows participants to get involved in a variety of activities such as walking, jogging, swimming, cycling or cross-country skiing.

Lunch-time

Lunch-time activity club

The lunch period is a prime opportunity for employees to be involved in physical activity. Some employers encourage participation by allowing staff who are active to have an extended lunchtime. People can do a wide variety of activities in a half hour period, such as walking, jogging, swimming, cycling, fitness workouts, a stretch class or a relaxation class.

Lunch-time walking club

Organize the club so that it starts at the same time (noon), from the same place, on the same day(s) each week. Remember the importance of continuity.

Plan a route that takes 20–30 minutes to walk at a brisk pace. Try to find walks that are interesting and can be easily varied.

Provide voluntary leaders who will take groups according to ability, to ensure that people can enjoy the experience rather than be put under pressure from faster and fitter walkers.

Give people maps because they like to know where they are going, organize a competition for walkers to plan new routes, encourage continued participation by linking the walks to the ideas included in the section entitled Cross the Country, Climb a Mountain, Swim a River.

Walking is one of the easiest activities to organize because it is cheap. All that participants need are good comfortable shoes and some protective clothing if it rains.

This is an example of an activity which could be extended to other activities.

Special programmes

Individual programmes

Some people may prefer to exercise alone, although evidence shows that this is not as successful in the long term as participating in a group. A person may, however, prefer individual activity for a number of reasons, some to do with body image or the time he or she has available. (There will, of course, be people who will combine group activity with additional individual activities.)

Individual programmes should be built around the person's interests and available time. It is particularly important for people exercising on their own that the activities are enjoyably varied and that they achieve the goals that are set.

When helping someone who wants to exercise alone, begin with small lifestyle changes, such as walking up stairs rather than taking the lift, or walking to the shops.

Over 45 programmes

In a large company with a mixture of ages, some people (particularly women over 45) may be reluctant to get involved because they may not be able to keep up with younger colleagues. Creative programming will ensure that everyone can be involved.

Remedial programmes

Two occupational hazards associated with sedentary jobs are creeping obesity and lower back pain. Remedial programmes to counteract or prevent these problems are a good adjunct to a workplace physical activity programme.

Activity challenges

Individual company

It is possible to organize a group activity and at the same time give an opportunity to each individual to take part in a fun, non-competitive environment and achieve a personal challenge.

Set times for a 5 or 10 km run where individuals try to reach either a gold, silver or bronze standard for their age group. It does not matter who comes first but rather the standard each person achieves. The trick to attract large entries for such an event is for the bronze standard to be achievable by someone walking the distance while the gold standard should be at a level achievable by a fun runner, and thus of limited interest to club athletes.

Use the same approach to organize cycling, walking or swimming events. This removes the element of competition and creates an enjoyable environment in which everyone is a winner.

Corporate challenge open to others

Develop a corporate challenge open to other employers in your area, involving a variety of intercompany individual or team events.

Week-ends away

Week-end outings can be arranged to bring staff together in a social environment that encourages interaction and team-building. Various activities can be considered, depending on availability and interest: cross-country skiing, walking, cycling, canoeing, sailing, etc. Accommodation need not cost too much if participants are willing to camp or use youth hostel or outdoor activity centres.

Fresh air break

Encourage staff to go outside at least once a day for five minutes for some fresh air. Going outside will break the work routine and will be particularly valuable to people involved in repetitive work.

Send staff a memo encouraging them to go outside during a break.

Sports and recreation clubs

A natural development of encouraging employees to be more physically active will be that a number of them will want to organize sports clubs for activities such as football, hockey, squash or volleyball. Help them to form a club and participate in local leagues. Such clubs will develop team spirit among the workforce and will raise the profile of the company in the community.

Contact the clubs in your area and find out what opportunities there are. Contact other companies in the area as well to find out if they might be interested.

Use of local community facilities

Small companies which are not in a position to provide exercise equipment or facilities should consider giving staff membership of local community facilities. Talk to the manager of the facility and negotiate a rate for your employees. Determine whether your company will pay the full membership fee or a part of it.

Promote the opportunity among your staff and introduce a scheme to ensure that they use the facility by keeping record cards. Review the agreement regularly to ensure sufficient uptake by staff.

Active living

As a first step to being physically active encourage people to build a little bit more activity into the day. There are a number of ways to do this, such as:

- walk up the stairs – close down the lifts;
- encourage staff to be more active around the workplace;
- put up posters beside the lifts and stairs to encourage people to walk up the rather than use the lifts;
- provide car parking space away from the workplace so that staff have to walk for a short distance;
- encourage staff to get off the bus a stop further away.

SECTION 4. FACILITIES

Levels of intervention have been described in section 2, step 5. Physical fitness programmes at levels 1 and 2 require no specialized facilities and at level 3 they only require suitable floor space. Level 4, however, requires specialist equipment and facilities on- or off-site.

While on-site facilities are the most conducive to ensuring a successful programme, many employers will not be in a position to invest in such a facility.

Some general comments should be considered when determining programme facility needs.

Programme objectives

1 *Cardiovascular fitness.* Aerobic activities such as step aerobics, exercise to music, walking, jogging require little in the way of specialist facility provision. A running track, tread mills or exercise bikes could be considered if facilities and finance permit.

2 *Muscle strength and endurance.* No special equipment is needed, but if resources permit think about obtaining a multigym, sit-up boards and free-standing weights.

3 *Flexibility.* Very little space or equipment are needed: a thick carpet or mats are generally all that is necessary.

Changing facilities

Showering and changing facilities should be provided where any moderate or vigorous activity is offered. People returning to their jobs after exercise should feel comfortable and refreshed.

Accessibility

The facility should be as accessible as possible to the participants. If the facilities are not on-site they should be a short walk, drive or bus journey away.

Finance

The facility must be designed so that costs are not prohibitive. Whether the programme is funded by the company, the staff or a

combination of the two, the cost must be such that anyone wishing to become involved in the programme may do so.

Location

Off-site – programme organized by outside agency

Where an off-site facility is used it is important that the time and effort required to get to the facility is minimal. Institutions such as universities and community centres may be able to offer programmes to groups or to absorb participants into their existing programmes. Some organizations provide company packages which allow their facilities to be used by a number of participants at various times.

Off-site – programme organized by the company

Suitable facilities might be available in the community that could be adapted, such as a school gymnasium/classroom or a vacant building. Depending on the expertise of those planning the programme, an outside consultant may be required.

On-site

Because of its convenience, a programme at the workplace will generally be much more appealing to the participants. Three types of facility should be considered.

1. *Individual exercise room.* Turn an office, meeting room or store room into an exercise room. Areas as small as 300 sq ft (35 m²) can be used providing participants are scheduled so that workouts can be completed with a minimum of waiting time.
2. *Group exercise room.* Where group exercise is planned a space of at least 1600 sq ft (ca. 210 m²) is necessary. The larger the area the better. Participants need room to move freely without running into pillars, walls or each other. The floor surface should be suitable for physical activity – avoid

concrete or tiles. If space permits, individual exercise equipment could also be in the room.

3. *Full fitness suite*. A costly option which might include:
- a running track with individual and group exercise space inside or adjacent to the track;
 - squash, racquetball or tennis courts;
 - a swimming pool, whirlpools and saunas.

If the provision of the facility is expensive it might be possible to recoup some of the costs by opening them to the community, but in this case more changing facilities would have to be provided to accommodate larger numbers of people.

Additional considerations

Careful consideration should be given to ensuring that the area has a pleasant *environment*: it should be well lit and the carpeting should be durable where there will be heavy traffic. Walls can be made attractive through the imaginative use of paint and wall coverings. Ventilation and heating will also help to create a warm and supportive atmosphere.

All physical activity facilities should conform to *health and safety regulations*.

There should be suitable *first aid facilities* near any physical activity. Minimum provision would be a first aid kit, a first aid manual, a bed and a telephone with emergency numbers attached.

The presence of a trained health professional with access to equipment such as defibrillators is important when programmes include *people* who might be *at risk*. Regardless of the type of programme everyone involved in running or supervising

activities should be trained in first aid and in cardiac pulmonary resuscitation. Refresher courses should be held every two years.

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Annex 1

FACTS AND FALLACIES

Regular physical activity helps to reduce stress

True: Stress causes many physical reactions (increased heart rate, tense muscles, increased adrenalin, raised blood pressure, etc.) so the best way to reduce stress is to reduce these physical responses when they occur. In other words do some physical activity.

Being physically active is only for those who want to train for a specific goal

False: Activity is for everyone. How else will you cope with unexpected activities such as climbing the stairs because a lift has broken down, or pushing a car that has broken down?

Physical activity is for young people

False: There is a functional decline by age if you are inactive. Physical activity is for everyone, no matter what age you are. The only thing that changes is the intensity.

Physical activity will help lose weight

True: Physical activity which is aerobic will help to burn off fat and, when combined with a healthy diet, will result in weight loss.

You should not exercise when you have had a hard, tiring day at work

False: Physical activity injects oxygen into the body which increases your heart rate and blood pressure, all of which help to re-energize the body.

Exercise classes are boring

False: One class might be, so join another. Physical activity is a social activity and should be fun.

Physical activity can be expensive

False: It doesn't need to be. Many activities are available at low cost or free.

You can vary your activity

True: Variety is a sure way to keep motivated. If you are exercising to stay healthy it doesn't matter which activities you do as long as you are active.

Regular physical activity reduces cholesterol levels and high blood pressure

True: Physical activity has a positive influence on high cholesterol levels and blood pressure.

Diabetics should be physically active

True: Regular physical activity reduces the complications of diabetes and leads to a reduction in the daily insulin dose. Get advice from a health professional before starting an exercise programme.

Aerobic exercise strengthens the heart and makes it more efficient

True: Aerobic exercise makes the heart work harder over a long period of time. The heart then adapts to the exercise, becomes stronger and has a lower resting heart rate. Examples of aerobic exercise are running, cycling and brisk walking.

Physical activity is a good way to control blood pressure

True: Physical activity makes the heart work efficiently and keeps the arteries relatively clear, thus reducing the build-up that might occur on the artery walls. An efficient heart will cause the blood pressure to stabilize and actually drop. Many health professionals recommend an exercise programme as a first step towards controlling blood pressure before going on medication.

People with back problems should avoid physical activity

False: People with low back problems should be active. Many problems are caused by lack of strength and mobility. Consult a health professional as to what types of exercise to do.

Physical activity counteracts the negative aspects of smoking

True: Smoking causes damage to arteries and the heart, and causes cholesterol and fat levels to rise. Physical activity has a positive effect on the heart and blood so it will counteract the bad effects of smoking if the individual stops smoking.

No pain, no gain

False: If you experience any pain during physical activity, stop immediately and rest. If the pain persists, seek advice from a health professional. After exercise it is normal for muscles to feel sore for a day. If they hurt for several days, you overdid the exercise.

Weight training is a good way to improve the cardiovascular system

False: Weight training will improve muscular strength and should be accompanied by an aerobic programme.

Moderate physical activity five times a week will keep you healthy

True: The recommended prescription is to accumulate thirty minutes of moderate activity on at least five days per week.

A warm-up is not important

False: Before any physical activity everyone should warm up their muscles through stretching exercises and whole body movements.

Strength exercises are only for those who want to use machines or build muscles

False: During daily living there are many occasions which demand strength such as carrying groceries or carrying heavy things upstairs.

Pregnant women should not be physically active

False: Staying active is important to avoid excessive weight gain and complications during pregnancy. Consult a health professional for advice on which exercises to do.

A fitness evaluation is an important starting point

False: Start by doing things that are interesting and enjoyable. A fitness test will help you find out where you are and measure your progress during an exercise programme.

It is important to use proper footwear and equipment

True: Always use the footwear and clothing designed for the activity.

50 sit-ups a day will get rid of excess fat around the stomach

False: Fat cannot be burned off in certain areas by doing exercises for that area only. You must get involved in general physical activities that involve continuous activity such as cycling, fitness classes, swimming, jogging or walking.

*Annex 2***THE WALK-TALK TEST**

Beneficial physical activity should be undertaken at a moderate level. A simple way to determine the level at which you are exercising is the talk test. During an activity session, you should be able to talk while you are exercising. If you are too out of breath to talk you are exercising too hard.

The Walk-Talk Test

Start with a good warm up.

Follow your walking programme.

Walk so you can talk.

If you want to move more strenuously, walk fast enough so that you are slightly out of breath and perspiring, but not so that you are in distress.

Slow down but do not stop if you are out of breath or if you are tired. Increase the distance walked only if you feel comfortable at the previous level.

If your breathing is not back to normal within three minutes of stopping exercise, your training session is too difficult.

If you have problems breathing, experience dizziness, a loss of coordination or chest pains, stop your exercise immediately and contact a health professional.

Annex 3

**EATING AND LIFESTYLE HABITS QUESTIONNAIRE –
PREVENTION OF CARDIOVASCULAR DISEASE**

Circle the answers that correspond most closely to your normal dietary/lifestyle habits, then add up your points at the end.

Part I: Food habits	<i>Points</i>
<i>1. Milk products</i>	
whole milk or high fat cheese (>15% milk fat (mf) or ice cream, or cream or high fat yoghurt (>3% mf)	1.0
partially skimmed milk, low fat cheese (<15% mf) and yoghurt (<3% mf)	0.5
skimmed milk and low fat cheese (<15% mf) or partially skimmed milk and extra lean cheese (<7% mf)	0
<i>2. Eggs</i>	
7 or more per week	1.0
3–6 per week	0.5
fewer than 3 per week	0
<i>3. Red meat</i>	
<i>a) Cuts/portions</i>	
regular cuts or large portions for 5 or more meals with meat per week	0.5
lean cuts and normal portions and fewer than 4 meat meals per week	0.5
extra lean cuts and normal portions and fewer than 4 meat meals per week	0
<i>b) Do you trim the visible fat off your meat?</i>	
rarely or never	1.0
sometimes	0.5
almost always	0
I do not eat red meat	0

4.	<i>Unbattered fish</i>	
	never, sometimes	1.0
	1–2 times per week	0.5
	3 times per week	0
5.	<i>Chicken – do you remove the skin?</i>	
	never	1.0
	sometimes	0.5
	usually	0.5
	always	0
	I never eat chicken	0
6.	<i>Sandwich meat</i>	
	3 times per week	1.0
	1–2 times per week	0.5
	never	0
7.	<i>Pastries (muffins, doughnuts etc.)</i>	
	regularly 5–7 times per week	1.0
	3 times per week	0.5
	sometimes or never	0
8.	<i>Fat (oil, butter, margarine, salad dressing, mayonnaise)</i>	
	7 teaspoonfuls a day	1.0
	4–6 teaspoonfuls	0.5
	5 or less teaspoonfuls a day	0

Part II: Lifestyle habits

9.	<i>Blood pressure</i>	
	>159/94	2.0
	140/90–159/94	1.0
	<140/90	0
10.	<i>Physical activity</i>	
	sedentary	2.0
	active (1–2 times per week)	1.0
	active	0

<i>11. Smoking</i>		
>2 packs a day		3.0
1–2 packs a day		2.0
1 pack a day		1.0
1–10 cigarettes a day		0.5
none		0
<i>12. Diabetes</i>		
yes – insulin-dependent		1.0
yes – not insulin-dependent		0.5
no		0
<i>13. Heredity</i>		
Has anyone in your family experienced a heart attack or stroke before the age of 60 years?		
yes, parents, siblings, grandparents		1.0
yes, uncle/aunt, cousins		0.5
no		0
<i>14. Gender</i>		
Male		1.0
Female		0
<i>Total number of points</i>		<hr/> <hr/>

Outcome of questionnaire

Points:

- 0–3 Very low risk
Keep up the good work. Your risk factor profile is excellent.
- 4–7 Moderate risk
You are not in danger but you should take steps to modify a few bad habits.
- 8–12 Moderately high risk
Your risk of cardiovascular disease is high. Look at ways of lowering your risk to a more acceptable level.
- 13+ Very high risk
Consult a health professional to draw up a programme to modify your lifestyle.

*Annex 4***PLANNING MODEL FOR A WORKPLACE HEALTH
PROMOTION PROGRAMME****Part I – Establish a staff committee**

- Invite representatives from each department for the staff committee.
- Define objectives for the staff committee.
- Determine a budget for each element of the programme and the source of funding.
- Set dates and times for regular meetings.

Part II – Identify the interest in workplace health promotion in the enterprise

- Develop a method to audit the needs of the enterprise and the employees.
- Distribute the audit – set a date to receive completed forms.
- Collect, analyse and prepare a report on audit results.
- Discuss findings with staff committee.

Part III – Develop the WHP programme*Promotion*

- Establish a budget for media to be used (posters, leaflets newsletter, etc.)
- Design, print and distribute materials.
- Evaluate impact of resources.

Programme steps: Level 1 – Awareness

- Use audit to identify needs and obtain information for external agencies.
- Develop internal resources where appropriate.
- Disseminate information and evaluate at regular intervals.

Programme steps: Level 2 – Education

- Develop and implement education programme based on results of audit.
- Evaluate each element of the programme.

Programme steps: Level 3 – Implementation

- Set start date, venue and resource needs for each element of the programme.
- Evaluate each element of the programme, consider changes, and continue.

Annex 5

PROGRAMME ACTION PLAN

Identify programme objectives

Information: What do you want staff to learn from participating?

Skills: What do you want staff to be able to do as a result of participating?

Attitude/behaviour: What beliefs or values about health do you want staff to adopt?

Environment and policy: What environmental and policy changes do you feel should take place as a result of a commitment to introduce physical activity programmes in the company?

Brainstorm ways to achieve the objectives

Divide each objective into three components

Objective	Awareness	Skills development	Maintenance
Information objectives			
Skills objectives			
Attitude/behaviour objectives			
Environment and policy objectives			

Resources

	Internal	Community
Human		
Financial		
Printed/audiovisual		

Duration and times:

duration:

times:

Other details: _____

Company profile

1. Age distribution (enter number of employees)

Under 30	!
30–39	!
40–49	!
50–59	!
60 and over	!

Comments: _____

2. Education level (number at each level)

Grammar school only	!
High school	!
College/university	!
Postgraduate	!

3. Language spoken (employee's first language)

Native language	!
English	!
German	!
Russian	!
French	!
Spanish	!

4. Sex

Male !
 Female !

Programme assessment

1. List the key features of the programme
2. What should employees know about the programme?
3. What will employees want to know about the programme?
4. Are there any features that should receive special attention?

Company communication

1. List the means by which you plan to communicate with employees.
2. List the resources/skills you will need to develop the communication materials.
3. List the skills (if any) that you will have to buy in to the company?

Sample timetable for communication plan

Week	1	2	3	4	5	6	7	8
1. Meet designer and develop theme to be used in communication materials		_____						
2–3. Write a first draft of communication materials			_____					
4. Finalize first draft				_____				
5. Design communication materials					_____			
6–7. Arrange printing						_____		
8. Distribute communication materials							_____	

Programme evaluation

Example of poster campaign

Objective	Evaluation	Results
<p>To find out how many employees noticed the posters.</p> <p>To find out whether employees shared the ideas in the posters with other at work or home.</p>	<p>Volunteers surveyed staff through informal discussions recorded on a pre-set form with questions such as: Did you notice the posters? Which poster stood out? Would you like to see more poster campaigns? Why/why not?</p>	<p>100% of the staff surveyed saw the posters. 89% liked them. 80% discussed ideas with colleagues. 60% mentioned the posters at home.</p>
<p>To find out whether employees remembered the posters three months after they had been removed.</p> <p>To find out whether the posters had an impact on employees' attitudes three months after they had been removed.</p>	<p>Survey of employees through informal discussions recorded on pre-set form.</p>	<p>75% remembered the posters. 65% indicated that the posters were having a continued impact on their attitudes.</p>

Activity evaluation questionnaire

Activity _____

- Is the programme offered based on the results of the needs assessment? !
- Does the activity include components such as:
- social support? !
 - increasing employees' sense of control over their own health? !
 - involving employees in the design of the programme? !
- Does the programme address differences in age, sex, ability? !
- Who can participate? (full-time, part-time, family, community) !
- How many employees have taken part? !
- What is the attendance rate for the activity? !
- When is the activity offered? !
- Where is the programme offered? !
- Is there a cost to the participants? !
- Are there incentives/awards? !
- How was the activity promoted? !
- Was senior management involved in the activity? !
- Was there an opportunity for employees to evaluate the activity? !
- Is there a mechanism to evaluate changes in employees' attitudes to health and health behaviour after the programme? !