Research Paper

Physical Education



* Mr. Kalidas Karak

* PH.D SCHOLAR & LECTURER, S.B.S.S MAHAVIDYALAYA, GOALTORE, PASCHIM MEDINIPUR, PIN-721128

ABSTRACT

Men and women of all ages can improve the quality of their lives through a lifelong practice of regular moderate physical activity. Researches indicate that physical activity need not be strenuous to achieve real health benefits. A regular, preferably daily routine of at least 30-45 minutes of brisk walking, bicycling, or even dancing will reduce the risks of developing coronary heart disease, hypertension, colon cancer, and diabetes. Moreover, regular physical activity can reduce symptoms of depression and anxiety; help control weight; and help build and maintain healthy bones, muscles and joints. Physical activity is a natural, relatively safe, cost-effective intervention with few unwanted side effects.

Keywords : Brisk Walking, Bicycling, Dancing, Hypertension, Depression & Anxiety

Introduction:

Fitness is a very broad term and has various concepts. Total fitness looks at the overall individual, combining the absolute levels of physiological, psychological, social and cognitive fitness. Our nation is becoming more concerned with physical fitness. People want quality in life, and adults particularly, are becoming more concerned about their health and fitness life style. Physical activities promote physical fitness. Awareness about the importance of physical activity is a step forward to acquire required level of physical fitness. My presentation goes with the above stated direction.

The Dimensions of Physical Activity:

Physical activities have five dimensions or components: intensity, frequency, duration, type and context. It is not possible to determine physical activity level by looking at these determinants in isolation.

i. Intensity:

Intensity refers to the physical effort required to perform the activity, and is categorized as light, moderate or vigorous. It is expressed in absolute (objective) or relative (subjective) terms. Absolute intensity is the rate of energy expenditure during the activity session and is typically expressed as the rate of oxygen uptake. But most physiological responses to exercise are dictated by the relative intensity, which is influenced by factors such as age, gender, weight, disability, and fitness level.

ii. Frequency:

Frequency refers to how physical activity is performed and is measured as the number of days or sessions the activity is performed within a particular time period (per day, week, or month)

iii. Duration:

Duration describes the amount of physical activity performed within a set time period (e.g., activity session, per day, last 7 days, usual week or last year) and is typically expressed in hours or minutes. Factors such as age and intensity will influence the duration an activity is performed.

iv. Type (Mode):

Type (Mode) of activity refers to the specific activity itself (e.g., walking, cycling, tennis), but can also be classified into

broader types of activity categories (e.g., aerobic, anaerobic, weight bearing or non weight bearing, resistance or strength activities). Factors such as health, income, social and environmental surroundings will influence the type of activity chosen by an individual.

v. Context:

Importance of Physical Activity

Physical activity contexts refer to the purpose or circumstances under which activities are performed. Three main physical activity domains have been identified by the World Health Organization:

- Leisure-time sport and recreation
- Occupation
- Transportation

The threshold level of physical activity required for health depends on the health conditions that an individual has or is at risk of having. For example, obesity depends on calories expended, osteoporosis depends on weight-bearing activity and coronary heart disease depends on cardiovascular fitness. Physical activity guidelines have been developed to promote the role of physical activity for cardiovascular health. For cardiovascular health, at least 30 minutes of moderate-intensity physical activity on most, if not all, days of the week is required.

Definitions:

Physical activity: Any bodily movement produced by skeletal muscles that results in energy expenditure. It comprises duration, frequency, intensity, type and context (Caspersen et al 1985).

Exercise: Exercise is a subset of physical activity that is distinguished by being done to improve or maintain physical fitness or health. Exercise can be done at a variety of intensities but often means vigorous activity. It can include moderate-intensity walking.

Physical fitness: A combination of several components, each specific in nature, to improve and maintain health and physical state of the body. It is the ability to carry out daily tasks with vigour and alertness without undue fatigue and with ample energy.

Importance of Physical Activity:

Being physically active is a natural activity. As a result of massive social, environmental and lifestyle changes over the years, human beings no longer have to be as physically active as they used to be, to the extent that it is damaging health. The promotion of physical activity fits clearly to focus more on preventive health. Developing supportive environments and lifestyles that promote participation in physical activity will lead to the prevention and modification of many non-communicable diseases. Physical activity reduces the risk of death or ill health from many non-communicable diseases and conditions, especially:

- cardiovascular diseases
- some cancers
- diabetes
- osteoarthritis and osteoporosis
- falls in older people
- obesity
- mental health (depression and anxiety).

Physical activity generally benefits health by acting on the intermediary physiological factors that affect health status (eg, heart rate, blood pressure, oxygen uptake and metabolic function). Physical activity reduces all-cause mortality and morbidity primarily by decreasing the risk of cardiovascular diseases, which are by far the most common cause of death in our country.

The evidence for the benefits of physical activity:

Most of the scientific evidence for promoting physical activity comes from observational studies, similar in design to those used over the last four decades to provide evidence of the health risks of tobacco (Bauman 2001). The association between disease and inactivity is consistent using various measures (eg, physical activity, cardiovascular fitness). More recent studies have adjusted for many confounding variables and have demonstrated that many of the effects of physical activity are independent of other risk factors. Reviews of the evidence have shown a greater association between physical activity and health outcomes under optimal research conditions, suggesting that the relationship is likely to be causal. Although there is still no evidence of a direct link between physical inactivity and cardiovascular disease, there is evidence that physical activity affects other risk factors for cardiovascular disease (ie, increased blood pressure, increased cholesterol, obesity, diabetes and like).

The key non-communicable diseases, health behaviours and conditions that can benefit from physical activity are listed below.

The benefits of physical activity on health extend beyond preventing or reducing the impacts of disease. For example, there is the opportunity cost of time spent on activity instead of unhealthy behaviours. Walking or cycling means cars are used less which also reduces fuel emissions and pollution. With more people walking in urban areas, social cohesion may increase and crime levels may fall.

ii. Longevity: A lifelong commitment to a high level of physical activity in terms of frequency and duration and to a lesser extent intensity can improve disability-free life years and life expectancy.

iii. Coronary heart disease (CHD): Regular physical activity reduces both the incidence of myocardial infarction (heart attack) and coronary heart disease morbidity and mortality. Increases in duration and/or appear to reduce the risk of CHD. Physical fitness has a greater effect than moderate physical activity, so where possible vigorous activity should be added. Activity should also be performed regularly.

iv. Cerebro-vascular accident (CVA, stroke): Physical activity in middle-aged and older adults can reduce the risk of stroke (Hu et al 2000). There appears to be a graded reduction in stroke risk with increased intensity of aerobic activity, with vigorous activity lowering the relative risk by about half compared with inactive people.

v. Chronic obstructive respiratory disease (CORD):

Regular aerobic activity can reduce disability in people with CORD. As a result, ventilation, oxygen consumption and dyspnoea (shortness of breath) tolerance may improve. Strength or resistance training may also be useful to reduce muscle fatigue.

vi. Hypertension: High blood pressure is well recognised as a risk factor for cardiovascular disease. Aerobic activity of moderate intensity is an important means of reducing blood pressure in those with hypertension particularly for middle-aged people. The activity should be maintained on a longterm basis.

vii. Cancer: The role of physical activity in cancer prevention was analysed at a workshop held by Cancer Care Ontario (Marrett et al 2000). The workshop concluded that physical activity plays an important role in reduction of cancer risk, and that activity should be encouraged at all ages and should comprise at least 30 to 45 minutes of moderate to vigorous activity on most days of the week. Following a review of the literature, Batty and Thune (2000) reached similar conclusions. They found that physical activity reduces the risk of colon cancer by 50 percent and of breast cancer by 30 percent.

viii. Diabetes: Moderate physical activity significantly reduces the risk of developing type 2 diabetes, particularly in those at high risk (Hu et al 1999; Manson and Spelsberg 1994) and when combined with nutritional advice (Tuomilehto et al 2001). Physical activity also reduces morbidity and mortality among those diagnosed with diabetes (Booth et al 2000; Grundy1999).

ix. Obesity: Prolonged physical activity has been shown to aid in the prevention, maintenance and treatment of obesity through increased energy expenditure (Grundy et al 1999). Regular moderate aerobic activity coupled with a healthy diet can reduce the risk of obesity and improve the health of those who are overweight or obese (Wing 1999).

x. Osteoarthritis: Both resistance (Sevick et al 2000) and selected aerobic activities (while high impact activities may not be appropriate (Kovar et al 1992)) can benefit people with osteoarthritis. Physical activity is a cost-effective means of improving symptoms and function in those with osteoarthritis if activities are maintained.

xi. Osteoporosis: Moderate and vigorous activity is recommended for children to increase bone mass and strength. It is also recommended for asymptomatic adults to help preserve bone density. Modified physical activity is recommended for those with osteoporosis to improve posture and muscle strength and maintain bone mass (Forwood and Larsen 2000).

xii. Falls: Maintenance of a moderate level of activity in older age has been shown to reduce the risk of hip fracture (Hoid-rup et al 2001).

xiii. Mental health: Physical activity appears to reduce the risk of becoming depressed, reduce symptoms and frequency of depression, and improve self-esteem, coping skills and cognitive functioning among those with depression. People who are inactive are up to twice more likely to have depressive symptoms than active people (Camacho et al 1991; Morgan and Bath 1998; Petruzello et al 1991). The intensity and duration of activity. Frequent light- or moderate-intensity activity improves mood in those with major depressive disorders.

xiv. Stress: Any physical activity that an individual finds enjoyable may reduce subjective stress. The intensity of the

activity is not important for stress reduction.

xv. Asthma: Physical fitness appears to reduce the risk of adult onset asthma (Huovinen et al 2001). Activity for the prevention of asthma should be of moderate to vigorous intensity. Physical training in those with asthma can improve cardiopulmonary fitness and subjectively improve asthma symptoms (Ram et al 2001).

xvi. Smoking: Physical activity has been demonstrated to help people quit smoking (Marcus et al 1999). It reduces some of the common side effects of smoking cessation and improves quit rates (Brehm 2000).

xvii. Pregnancy: Moderate-intensity exercise during pregnancy in low-risk healthy women improves the likelihood of giving birth to a healthy baby (Clapp et al 2000). However, most studies have only examined the effects of activity on healthy women.

Barriers to physical activity:

A complex range of personal factors influence an individual's participation in physical activity, including social experiences, cultural background, physical disability and health status. Perceptions of appropriate physical activity can also differ by gender, age, weight, marital status, family responsibilities, disability and socioeconomic factors. Barriers to physical activity include:

- lack of time
- other responsibilities (family and job, particularly for women)
- lack of knowledge about facilities and opportunities to be active
- feelings of inadequacy (the .body beautiful. image)
- fear of failure
- injury or disability
- less or no motivation
- poor health.

Summary:

Physical inactivity is second to smoking as a modifiable risk factor for poor health. It is associated with 8 percent of all deaths and accounts for over 2000 deaths per year. Thirty minutes of physical activity of moderate intensity on most, if not all, days of the week can benefit health. Adequate levels of Once active, people must be encouraged to remain active. physical activity can reduce the risk of premature death and poor health across a number of serious diseases and conditions. There is good evidence that undertaking at least 30 minutes of moderate intensity physical activity on most, if not all, days of the week benefits health. To achieve health benefits, physical activity does not have to be undertaken at a single session. It is possible to accumulate smaller doses of physical activity throughout the day (eg, 10 minutes at a time) to improve health.

Conclusion:

The professionals in the field of physical education relay upon physical activity, usually exercises or running, as their primary method of maintaining physical fitness. Prescribing the physical activities is very important as it varies as to ages and fitness requirements. Physical fitness is the primary responsibility of all physical educators, both for themselves and for the people they instruct. Physical fitness is an essential element of a healthy life style. Physical fitness and the knowledge and skills necessary to impart these practices to others.

REFERENCES

Brehm BA. 2000. Smoking cessation: antidepressants and nicotine withdrawal symptoms. Fitness Management Oct: 30.2. | 2. Batty D, Thune I. 2000. Does physical activity prevent cancer? Evidence suggests protection against colon cancer and probably breast cancer. British Medical Journal 321(7274): 1424.5. | 3. Camacho TC, Roberts RE, Lazarus NB et al. 1991. Physical activity and depression: evidence from the Alameda County Study. American Journal of Epidemiology 134: 220.30. | 4. Caspersen CJ, Powell KE, Christenson GM. 1985. Physical activity, exercise, and physical fitness: definition and distinctions for health-related research. Public Health Reports 100: 126.31. | 5. Clapp JF 3rd, Kim H, Burciu B, et al. 2000. Beginning regular exercise in early pregnancy: Effect on fetoplacental growth. American Journal of Obstetrics and Gynaecology 183(6): 1484.8. | 6. Forwood MR, Larsen JA. 2000. Exercise recommendations for osteoporosis: a position statement the Australian and New Zealand Bone and Mineral Society. Australian Family Physician 29(8) URL: http://www.racgp.org.au/publications/afp_online.asp. | 7. Hoidrup S, Thorkild IA, Stroger U, et al. 2001. Leisure-time physical activity levels and changes in relation to risk of tip fracture in men and women. American Journal of Epidemiology 154(1): 60. | 8. Hu FB, Sigal RJ, Rich-Edwards JW, et al. 1999. Walking compared with vigorous physical activity and risk of type 2 diabetes in women: a prospective study. Journal of trial. Annals of Internal Medician 16(7): 529. | 11. Manson J, Spelsberg A. 1994. Primary prevention of non-insulin-dependent diabetes mellitus. American Journal of Preventive Medicine 10(3): 172.64. | 12. Marrett LD, Theis B, Ashbury FD, et al. 2000. Workshop report: physical activity and cancer Prevention. Chronic Diseases in Canada 21(4): 143.9. | 13. Morgan K, Bath PA. 1998. Customary physical activity and psychological wellbeing: a longitudinal study. Age and Ageing 27, Suppl 3: 35.40. | 14. Petruzello S, Landers D, Hatfield B et al. 1991.