International Journal of Yoga, Physiotherapy and Physical Education
ISSN: 2456-5067
Impact Factor: RJIF 5.24
www.sportsjournal.in
Volume 2; Issue 5; September 2017; Page No. 52-54

Physical activity is medicine for older adults

Jyoti Mishra
Research Scholar, Department of Physical Education & Sports Sciences, University of Delhi, New Delhi, India

Abstract
There is evidence from high quality studies to strongly support the positive association between increased levels of physical activity, exercise participation and improved health in older adults. Worldwide, around 3.2 million deaths per year are being attributed to inactivity. In industrialised countries where people are living longer lives, the levels of chronic health conditions are increasing and the levels of physical activity are declining. Key factors in improving health are exercising at a moderate-to-vigorous level for at least 5 days per week and including both aerobic and strengthening exercises. Few older adults achieve the level of physical activity or exercise that accompanies health improvements. A challenge for health professionals is to increase physical activity and exercise participation in older adults. Some success in this has been reported when physicians have given specific, detailed and localised information to their patients, but more high quality research is needed to continue to address this issue of non-participation in physical activity and exercise of a high enough level to ensure health benefits.

Keywords: physical activity, health, exercise health benefits etc.

Introduction

It is very clear that physical inactivity is a major contributor to mortality. The WHO reported that around 3.2 million deaths each year are attributable to physical inactivity [1]. Governments around the world are recognising the importance and the large impact of physical inactivity on health and health-related expenditure. This has led to the production of global and national guidelines for physical activity [2, 5]. Many non-communicable chronic health conditions prevalent in both developed and developing countries are associated with physical inactivity. With increasing age, there is an increased risk of developing non-communicable chronic health conditions. In a recently published review, Blair *et al.* emphasised the direct link between physical inactivity, low cardiovascular fitness and the presence of chronic health conditions.

Five leading risk factors for death are high blood pressure, smoking, high blood glucose, physical inactivity and obesity. A glance at these risk factors reveals that high blood pressure and glucose levels as well as obesity are connected with physical inactivity. Alongside the increasing incidence of these risk factors with ageing, there is a decline in many physiological systems; a loss of muscle mass, a decline in balance ability, a reduction in muscle strength and endurance and a decline in cognitive performance, all of which impact on functional independence. Paterson *et al.* suggested that increasing physical activity levels is the most important intervention to improve health in populations. For older adults, extending life is an important factor, but the maintenance of functional independence is also of high importance, both to maintain quality of life and to manage health resources.

In the literature, the term 'exercise' is frequently used to distinguish structured programmes from incidental day-to-day physical activity, such as housework. Whether physical activity is defined as incidental or as exercise is of less importance than the amount, the frequency and the intensity of the activity. In this review, physical activity refers to any activity that has an energy cost, such as housework, shopping, gardening and structured exercise programmes (such as Tai Chi or aquarobics). This research paper present clear guidance around the amount, type and frequency of physical activity for achieving health gain in older adults (>65 years of age), and describe the extent to which older adults achieve the suggested physical activity guidelines with suggestions on how to improve uptake and maintenance of high levels of physical activity.

Recommended levels of physical activity for older adults

The WHO guidelines 'Global Recommendations on Physical Activity for Health', included recommendations for physical activity in older adults. A position stand published by the American College of Sports Medicine (ACSM) has similar recommendations. A key message is that at least 150 min per week of moderate intensity physical activity is required for health benefit in older adults.

There is strong evidence for the effectiveness of aerobic exercises and muscle-strengthening exercises, with the result that details are clear around the type and intensity of these forms of exercise. Aerobic exercise is defined as any type of activity that uses large muscle groups and can be maintained over a period of time including activities such as brisk walking, swimming or dancing. Guidelines state that aerobic exercise should be at a moderate level, in which the individual notices increases in heart rate and breathing rate [3, 5], Resistance-based strengthening requires muscles to work against a load, which may be an external load or bodyweight that is progressively increased over the time of the

programme. Most of the trials of progressive resisted strength training in older adults have high-intensity strength training protocols, most frequently involving 8–12 repetitions of the exercise to the point of muscle fatigue. These programmes usually involve the support of exercise professionals and are usually based in gymnasiums, as specialist equipment is often used.

The evidence around balance exercises is not as strong as that around strength and aerobic exercises, and therefore, the recommendations are not as clear. In a systematic review of falls prevention interventions, it was apparent that the important components for falls prevention effects are exercises that challenge balance and exercises that strengthen lower limb musculature. For community-dwelling older adults, participation in physical activities, such as Tai Chi or individually tailored home exercise programmes, can reduce falls in those at risk of falling. There is good evidence that at least some falls prevention programmes reduce falls in community-dwelling older adults but it is unknown whether these programmes raise participants' physical activity levels adequately to improve health by affecting cardiovascular fitness and strength.

Incidental physical activity is that which occurs throughout the course of the day during activities of daily living. It is generally of low intensity but often contains some sporadic bouts of moderate intensity activity.

The good news is that increasing physical activity levels can have a positive effect on both mortality and functional independence in older adults.

There are many studies that show a reduced all-cause mortality and reduced risk of developing conditions such as cardiovascular disease and type 2 diabetes in people, including older adults, who exercise regularly at a moderate level. Epidemiological studies show a strong inverse relationship between physical activity, health and all-cause mortality. There is a strong association between objectively measured cardiovascular fitness and mortality, but not between self-reported measures of physical activity and mortality. This may indicate that in addition to emphasising the need for physical activity, it may be important to encourage the use of objective measures of cardiovascular fitness, or objective measures of physical activity, such as pedometers.

Both muscle strength and aerobic fitness have been strongly linked to functional independence. In older adults without disabilities, improvements in muscle strength and aerobic fitness resulted in improved functional independence. Findings from a systematic review indicated that when older adults participated in exercise of sufficient intensity and frequency, the reduction in risk of functional limitation and disability was in the range of 30–50%.

Aerobic training alone or aerobic training combined with resistance training have been shown to result in improved physical function in older adults without disabilities. In some groups of people with chronic health conditions there are indications of positive effects of increased physical activity and exercise. A review by Vincent *et al.* concluded that for obese older adults, participation in a programme of exercise that included aerobic and resistance exercises combined with dietary restriction did lead to improvements in functional mobility. However, in other groups of people, for example, older adults with disabilities from stroke, the translation of improvements in aerobic fitness and muscle strength into functional independence is unclear.

Older adults achieving the recommended levels of physical activity

Many people fall short of achieving the recommended levels of physical activity and exercise. More than 60% of American adults over the age of 50 years failed to achieve the recommended activity levels [3]. In England, 20% of men and 17% of women aged between 65 and 74 years achieved the recommended activity levels of 5 or more days of moderate-to-vigorous activity. From the age of 75 years onwards, 9% of men and 6% of women met the recommended guidelines [4]. Very few older adults are currently meeting the recommended levels of physical activity and exercise.

There are a large number of barriers to exercise participation identified. Interestingly, O'Neill and Reid reported that 87% of their older adult participants described at least one barrier to participation in exercise. The most common reasons given by older adults for not participating in physical activity was ill-health, pain and injury, One limitation of the research in physical activity and health is that many of the studies have used self-report measures of physical activity. There is some indication that self-report measures do not reliably reflect cardiovascular fitness, and may not predict health outcomes as clearly as objectively measured cardiovascular fitness.

Conclusion

With the average population age increasing in industrialised countries, there is an increase in the proportion of older adults, many of whom are at risk for developing non-communicable chronic health conditions. Older adults are generally less physically active than younger adults. In the presence of strong evidence linking physical inactivity to chronic health conditions and increased physical activity to lower mortality and morbidity in older adults, it is imperative to develop a strong commitment to improving physical activity levels in older adults. Governments around the world have begun to produce national guidelines for physical activity and health for older adults. The main challenge is to find effective ways to support older adults to increase their physical activity and then to develop habitual physical activity behaviours. Individual health practitioners have an important role in discussing and making recommendations around physical activity. Public should have sufficient understanding of physical activity prescription to make recommendations to patients about type, amount, intensity and frequency of physical activity for health gain. Inclusion of physiotherapists or exercise professionals for exercise prescription may prove to be a valuable addition to the General Practice team. The health problems relating to physical inactivity are unlikely to be completely solved by individual health practitioners, and significant steps by governments and policy makers have to be taken to create environments that encourage participation in lifelong physical activity.

References

1. Ahmad AN, Edwards KL. A cross-sectional study

analysing the association between habitual physical activity levels and quality of life in adults with asthma. Baltic Journal of Health and Physical Activity. The Journal of Gdansk University of Physical Education and Sport, 2015, 7(1).
2. Bauman A, Craig CL. The place of physical activity in the WHO Global Strategy on Diet and Physical Activity. International Journal of Behavioral Nutrition and Physical Activity. 2005; 2(1):10.
3. Centers for Disease Control and Prevention. US Department of Health and Human Services Physical activity guidelines for Americans Washington, DC, 2008.
4. Zealand N. Ministry of Health. Guidelines on Physical Activity for Older People (aged 65 years and over) [Internet]. Wellington, 2013-2015.
5. Mazzeo RS, Cavanagh P, Evans WJ, Fiatarone M, Hagberg J, McAuley E, *et al.* Exercise and physical activity for older adults. Medicine and science in sports and exercise. 1998; 30(6):992-1008.