

Physical Activities Guidelines for Healthy Life Style

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ABSTRACT: Physical activities are essential for physical and psychological growth and development. In addition. It strengthens the immune system, which helps to avoid different health problems. Besides the fact that physical activity is a necessity of our daily life, people currently adopt unhealthy living patterns, such as smoking, drug addictions, etc., instead of healthy habits, such as exercise and a healthy diet. This study aimed to evaluate the previous literature and to recommend the most appropriate activities guidelines for communities with different age, gender and demographic attributes. To meet the study's objective, literature available in the concerned research area was gathered and evaluated. The available literature showed that different national and international organizations suggested different guidelines, such as 150 minutes up to 300 minutes of daily physical activities with moderate to vigorous volumes and intensities for maintaining a healthy lifestyle.

Keywords: Health life style, physical activity, psychological growth.

INTRODUCTION

According to the world health organization (WHO) (2002), physical activity refers to those movements produced by skeletal muscles using energy such as walking, jogging, cycling, wheeling, sports, active recreation play etc. Physical activities promote physical and mental health and reduce the chances of health problems such as hypertension, heart disease, stroke, diabetes and several cancers. Besides the fact that physical activities play a vital role in an individual's overall health and well-being, the WHO (2002) report shows that about 60 % of the total population fails to perform the daily recommended guild lines for physical activities.

Regular exercise with sufficient intake of healthy foods and beverages helps in growth, development and maintaining body weight. Likewise, proper sleeping helps in managing stress and avoiding health problems (National Institute of Diabetics and Digestive and Kidney Disease, 2023). Exercise has numerous short or long term health benefits. Short term benefits of exercise includes relief from stress, anxiety, maintenance normal blood pressure and quality sleep similarly long term benefits of exercise are maintenance of body weight (Dairy Council of California, 2023).

According to Paterson, and Warburton, (2010), 31 to 45 % risk reduction in premature all-cause mortality, 33% to 55 risk reduction of cardiovascular diseases, 31 to 60 % risk reduction in stroke, 32to 50 % risk reduction in hypertension, 30 % risk reduction in colon cancer, 20% risk reduction in breast cancer, and 40 to 50 % risk reduction in type-2 diabetes are observed. In addition, risk reduction in osteoporosis is bone adaptations to exercise are load-dependent and site-specific. The result of the study conducted by Warburton et al. (2010) and given in the below figure indicts risk reductions associated with physical activities.

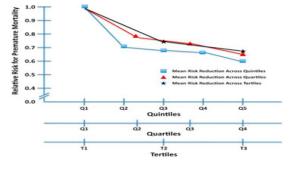


Figure 1. Relative Risk for Premature Mortality

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Physical activities are vital in reducing the risk of all-cause of mortality and cardiovascular problems. The research estimated a 50% reduction in health risks among physically active people (Myers et al., 2004). Likewise, the energy expenditure of about 1000 kcal (4200 kJ) per week or an increase in physical fitness of 1 MET (metabolic equivalent) associated with physical activities can reduce 20 % risk of mortality; thus, women of middle age performing less than 1 hours daily activities experience 52% increase in all-cause mortality, copying of cardiovascular-related mortality and a 29% increase in cancer-related mortality as compared to physically active women (Hu et al., 2004).

A meta-analysis by Kelley and Sharper Kelley (2001) showed that a person aged more than 50 years performing aerobic activities significantly decreased blood pressure values only for systolic pressure. The same result is also observed among moderate-intensity exercise performers. Cox et al., (2006) concluded that swimming cause raised blood pressure. In older people, lacking aerobic and cardiovascular fitness may cause all types of mortality. Vo_{2 maximum} declined with ageing, but its values from 15–18 ml/kg/min can be maintained through daily physical activity. Vo_{2 maximum} is found to be higher than sedentary subjects of the same age (Wilson and Tanaka, 2000; Stathokostas et al., 2004).

Different studies (Ngugyen et al., 1996; Woolf and Åkesson, 2003; De Kam et al., 2009) show that exercise improves bone density, and thus risk factor of fracture among older people aged 65 was observed. Therefore, a 30% less fracture risk among regular exercise performers was observed (Cummings et al.,1995). Still, many studies found an increase in physical activities compared to normal people. These risk factors may be considered associated with skills of physical exercises (Ebrahim et al., 1996; Robbins et al., 2007).

One needs to exercise regularly and use a healthy diet for a healthy lifestyle. Both physical activity and a healthy diet improve health and help the body avoid physical and psychological health problems. Even though daily physical activity is a critical element of our everyday life, the level of physical activity is declining day by day. This study aims for the previous studies to summarize and guidelines for daily physical activities.

METHOD

Keeping in view the role of physical activities in our daily life as a preventive tool for different health complications, as shown by the above studies, five hundred articles were collected and thus placed into two categories, i.e. (a) articles about physical activities and their role in our daily and (b) articles about physical guidelines. Furthermore, the study was limited to the primary two dimensions of a healthy lifestyle, i.e. daily physical activities and nutrition. A literature search was done based on predefined keywords of the study. Lastly, two leading search engines were used for collecting relevant literature, and thus 22 papers were entertained per the study's suggested criteria. Grading of studies based on quality and quantity was made on the established standards of the current review study.

RESULTS

WHO and other international organizations suggested different guidelines, such as 150 minutes up to 300 minutes of daily physical activities with moderate to vigorous volumes and intensities for maintaining a healthy lifestyle. Furthermore, the detail of daily physical activities, as well as dietary needs and requirements suggested by the available literature, are The Health benefits of exercise are not specified to a particular race, gender, age, and social class. Everyone can benefit from exercise as by doing regular exercise, one can prevent more than 25 health problems related to cardiovascular health concerns and premature mortality. Physical inactivity is 4th leading cause of mortality (Warburton and Bredin, 2016) Thus WHO estimated that approximately 3.2 million death cases every around the globe is caused by physical inactivity. Brown et al. (2015) indicated the top listed problems of health in the below figure

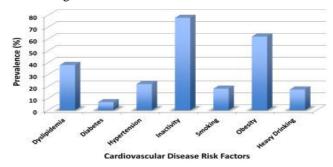


Figure 2. Cardiovascular Disease Risk Factors

For the improvement of health, one needs to do regular exercise. Regardless of age, gender, race, ethnicity etc., physical activities have many health benefits (Center for Disease Control and Prevention, 2023). From 3-5 years, preschool-age children, *Healthy Life Style*

enjoyable physical activities daily are suggested. For children and adolescents (6-17 years), 1 hour's moderate-to-vigorous intensity physical activity such as climbing or push-up, gymnastics or jumping rope. Adults adding 18-64 years must perform at least 150 minutes of moderate-intensity exercises, such as brisk walking, at least two days a week. In addition, people aged 65 years and older must perform 150 minutes of moderate-intensity exercises, such as brisk walking and balancing activities, at least two days a week.

According to Piercy et al. (2018), children and adolescents from ages 6 to 17 years are recommended to perform an hour or more of moderate-to-vigorous physical activity daily. Teenagers need to exercise at least moderate-intensity exercise every day to make them physically and psychologically fit or stable (Kalak et al.,2012).

Childhood is the stage where children learn about long-term healthy and unhealthy habits. Unhealthy dietary habits cause obesity, type 2 diabetes mellitus, cardiovascular problems and sub-optimal immunity in children (Tambalas et al.,2022). Dietary product is considered essential and necessary for a healthy life. This is why dietary products constitute micronutrients such as vitamin B and vitamin D, macronutrients (such as proteins and enzymes; bioavailability of some nutrients) (Tambalas et al., 2022).

According to American Heart Association (2023), 150 minute's moderate-intensity exercise per week or 75 minutes of vigorous aerobic activities per week is suggested for adults. It is also recommended to add moderate- to high-intensity muscle-strengthening activity (such as resistance or weights) at least two days per week. To gain more health benefits from exercise, one can need to be involved for at least 300 minutes (5 hours) per week according to the principles of practice or training. Kids aged 3-5 years must participate in enjoyable physical activities daily. For 6-17 years old kids, 60 minutes daily moderate activities and vigorous activities, including Include muscle- and bone-strengthening (weight-bearing) activities at least three days per week, is suggested, but the principle of training must need to adopt. In addition, Loprinzi, P. D., Lee, H., & Cardinal, B. J. (2015) found that 300 minutes per week of light-intensity physical activity (LLPA) was more significant from a health point of view.

Food Standard Agency (FSA) (2000) suggested that for healthy living, one needs to use eat healthy plate guidelines prepared per the direction and guidance of the Committee on Medical Aspects of Food and Diet Policy and the Scientific Advisory Committee. According to the guidelines, a healthy diet plate includes 33% fruit and vegetables (at least five portions per day). 33% starchy foods (rice, bread, pasta, potatoes). 15% milk and dairy foods (choosing reduced-fat versions, eating smaller amounts of full-fat versions, or eating full-fat versions less often). 12% meat, fish (two portions per week, one of which is the oily variety such as mackerel, salmon or sardines), beans and other non-dairy sources of protein. No more than 8% of foods and drinks are high in fat and sugar.

CONCLUSION

Based on critical analysis of previous studies, the researcher arrived at conclusion thatt different national and international organizations suggested different guidelines, such as 150 minutes up to 300 minutes of daily physical activities with moderate to vigorous volumes and intensities for maintaining a healthy lifestyle.

CONFLICT OF INTEREST

No conflict of interest was declared by the authors.

REFERENCES

- American Heart Association. (2023). Available https://www.heart.org/en/healthy-living/fitness/fitness-basics/aha-recs-for-physical-activity-in-adults Accessed 15 March 2023
- Brown, W. J., Pavey, T., Bauman, A. E. (2015). Comparing population attributable risks for heart disease across the adult lifespan in women. British Journal of Sports Medicine, 49(16), 1069-1076.
- Center for Disease Control and Prevention. (2023). Available https://www.cdc.gov/physicalactivity/basics/age-chart.html
 Accessed 15 March 2023
- Cox, K. L., Burke, V., Beilin, L. J., Grove, J. R., Blanksby, B. A., Puddey, I. B. (2006). Blood pressure rise with swimming versus walking in older women: the Sedentary Women Exercise Adherence Trial 2 (SWEAT 2). Journal of hypertension, 24(2), 307-314.
- Cummings, S. R., Nevitt, M. C., Browner, W. S., Stone, K., Fox, K. M., Ensrud, K. E., Cauley, J., Black, D., Vogt, T. M. (1995). Risk factors for hip fracture in white women. New England journal of medicine, 332(12), 767-773.

- Dairy Council of California. (2023). Available https://www.healthyeating.org/nutrition-topics/general/lifestyle/physical-activity Accessed 15 March 2023
- De Kam, D., Smulders, E., Weerdesteyn, V., Smits-Engelsman, B. C. M. (2009). Exercise interventions to reduce fall-related fractures and their risk factors in individuals with low bone density: a systematic review of randomized controlled trials. Osteoporosis International, 20(12), 2111-2125.
- Ebrahim, S., Thompson, P. W., Baskaran, V., Evans, K. (1997). Randomized placebo-controlled trial of brisk walking in the prevention of postmenopausal osteoporosis. Age and ageing, 26(4), 253-260.
- Hu, F. B., Willett, W. C., Li, T., Stampfer, M. J., Colditz, G. A., Manson, J. E. (2004). Adiposity as compared with physical activity in predicting mortality among women. New England Journal of Medicine, 351(26), 2694-2703.
- Kelley, G. A., Kelley, K. S. (2001). Aerobic exercise and resting blood pressure in older adults: a meta-analytic review of randomized controlled trials.
- Kalak, N., Gerber, M., Kirov, R., Mikoteit, T., Yordanova, J., Pühse, U., Holsboer-Trachsler, E., Brand, S. (2012). Daily morning running for 3 weeks improved sleep and psychological functioning in healthy adolescents compared with controls. Journal of Adolescent Health, 51(6), 615-622.
- Loprinzi, P. D., Lee, H., Cardinal, B. J. (2015). Evidence to support including lifestyle light-intensity recommendations in physical activity guidelines for older adults. American Journal of Health Promotion, 29(5), 277-284.
- Myers, J., Kaykha, A., George, S., Abella, J., Zaheer, N., Lear, S., Yamazaki, T., Froelicher, V. (2004). Fitness versus physical activity patterns in predicting mortality in men. The American journal of medicine, 117(12), 912-918.
- National Institute of Diabetics and Digestive and Kidney Diseases. (2023). Available https://www.niddk.nih.gov/health-information/weight-management/healthy-eating-physical-activity-for-life Accessed 15 March 2023
- Nutrient, F. S. A. (2006) "Food Based Guidelines for UK Institutions." Food Standards Agency 1, 2.
- Ngugyen, T. V., Eisman, J. A., Kelly, P. J., Sambroak, P. N. (1996). Risk factors for osteoporotic fractures in elderly men. American journal of epidemiology, 144(3), 255-263.
- Piercy, K. L., Troiano, R. P., Ballard, R. M., Carlson, S. A., Fulton, J. E., Galuska, D. A., George, S.M., Olson, R. D. (2018). The physical activity guidelines for Americans. Jama, 320(19), 2020-2028.
- Paterson, D. H., Warburton, D. E. (2010). Physical activity and functional limitations in older adults: a systematic review related to Canada's Physical Activity Guidelines. International Journal of Behavioral Nutrition and Physical Activity, 7(1), 1-22.
- Robbins, J., Aragaki, A. K., Kooperberg, C., Watts, N., Wactawski-Wende, J., Jackson, R. D., LeBoff, M.S., Lewis, C.E., Chen, Z., Stefanick, M.L., Cauley, J. (2007). Factors associated with 5-year risk of hip fracture in postmenopausal women. Jama, 298(20), 2389-2398.
- Stathokostas, L., Jacob-Johnson, S., Petrella, R. J., Paterson, D. H. (2004). Longitudinal changes in aerobic power in older men and women. Journal of Applied Physiology, 97(2), 781-789.
- Tambalis, K. D., Panagiotakos, D., Psarra, G., Sidossis, L. S. (2022). Recommended dairy intake is associated with healthy dietary habits, better physical fitness, less obesity and a healthier lifestyle profile in school age children. British Journal of Nutrition, 1-8.
- Warburton, D. E., Bredin, S. S. (2016). Reflections on physical activity and health: what should we recommend?. Canadian Journal of Cardiology, 32(4), 495-504.
- Warburton, D. E., Charlesworth, S., Ivey, A., Nettlefold, L., Bredin, S. S. (2010). A systematic review of the evidence for Canada's Physical Activity Guidelines for Adults. International journal of behavioral nutrition and physical activity, 7(1), 1-220.

Wilson, T.M., Tanaka, H. (2000). Meta-analysis of the age-associated decline in maximal aerobic capacity in men: relation to training status. Am J Physiol Heart Circ Physiol, 278, H829–834.

World Health Organization. (2001). The World Health Report 2001: Mental health: new understanding, new hope.

Woolf, A. D., Åkesson, K. (2003). Preventing fractures in elderly people. BMJ, 327(7406), 89-95.