



Physical Activities and How They Improve on Lifestyle

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Abstract

The phenomenon of sedentary lifestyle has become a dangerous issue with serious health consequences in modern time. Modern technology has contributed, in no small measure, to a sedentary lifestyle of many individuals with attendant physical, physiological and social health hazards. As a result of lack of regular exercises, many people are now battling with obesity, diabetes, hypertension and overweight. This paper examines the concept of sedentary lifestyle, reasons for sedentary lifestyle, consequences of sedentary lifestyle and the use of regular physical activity to ascertain healthful living and longevity.

Subject Areas

Sociology, Sports Science

Keywords

Sedentary Lifestyle, Physical Activity, Physical Fitness, Degenerative Disease, Longevity

1. Introduction

Physical activity (PA) is defined as any body movement produced by skeletal muscles that requires energy expenditure. Exercise is a subcategory of PA, being planned, structured and repeated purposely to improve or maintain fitness and health. Sedentary behavior, on the other hand, refers to any waking behavior characterized by an energy expenditure of less than or equal to 1.5 metabolic equivalents while sitting, reclining, or lying down. Most office work, watching television and even driving a car, are examples of sedentary behaviors (WHO, 2020) [1]. The World Health Organization (WHO) recommendations on physi-

cal activity and sedentary behavior include all populations, regardless of gender, cultural origin or socioeconomic status, and are relevant to people at all skill levels. Adults should engage in at least 150 - 300 minutes of moderate intensity aerobic physical activity, or 75 - 150 minutes of vigorous intensity, for substantial health benefits (WHO, 2020) [1].

The WHO further recommends that adults limit their sedentary time, substituting by any intensity of PA, even if light. It is estimated, however, that in 2016, 27.5% of adults and 81% of adolescents did not meet such recommendations. Regular PA may reduce the risk of all-cause mortality and is associated with reduced risk of developing several comorbidities, including type 2 diabetes mellitus, cardiovascular diseases, depression and various types of cancer. Incentivizing PA for the general population as a form of treatment, disease prevention, and health promotion is therefore, essential.

Despite acting mainly in tertiary care, almost exclusively in rehabilitating and curing sequelae, physical therapists have often been appointed as one of the main professionals responsible for promoting increased physical activity and reduction of sedentary behavior. Thus, physiotherapist plays a role in planning and developing strategies to contemplate both rehabilitation, health promotion, and disease prevention actions (Bispo, 2020) [2].

Encouraging change in behavior, aiming at a physically active lifestyle and reduced sedentary time, goes beyond the walls of rehabilitation centers. In fact, rehabilitation alone has shown to be insufficient to describe functional gains in behavior change for a more active lifestyle (Cindy *et al.*, 2022) [3] or reduced sedentary behavior.

Significant attention has been paid to interventions focused on behavior change through strategies that optimize self-confidence or self-efficacy to increase participation in physical activity and reduce sedentary behavior (Freitas *et al.*, 2021) [4]. Goal setting, action planning, problem solving, background information and health consequences, pros and cons, and comparative imagination of future results are specific techniques considered promising for behavior change to increase participation in physical activity (Sawyer *et al.*, 2023) [5].

Generally, this paper examines the concept of sedentary lifestyle, reasons for sedentary lifestyle, and the use of regular physical activity to ascertain healthful living and longevity.

2. Concept of a Sedentary Life-Style

There are various opinions on what constitutes a sedentary life style. However, most experts or several health organizations agreed on general guidelines that apply to most people and that a person is sedentary if he/she does not exercise or engage in some vigorous activities for at least 30 mins three times a week; fails to move from place to place while engaging in leisure activities; rarely walks more than 10 minutes during the day; remains seated most of the working hours; and has a job that requires little physical activities. Thus, sedentary lifestyle simply

means a person is not getting enough regular aerobic exercise or any movement that can raise the heart rate significantly for an extended period of time (Wallace, 2022) [6].

Sedentary lifestyle involves the toll of sedentary living which results in inactivity epidemic (Wallace, 2022) [6]. Recent studies have found that an increasing number of children do not engage in physical activity on a regular basis. They prefer sitting down and be watching video films, television and playing video games (Buckworth, Janet and Claudio, 2021) [7]. Inactivity is more prevalent among girl-child/females than among boys/males. It appears that more than 60% of women do not participate in regular amount of physical activity that can improve the level of their physical fitness. For all races, women are less physically active than men on average due to some physiological differences (Dianne, 2021) [8].

3. What Has Prompted This Sedentary Behaviour

Of the many positive changes that have taken place in our generation during the 21st century, one of the negative aspects has been in the form of an emerging and increasing trend in a sedentary lifestyle (Buckworth, Janet and Claudio, 2021) [7]. Compared to our grandparents or parents, there is a significant decrease in physical activity and an increase in health complications. Some of the reasons why this inactivity has increased are (Tai-Hing, 2023) [9]: Rise in desk jobs coupled with emerging technologies in the last few decades, such as laptops and desktops, an increasing amount of time spent on the phone and social media, hours spent sitting during commute time to work, long work hours (being a workaholic) and rise in-home delivery cultures has cut down on people's need to visit stores physically.

4. A Global Perspective of Sedentary Life-Style

Clearly, a program of moderate physical activities is vital to a man's well-being. Yet, despite the well-published risk of physical inactivity, a life segment of the world population remains inactive. For instance, between 60% and 85% of the world's population is not physically active enough to gain health benefits, especially among girls and women (World Heart Federation, 2021) [10]. The organization claims that nearly two-thirds of children are also insufficiently active for their health. In the USA, about 40% of adults are sedentary and about half the youth between ages of 12 and 21 do not engage in regular rigorous activities (Wallace, 2022) [6].

A study that examined the prevalent of sedentary lifestyle in 15 European countries found that the percentages of inactive people ranged from 43% in Sweden to 87% in Portugal. In Sao-Paulo, Brazil, about 70% of the population is sedentary. The WHO (2020) [1] reported that an estimated 2 million people die every year from causes related to physical inactivity. Many governments and health organizations are seriously concerned over the financial strains that

physical inactivity has placed on society. For instance, in Australia, the yearly health care costs linked to physical inactivity amount to about \$377 million. In Canada, it was reported that during just one year, more than \$2 billion on health care cost was attributable to physical inactivity. In the United States, the astronomical figure of 76 billion on medical cost directly associated with physical inactivity was spent in year 2020 (WHO, 2020) [1].

5. The Risk Factors of a Sedentary Life-Style

The drastic reduction in physical exertion has led to many physical, mental and emotional health problems. Inactive children may be at risk of poorer self-esteem, greater anxiety and higher stress level. These children are also more likely to smoke and use handful substances (drugs) than active children. Inactive employees have more days off work than active employees. In later life (old age), inactive people lose the basic strength and flexibility for daily activities (Ismail *et al.*, 2018) [11]. As a result, many lose their independence and have poorer mental health.

The incidence of type 2 diabetes is rapidly increasing worldwide as a result of the increasing occurrence of obesity and sedentary life-style (Mokdad, 2023) [12]. Among people of 35 years of age and older about 20% of all deaths could be related to a lack of physical activity (Tai-Hing, 2023) [9]. He later concluded that the risk from physical activity exceeds that of tobacco smoking and people will witness a similarly large mortality burden in future. It is widely accepted that compared with active people, inactive people tend to have higher risk of strokes and heart attacks, higher blood pressures, a higher risk of developing certain types of cancers, a higher risk of osteoporosis, and a higher tendency to become obese. In short, physical inactivity can dramatically increase the risk of hypertension by 30%. It also doubles the risk of untimely deaths from cardiovascular disease (CVD) and stroke (Mokdad, 2023) [12].

It has been observed on every continent of the globe, even including regions where malnutrition is rife, the number of people who are either overweight or obese is rising at an alarming rate, the major reason is due to some combination of high-caloric diets and sedentary behaviour that fuels the epidemic of fats. There is no country in the world where obesity is not increasing (WHO, 2020) [1].

6. Reducing Sedentary Life-Style through Regular Physical Activity Regime

Sedentary life-style can be arrested or at least minimized if people invest at least 30 minutes three times daily a week in moderate rigorous physical activity most especially aerobic exercises. A warm-up is essential before the beginning of any aerobic activity or strengthening training session. Warming-ups activities prepare the body for exercises by gradually increasing the heart rate and blood flow raising the temperature of the muscles and increasing muscles functions. It may

also decrease the chance of sport-related injuries. However, sudden exercises without a gradual warm-up can lead to an abnormal heart rate and blood flow and changes to blood pressure which can be dangerous, especially for older exercise activities such as arm swinging, jogging, running on the spot, neck rotation, and stationary cycling, push up, press up and hip rotation are fully body warm-ups that if performed for 5 minutes to 10 minutes, will raise the body temperature and prepare the body for aerobic exercises.

Aerobic exercises significantly raise the heart rate and provide benefits differ from those derived from strength training. Aerobic exercises seem to lower body cholesterol level and blood pressure. It also improves cardiovascular fitness and the ability of the heart and lungs to supply the muscle with sufficient oxygen. Improvement in aerobic exercise capacity is related to three essential variables such as intensity, duration and frequency to fully experience its benefits in the body system for longevity (Barrnes & Schoenborm, 2023) [13].

The individual through aerobic exercise is able to establish a steady state of oxygen consumption at higher rates of work because of his greater mechanical efficiency in performing the required task. This permits him to do more work with a lower expenditure of energy or oxygen consumption (Klafs & Daniel, 2021) [14].

Sedentary people may benefit from simply increasing the frequency of everyday activities that requires moderate levels of exertion. Such aerobic activities include regular jogging, swimming, speed walk or power walking, bicycling, rebounding, lifting and stretching. When a person uses public transportation, he/she should get off a few stops/distances early, and walk the rest of the way. When using your own vehicle, cultivate the habit of parking some distance away from your destination, walk while you talk. You do not always need to be seated when having casual conversations with friends or family members. If a person has a sedentary job, he/she would find opportunities to work in a standing position, and move around whenever possible and to avoid dehydration during exercise, a person should drink water before, during and after an exercise session.

Short bouts of exercise during the course of a day have an addictive benefit. That is, three 10 minutes' periods of exertion can be almost as beneficial as one 30 minutes session. Thus, you do not need to engage in lengthy periods of rigorous exercise in order to reap substantial health benefits. It has been reported that light to moderate activity as well as rigorous activity was associated with a lower risk of experiencing coronary heart disease (Mokdad, 2023) [12].

An active life is a better life. Towards this fact, an active person should accommodate up to 60 minutes of physical activity every day. This can be achieved by engaging in several brief exercise/physical activity sessions spread throughout the day. It is a fact that rigorous activity is associated with lower all-cause mortality; the current emphasis is on promoting moderate activity (Sparling, Philip and Theresa, 2022) [15].

Regular exercises whether recreational or work related, contributes to overall

health and well-being of an individual. They offer numerous physical, physiological and psychological benefits that lead to greater quality and quantity of life and longevity of a person. Generally, the benefits of regular physical activity in relation to longevity (US department of health and human service, 2021) [16] include the following:

- Reduce the risk of dying from coronary heart disease and of developing diabetes, high blood pressure, and colon cancers.
- Help to reduce blood pressure in people who already have high blood pressure.
- Help to maintain healthy bones, muscles and joints.
- Help to control weight, build lean muscles and reduce body fats.
- Help to control joint swelling and associated pains.
- Reduce symptoms of anxiety and depression and fosters improvement in mood and feeling of wellbeing.
- May enhance the effects of estrogen replacement therapy in decreasing bone loss after menopause.
- Help the older adults to move about better without falling and risk fractures.
- Improve digestion and metabolism.
- Improve blood circulation.

Participation in regular exercises shows the changes that are associated with the advancing age loss of lean muscle tissue, increase in body fat, and decrease in work capacity. In addition to lowering the risk of lowering the risk of heart disease and stroke, regular exercises also help older men and women needed to live independently than in old age. Exercises boosts strength and stamina lessens time in wheelchairs and improves outlook and sense of control.

7. Conclusion

This paper examined the concept of sedentary life-style, reasons for sedentary life-style, the global problems of physical inactivity and longevity, the risk factors associated with sedentary life-style and the effects sedentary life-style on longevity. Other areas examined were the benefits of a regular participation in physical activities towards longevity. It is therefore concluded that physical inactivity of a person promotes sedentary life-style with various psychological and health effects. Therefore, regular participation in physical activities ranging from moderate to rigorous intensity promotes longevity and reduces the effects of sedentary life-style. In this context, physiotherapists should incorporate evidence-based strategies that go beyond prescribing exercise, to support autonomy and self-efficacy according to each individual and thus significantly impact the change in behaviour.

8. Limitations

In reviewing the article, there were a number of limitations encountered by the researcher. The limitations include: there was not enough time for the researcher

to gather enough resources needed for the review. Secondly, the review was limited due to the fact that there were not enough resources needed for a thorough analysis. Thirdly, the researcher was constrained to expanding the scope of the review.

Conflicts of Interest

The authors declare no conflicts of interest.

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