

Introduction

Sedentary behavior can be defined as “Engaging in behaviors during the waking day that are done while sitting or reclining and that result in little energy expenditure above rest, such as using the computer, watching television, driving a car, or sitting at a desk.”¹

Sedentary behavior should not be seen as an extreme lack of activity, it is very possible for someone to be adequately active, but excessively sedentary.

Recently, studies have shown that spending more than 6-7 hours per day engaged in such behaviors increases the risk of cardiovascular disease, is harmful to metabolic health and increases the risk of certain cancers. These risks are thought to be independent of time spent exercising.^{1,2}

Current exercise guidelines focus on promoting moderate and vigorous activity with very little mention of reducing sedentary time, but breaking up sedentary time could reduce these novel health risks. It has beneficial associations with waist circumference, body mass index, triglyceride levels, and 2-hour glucose levels.³

Aims

To see how many people this would benefit from reducing sedentary hours the short study aimed to answer the following questions:

1. Are patients exercising enough?
2. How much of the waking day do patients spend engaged in sedentary behaviors?
3. How many patients are both not exercising enough and spending too much time sedentary?
4. How many patients are exercising enough, but are spending too much time sedentary?

Methods

A questionnaire was circulated amongst 101 patients at Cleadon Park Medical Centre, South Shields.

Sedentary hours per day were self reported, a patient was considered excessively sedentary if they self reported more than 6 hours per day.

Physical activity was measured using The General Practice physical Activity Questionnaire (GPPAQ) A patient was considered to be less than active if they had a result of ‘inactive’ ‘moderately active’ or ‘moderately inactive’. This indicates that they are not meeting current exercise recommendations. 30 minutes of moderate exercise or 20 minutes of vigorous exercise 3 times per week.

Acknowledgements

I would like to thank the team at MSK CATS South Tyneside for their support especially Dr Glen Ray for his supervision during this study.

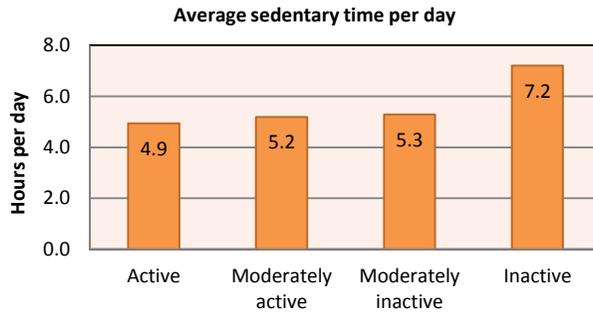


Figure 1: Bar chart – Average number of hours per day spent engaged in sedentary behavior by GPPAQ category.

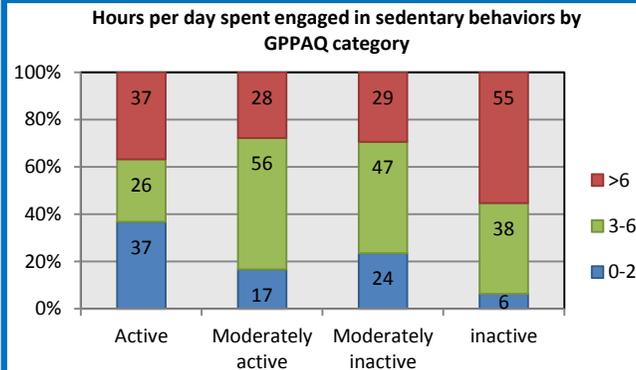


Figure 2: Bar chart - The percentage of each GPPAQ category spending 0-2, 3-6 and >6 hours engaged in sedentary behaviors.

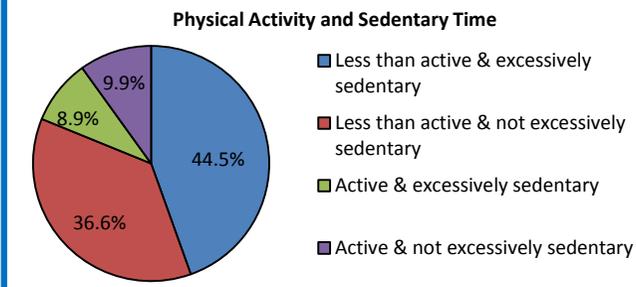


Figure 3: Pie chart – The overall percentage of patients who are active/inactive and excessively sedentary/not excessively sedentary.

Results

Of the 101 patients surveyed, 19 were categorized by the GPPAQ as active, i.e. 19% of patients meet current exercise guidelines and 81% do not. Overall, 53% of patients reported spending more than 6 hours sedentary.

On average, it appears that the more active a patient is, the fewer hours they spend sedentary (figure 1) only in the inactive category does the average patient spend more than 6 hours per day sedentary. But, within each category there are a significant number of people who do.

Adequate levels of physical activity and excessive sedentary behavior often co-exist, of the 19 active patients, 37% reported spending too much time sedentary. (figure 2)

Only 12 of the 101 patients exercise enough and also spending fewer than 6 hours daily sedentary.

Patients can be divided into four categories (figure 3)

1. Less than active and excessively sedentary n= 45 (44.55%)
2. Less than active but not excessively sedentary n= 37 (36.63%)
3. Active and excessively sedentary n=9 (8.91%)
4. Active and not excessively sedentary n=10 (9.90%)

Discussion

From the results it is clear that patients on the whole are not exercising enough, are sitting too much or as is the case for 44.5% of patients, doing both.

There is also small percentage of patients (8.9%) who although active, and benefiting from having adequate exercise levels are too sedentary. Both groups are exposed to the novel health risks of excessive sedentary time, but the inactive and excessively sedentary group are also experiencing the harm caused by physical inactivity.

Reducing sedentary time should be encouraged, as well as increasing exercise. It would be beneficial to a number of patients, could be an alternative goal for those who are inactive with special attention being paid to those who are both inactive and too sedentary.

References

- (1) A.Koster, P.Caserotti, K.V.Patel, C.E.Mathews, D.Berrigan, D.R.VanDomenen et al. Association of sedentary time with mortality independent of moderate to vigorous physical activity. PLOS One 2012;7(6). Available from: <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3374810/> Accessed: 20th June 2015
- (2) A.V.Patel, L.Bernstein, A. Deka, H.S. Feigelson, P.T. Campbell, S.M. Gapstur et al. Leisure Time Spent Sitting in Relation to Total Mortality in a Prospective Cohort of US Adults. American Journal of Epidemiology 2010; 172(4): 419-429. Available from: <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3590043/> Accessed: 20th June 2015
- (3) N.Owen, P.B.Sparling, G.N.Healy, D.W.Dunstan, C.E.Mathews Sedentary Behavior: Emerging Evidence for a New Health Risk. Mayo Clinic Proceedings, Volume 85, Issue 12, 1138–1141. Available from: [http://www.mayoclinicproceedings.org/article/S0025-6196\(11\)60368-6/fulltext](http://www.mayoclinicproceedings.org/article/S0025-6196(11)60368-6/fulltext) Accessed: 20th June 2015