

***At Least Five a Week* – a summary of the report from the Chief Medical Officer on physical activity**

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In April 2004, the Chief Medical Officer published an in-depth review of the impact of physical activity on health (Department of Health 2004). This long-awaited report presents the scientific evidence for encouraging moderate intensity physical activity and addresses the health problems associated with inactivity. It comes at a time of massive media and academic interest in the problems associated with sedentary lifestyles, in particular concerns about the global rise in obesity.

The cost of inactivity

The evidence clearly shows that physical activity benefits well-being and is necessary for good health at all ages, stages of life, and in all socio-economic groups. Physical activity has therapeutic effects on a wide number of diseases but, more importantly, plays a role in disease prevention. Participating in physical activity and being fit has been shown to reduce the risk of a number of chronic diseases including cardiovascular disease (heart disease and stroke) and type 2 diabetes (both by approximately 50%), as well as the risk of premature death (in the region of 20–30%). Smoking and an unhealthy diet have long been established as important risk factors for chronic disease; this report establishes physical inactivity as an equally important causal contributor. Physical inactivity therefore exerts a negative impact on both individual and public health. In England alone it is estimated to cost the economy and the health service around £8.2bn annually, and if the costs of inactivity related to obesity are also included this figure rises by £2.5bn.

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Recommended levels of physical activity

The *At Least Five a Week* report supports the recommendation made by the Department of Health in 1996 that in order to benefit health, individuals should participate in at least 30 minutes of at least moderate intensity activity on five or more days a week. Moderate intensity activity is defined as a level of activity that will:

- lead to an increase in breathing rate;
- lead to an increase in heart rate (the pulse can be felt during this level of activity); and
- lead to a feeling of increased warmth, possibly accompanied by sweating.

Moderate intensity activity is said to be adequate to reduce the risk of premature death from cardiovascular disease and some cancers, to reduce the risk of type 2 diabetes and improve psychological well-being. Whilst greater health benefits will of course be achieved by participating in a higher total period of activity over a week, activity does not have to be vigorous to benefit health. One important message that comes out of the report is that the recommended 30 minutes of moderate intensity activity does not have to be taken all at once; rather three brisk walks of 10 minutes duration would be equally beneficial. Also highlighted in the report is the fact that different modes of activity are beneficial. By encouraging individuals to engage in shorter periods of activity rather than one longer period, this may actually encourage the population to take part in more physical activity in the long term.

These recommendations also apply to older adults, amongst whom the health benefits are even more pronounced because of the protective effect on conditions that may impair ability to maintain an independent lifestyle (e.g. avoidance of osteoporosis, circulatory diseases and depression). Older people should aim to maintain mobility through daily activity and engage in

activities that can help to promote and improve balance, strength and coordination.

The report recommended that children and young people engage in at least 60 minutes of at least moderate intensity exercise every day. Activities that increase muscle strength and flexibility and improve bone health (*i.e.* weight-bearing activities that strengthen the skeleton) should be included at least twice a week.

More specific recommendations are made to help prevent and benefit specific diseases and conditions. For example, in order to prevent obesity, many individuals will need to participate in between 45 and 60 minutes of moderate intensity physical activity each day. People who have been obese and have managed to lose weight may need 60–90 minutes of activity each day to avoid regaining weight. For bone health, activities that produce high physical stress on the bones are necessary (*e.g.* dancing, jogging).

Inactivity throughout the life-course

Physical activity levels in England are low and are cause for concern, across virtually all sections of the adult population (Fig. 1) and amongst some groups of children, notably teenage girls. Reports suggest that up to two-thirds of men and three-quarters of women are at increased risk of a number of chronic diseases as a result of insufficient physical activity. Over the last 20–30 years, despite a small increase in the proportion of

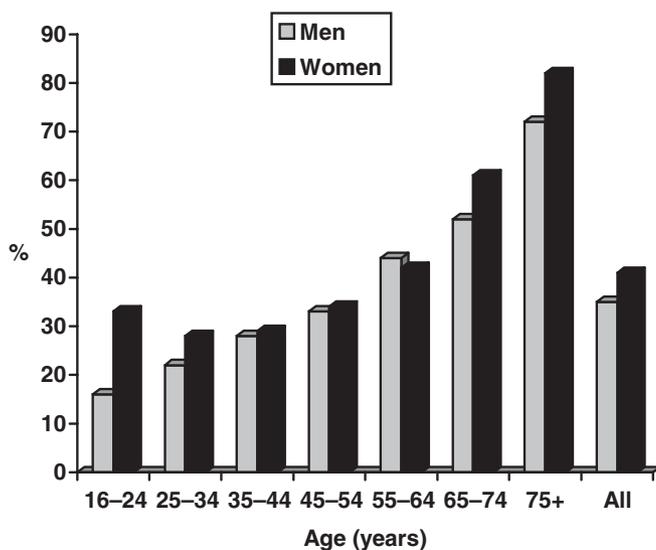


Figure 1 Prevalence of inactivity in England: proportion of adults reporting less than 30 minutes of moderate intensity activity per week, 1998. Material reproduced from Department of Health (2004) is Crown Copyright and is reproduced with the permission of the Controller of HMSO.

people participating in physical activity for leisure, total physical activity levels have fallen as a result of less physical activity as part of the daily routine. For example, there are more labour-saving devices in the home, fewer manual jobs, and cars are being used more for shorter journeys. Over the last 25 years, walking and cycling have declined by around a quarter.

There is also concern about the activity levels of children. Whilst young people tend to be more active than adults, up to one-third of boys and one-third to a half of girls may not be participating in sufficient physical activity. This is one possible reason for the increase in prevalence of obesity in children.

Increasing physical activity

Many adults, particularly older adults, will benefit from increasing physical activity levels through protection against, and amelioration of, a number of diseases and through achievement and maintenance of a healthy bodyweight. In addition, individuals will benefit from improved mental health and well-being and musculoskeletal health. In addition, many children will benefit from greater physical activity through the amelioration of disease risk factors, the achievement of peak bone mass and also through maintenance of a healthy bodyweight.

It is likely that incorporating more physical activity into daily routines will be the easiest way to increase physical activity for most people, for example by walking or cycling instead of driving (particularly for short journeys), using the stairs instead of escalators or lifts and taking up more active hobbies such as gardening.

There are, however, a number of recognised barriers that need to be overcome before people will engage in more physical activity. Many people see physical activity as unenjoyable, hard work and requiring a lot of effort and time (and sometimes cost). It is a challenge to change lifestyle from a sedentary one to a more active one and to change attitudes regarding use of free time. Physical activity needs to be seen as enjoyable and beneficial. Individuals need to understand, and want, the many benefits of physical activity before they will commit to increased activity. Physical activity must therefore be widely promoted as an opportunity to improve vitality, increase fitness and achieve and maintain an optimal bodyweight, as well as an opportunity to gain numerous health benefits. Another barrier to change is that many people mistakenly believe that they are active enough already. Helping people to assess their activity levels more accurately (*e.g.* via the use of pedometers) would help to overcome apathy due to optimistic bias.

Many of these challenges are already being addressed by government departments and a number of initiatives have been set up. A concerted effort is required to encourage physical activity from a wide number and range of key players including:

- government at all levels;
- leisure and sports services;
- schools and colleges;
- town and regional planners;
- transport planners and providers;
- architects;
- countryside agencies;
- the NHS and social care;
- voluntary and consumer groups;
- employers and workplaces;
- the media; and
- parents and families.

The need for comprehensive health strategies

While this report does not address evidence relating to how activity patterns can be changed, it focuses attention on the huge health and economic costs of the rising physical inactivity levels and provides new recommendations about the modes and patterns of activity that can be of benefit (Box 1).

The consumption of a healthy balanced diet, participating in increased physical activity, ceasing cigarette smoking and adopting sensible drinking habits are all important (and equally so) for the prevention of chronic disease. Public health strategies incorporating all of these factors are required in order to improve the health of the population and to reduce the burden of disease on the economy and the health service.

Box 1 Key points

- Being inactive and unfit increases the risk of a number of chronic diseases including heart disease, stroke, type 2 diabetes and certain types of cancer.
- Low levels of physical activity in England are a significant factor in the dramatic increase in the prevalence of obesity amongst adults and children.
- Physical activity does not need to be vigorous to confer protection; 30 minutes of moderate intensity physical activity a day on at least 5 days a week is sufficient.
- The effect is transient so most of the benefits are lost if activity is not maintained.
- Currently in England around two-thirds of men and three-quarters of women are not reaching the recommended target. In addition, a fifth of boys and girls do less than 30 minutes activity per day.
- Accumulating activity in shorter bouts of 10 minutes or more, interspersed throughout the day, can provide the same health benefits and may be easier for many people to achieve.

References

Department of Health (2004) *At Least Five a Week. Evidence on the Impact of Physical Activity and Its Relationship to Health*. A report from the Chief Medical Officer. Department of Health, London.