

Physical Activity

2006

Preamble

Physical activity is any bodily movement produced by skeletal muscles that results in energy expenditure^{1,2}. Physical activity has been recommended for health and wellbeing since the time of Hippocrates (460-370 BC).³ Physical activity can take a number of forms including aerobic, cardiovascular, musculoskeletal, resistance, incidental, low impact, sport, active transport, competitive and non-competitive. Physical activity forms part of the body's important energy balance equation.

The current Australian Physical Activity Guidelines, published by the Commonwealth Department of Health and Ageing, suggest there are health benefits from 30 minutes of moderate activity on most days for adults.⁴ Although there is no clear absolute threshold for health benefit, most health experts agree that physical activity should be performed regularly to provide benefit.⁵

Participation in physical activity does not have to be continuous and can be built up in 10-15 minute sessions (which is recommended for those undertaking physical activity for the first time). Alternatively, it can be done in larger amounts every few days or weekly (which may be helpful for those who are time poor). It is suggested that additional amounts of vigorous activity may increase health related benefits.⁶

An argument has been made that Australia's current obesity epidemic is directly related to declining levels of physical activity. Recent data suggests that adult participation in physical activity is increasing⁷ (after a period of decline). However, there are conflicting data and views about Australian children's participation rates (stemming from increased participation in organised physical sports, and cultural activities such as dancing, and the decline in levels of incidental activity such as active transport, eg. riding to school).^{8,9,10,11}

Incidental activity, such as walking to the shops or train, sporting pursuits, cultural activities (such as dancing), and active transport, all contribute to an individual's level of physical activity. While there can be no doubt that physical activity forms part of an individual's energy balance equation, it is simplistic to suggest that physical activity alone is an effective intervention for weight loss (at both individual and population levels).¹²

There is, however, irrefutable evidence of the effectiveness of regular physical activity in the prevention of some chronic diseases including cardiovascular disease (CVD), diabetes, cancer, hypertension, depression, and osteoporosis.¹³ Physical activity may also provide additional benefits to those already suffering from chronic conditions such as CVD and osteoarthritis.

Regular, moderate physical activity is good for the maintenance of the ability to undertake activities of daily living such as getting out of bed and carrying the washing.

Chronic Disease

In relation to physical activity and chronic disease, it has been suggested that most chronic diseases can be prevented or perhaps, more accurately, postponed by routine participation in recommended levels of activity.¹⁴ Policies and programs targeted at the effective management and prevention of chronic disease at a population level must be guided by evidence.

For Weight Maintenance and Weight Loss

Increased physical activity is often included in brief lifestyle interventions, which aim to help a participant to maintain or lose weight. Encouragement of physical activity must be in conjunction with a varied and nutritious diet. More broadbased interventions, including information and education, may offer some benefit in the primary care setting.¹⁵ There must be more research into the benefits of such interventions as current evidence is limited.

Psychosocial – Mental Health

More recently, the psychosocial benefits of physical activity have been highlighted.¹⁶ This is timely considering the increasing focus on the burden of mental health problems within the Australian community.¹⁷ Physical activity is associated with increased levels of good mental health and is recognised as an evidence-based treatment for clinical anxiety and depression.¹⁸ It has been suggested that as little as 10 minutes of brisk walking may be adequate to improve psychological wellbeing and related quality of life.¹⁹ However, the evidence is limited and some studies showed no benefit.²⁰ With such large potential benefits, more research is needed in this area.

Physical Inactivity

Recent Australian estimates suggest that physical inactivity is responsible for seven per cent of the total burden of disease, resulting in large costs to the Australian economy.²¹ It has been suggested that increasing physical activity levels in people who are currently sedentary will provide the greatest health benefit to the community.²²

Children

Some argue that focusing solely on inactive adults will provide the greatest overall benefit to the community. Others suggest that focusing on the promotion of physical activity to children may provide a greater benefit, as it can establish positive life long attitudes towards physical activity, and may also encourage older family members to increase their activity levels.

From a young age, children can benefit from physical activity that can positively affect cognitive, developmental, coordination, confidence, and self esteem. Specific activities may provide additional benefits (swimming can increase water safety awareness, cycling can increase road safety awareness).

Incidental activity from play, particularly outdoor play, meets most of an infant or child's physical activity needs (to place any restrictions on their activity due to parental/carer perceptions of danger needs to be addressed). Placing young infants and children in front of televisions and videos may be seen as less dangerous than allowing the child to play actively, inside or outside (it is increasingly recognised that time spent in front of the television will reduce the time spent participating in outdoor physical activity for children). Recent recommendations by the Royal Australasian College of Physicians suggest no more than two hours of flat screen time per day for children.²³

While physical activity participation at school is important, the evidence appears to suggest that a singular focus on schools is not as effective as strategies that combine school initiatives with family and community based strategies.²⁴ Team sporting pursuits may provide additional benefits for children including the development of skills related to working collaboratively in groups.

Older People

Australia's ageing population warrants a specific focus on increasing the functional capacity (and independence) of people as they age.²⁵ Participation in physical activity by older people can improve bone health, reduce falls, and improve psychosocial well-being.

Elite Athletes

Elite athletes may suffer from injury due to large amounts of physical activity. Most are happy to suffer to pursue their sporting careers, believing the long term benefit outweighs the risk. Injuries are usually specific to the sport, and are often managed by medical professionals who specialise in treating athletes.

Illnesses affecting elite athletes are not always physiological and may include mental health problems such as anorexia or bulimia.

Access

Participation in physical activity tends to be based on certain socio-demographic factors including occupation, marital status, gender, cultural background, geographic location, and education. Those less likely to be active include older people, people with disabilities, and poorer people, because of the lack of opportunity to access (or the existence of) the necessary infrastructure to support participation.

Culturally and Linguistically Diverse (CALD)

Many culturally specific activities contribute towards physical activity levels. Providing culturally specific physical activity advice to people from CALD backgrounds may enhance participation rates, which can be of particular benefit in this higher risk population group.²⁶

Aboriginal Peoples and Torres Strait Islanders

In 2001, it was estimated that 70 per cent of Indigenous Australian adults living in non-remote areas reported their physical activity levels as low or sedentary.²⁷ While the lack of academic literature in this area is concerning, this should not prevent efforts to improve access and participation in physical activity. Supportive environments encouraging physical activity, such as swimming pools in remote communities, may have broad ranging positive impacts including specific improvements in ear and skin health for Aboriginal children, but also improved opportunities for socialisation and increased water safety awareness.²⁸

The Role of Doctors

There are a number of groups within the population, including those who do not participate in regular physical activity, that may benefit significantly from brief lifestyle interventions within the primary care setting.^{29,30,31} These interventions have been noted to increase physical activity levels in patients for up to six months.³² Interventions within the primary care setting need to be supported by multi-faceted population-wide interventions and public education campaigns.

Medical practitioners have a professional responsibility as role models within the community.

The Role of Government

As stated above, interventions within the primary care setting need to be supported by multi-faceted population-wide interventions and public education campaigns. Governments should aim for a coordinated approach so that simple, clear and consistent messages are delivered to the Australian public. A good example is the Active Australia campaign and the slogan 'take it regularly, not seriously', which has a large recall within the population.

Many note the role of the 'obese promoting' or 'obesogenic' environment, along with the related reduction in the need for incidental activity, as causes for concern. Governments have a responsibility to ensure that all sections of the Australian community, irrespective of income, have good access to safe physical activity. This includes a responsibility to ensure that in planning and building communities attention is paid to the provision of both incidental and planned physical activity.

There has been the development of an information technology tool to improve town and community planning. From the perspective of ensuring good levels of incidental activity and good access to safe physical activity, the impact of the tool is yet to be assessed.

Cycle paths and walking paths and planned distances between car parking and shops are good examples of how to encourage community participation in some forms of physical activity.³³

(For further information on the issue of drugs in sport, please see the *AMA's Position Statement on Drugs and Sport 2000*. In addition, for further information on issues associated with body image please refer to the *AMA's Position Statement on Body Image and Health 2002*).

The AMA believes

- That undertaking a minimum, moderate amount of physical activity (equivalent to 30 minutes per day) will assist with the maintenance of good health;
- That physical activity is a protective factor in relationship to the development of many chronic diseases;
- That physical activity plays an important role in the prevention and management of many of these conditions;
- That all doctors should undertake lifestyle interventions with their patients that include recommendations to participate in physical activity: and
- That there should be easy access to opportunities for physical activity for all.

The AMA calls for

- Physical education and physical activity to be universally incorporated into school curricula, and schools to be universally funded to support such activity.
- Governments to support, through funding, the provision of physical activity / education by institutions providing post secondary education.
- Governments to commit to more and better data collection in relation to physical activity levels within the population, including collection of information on formal and incidental physical activity.
- Governments to increase investment into research examining the risks and benefits (to both the individual and the community) of participating in various forms of physical activity.
- All levels of Government to provide supportive settings to encourage safe participation in physical activity, both formal and incidental. This may include new developments or upgrading of current infrastructure (including playgrounds, cycle paths and walking paths).
- All doctors to opportunistically advise patients and parents of the potential health benefits of increased physical activity in sedentary children and adults.
- Governments to support programs for physical activity in the elderly.
- Governments to support the establishment and maintenance of specific programs for physical activity in institutional care centres, including hospitals.
- Governments to extend their focus on support for elite athletes to support of more physical activity opportunities for all Australians.
- All possible steps be taken to maximise the safety of the environments in which exercise is performed and the provision of first aid facilities and resuscitation equipment, where appropriate. A health assessment by a medical practitioner should be performed before older persons are encouraged to undertake vigorous physical activity.

Reference:

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