

## Costs of Physical Inactivity

Physical inactivity is the second most important risk factor after tobacco use that contributes to the burden of disease, feelings of ill health and mortality in Australia.<sup>1</sup>

On the other hand, participation in sport and physical activity leads to a range of health, social, economic and environmental benefits for individuals and communities. Just about everyone agrees on the benefits and in recent times many groups and governments have aimed to increase the participation of Australians in physical activity.

### Physical activity levels of Western Australians in 2002

Just over 13 per cent of Western Australian Adults were inactive. That is they undertook no walking, moderate intensity or vigorous intensity activity in the week prior to survey. A further 31.8 per cent of Western Australian adults undertook levels of activity that that did not benefit their health.<sup>2</sup> The data from the Western Australian Adult Survey 2002 defined sufficient levels of activity as 150 minutes of moderate intensity physical activity over five or more sessions or 60 minutes of vigorous intensity activity in the previous week.<sup>3</sup>

### Health costs of physical inactivity

People who are physically inactive are at increased risk for a range of chronic diseases. Physical inactivity is also associated with other chronic disease risk factors such as high blood cholesterol and high blood pressure. In addition, lack of physical activity is associated with higher overall death rates for adults at any age.<sup>4</sup>

Physical inactivity is a high risk factor for the following health problems;<sup>5, 6, 7</sup>

- Coronary heart disease;
- Stroke;
- Non-insulin dependent (type two) diabetes;
- Colon cancer;
- Breast cancer;
- Depression;
- High blood pressure;
- High blood cholesterol levels;
- Excess weight;
- Obesity;
- Musculoskeletal disorders; and
- Atherosclerosis.



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## Burden of disease and injuries attributable to physical activity

Nationally, research shows that physical inactivity is responsible for 6.7 per cent of the burden of disease and disability in Australia, with an estimated 13 019 deaths in 1996. Of these deaths, 53 per cent were attributed to ischaemic heart disease, 22 per cent to stroke and 12 per cent to colorectal cancer.<sup>8</sup>

### *Attributable burden of physical inactivity by condition in Australia, 1996<sup>9</sup>*

Cause of death	Number of deaths
Ischaemic heart disease	6853
Stroke	2872
Colorectal cancer	1543
Breast cancer	691
Falls	591
Type 2 diabetes mellitus	256
Hypertension	207
Chronic Back pain	5
<b>Total</b>	<b>13 019</b>

- Heart disease and stroke are responsible for 40 per cent of all deaths in Australia.<sup>10</sup>
- People who do not participate in regular physical activity are almost twice as likely to die from coronary heart disease as those who participate.<sup>11</sup>

## Costs for children

- Many health effects of physical inactivity are manifested later in life in the form of chronic diseases such as diabetes, hypertension and CVD. Optimal skeletal growth and body mass maintenance during the growing years appear to be compromised when insufficient physical activity occurs.<sup>12</sup>

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## **Economic costs**

- In 1993–94, the estimated direct health care costs of six diseases attributable to physical inactivity were about \$377 million. This total consists of \$161 million for coronary heart disease, \$101 million for stroke, up to \$56 million for depressive disorders, \$28 million for type two diabetes, \$16 million for colon cancer and \$16 million for breast cancer.<sup>13</sup>
- It has been estimated that the indirect costs, such as time off work and the social costs of inactivity would be more than double the direct health care costs.<sup>14</sup>
- In Western Australia, the costs attributable to the six major diseases (heart disease, stroke, non-insulin dependent diabetes, colon cancer, breast cancer and depression disorders) due to physical inactivity have been estimated at \$36 million per year.<sup>15</sup>

## **Costs to organisations**

Inactive employees can be costly to organisations and may lead to:

- Increased employee benefit costs;
- Reduced productivity;
- Decreased employee satisfaction;
- Increased absenteeism;
- Increased short and long term disability payments;
- Increased levels of worker's compensation; and
- Increased levels of fatigue, inattention and accidents.<sup>16</sup>

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## Footnotes

- <sup>1</sup> Bauman, A., Bellew, B., Vita, P., Brown, W., Owen, N. (2002). (15/09/2005: date of retrieval). Getting Australia Active: towards better practice for the promotion of physical activity (summary). Melbourne, Australia: National Public Health Partnership. p5. [http://www.nphp.gov.au/publications/sigpah/gaa\\_summary.pdf](http://www.nphp.gov.au/publications/sigpah/gaa_summary.pdf)
- <sup>2</sup> McCormack, G., Milligan, R., Giles-Corti, B. and Clarkson, J.P. (2003). Physical activity levels of Western Australians 2002: results from the adult physical activity survey and pedometer study. Perth, Western Australia: Western Australian Government. p25.
- <sup>3</sup> Ibid. p17.
- <sup>4</sup> Australian Institute of Health and Welfare. (2002). Chronic diseases and associated risk factors in Australia 2001. Canberra, Australian Capital Territory: Australian Institute of Health and Welfare.
- <sup>5</sup> Australian Institute of Health and Welfare. (2003). Indicators of health risk factors: the AIHW view. AIHW Cat. No. PHE 47. Canberra, Australian Capital Territory: Australian Institute of Health and Welfare. p2.
- <sup>6</sup> Government of Western Australia. (15/09/2005: date of retrieval). Facts about physical activity, October 2002. Perth, Western Australia: Premier's Physical Activity Taskforce. [http://www.patf.dpc.wa.gov.au/documents/Fact\\_Sheet\\_1.pdf](http://www.patf.dpc.wa.gov.au/documents/Fact_Sheet_1.pdf)
- <sup>7</sup> Australian Institute of Health and Welfare. (2002). Chronic diseases and associated risk factors in Australia 2001. op. cit.
- <sup>8</sup> Mathers, C., Vos, T. and Stevenson, C. (1999). The burden of disease and injury in Australia. AIHW cat. no. PHE 17. Canberra, Australian Capital Territory: Australian Institute of Health and Welfare. p126. <http://www.aihw.gov.au/publications/health/bdia/bdia.pdf>
- <sup>9</sup> Ibid. p126.
- <sup>10</sup> Government of Western Australia. (15/09/2005: date of retrieval). Facts about physical activity, October 2002. op. cit.
- <sup>11</sup> Mathers, C., Vos, T. and Stevenson, C. (1999). The burden of disease and injury in Australia. op. cit. p124.
- <sup>12</sup> Premier's Physical Activity Taskforce. (2001). Getting Western Australians more active: a strategic direction report from the Premier's physical activity taskforce. Perth, Western Australia: Premier's physical activity taskforce. p14.
- <sup>13</sup> Stephenson, J., Bauman, A., Armstrong, T., Smith, B. and Bellew, B. (2000). The costs of illness attributable to physical inactivity in Australia: a preliminary study. Canberra, Australian Capital Territory: Department of Health and Aged Care and Australian Sports Commission. p vii.
- <sup>14</sup> Bauman, A., Bellew, B., Vita, P., Brown, W., and Owen, N. (2002). Getting Australia active: towards better practice for the promotion of physical activity. National Public Health Partnership. Melbourne, Australia: National Public Health Partnership. p13.
- <sup>15</sup> Premier's Physical Activity Taskforce. (2001). Getting Western Australians more active: a strategic direction report from the Premier's physical activity taskforce. op. cit. p11.
- <sup>16</sup> Ibid. p13.