

Physical activity patterns of Australian adults

The Australian Institute of Health and Welfare is Australia's national health and welfare statistics and information agency. The Institute's mission is to improve the health and well-being of Australians by informing community discussion and decision making through national leadership in developing and providing health and welfare statistics and information.

Physical activity patterns of Australian adults

**Results of the 1999 National
Physical Activity Survey**

**Tim Armstrong
Adrian Bauman
Joanne Davies**

August 2000

Australian Institute of Health and Welfare
Canberra

AIHW cat. no. CVD 10

© Australian Institute of Health and Welfare 2000

This work is copyright. Apart from any use as permitted under the *Copyright Act 1968*, no part may be reproduced without prior written permission from the Australian Institute of Health and Welfare. Requests and enquiries concerning reproduction and rights should be directed to the Head, Communication and Public Affairs, Australian Institute of Health and Welfare, GPO Box 570, Canberra ACT 2601.

A complete list of the Institute's publications is available from the Publications Unit, Australian Institute of Health and Welfare, GPO Box 570, Canberra ACT 2601, or via the Institute's web site (<http://www.aihw.gov.au>).

ISBN 1 74024 066 9

Suggested citation

Armstrong T, Bauman A & Davies J 2000. Physical activity patterns of Australian adults. Results of the 1999 National Physical Activity Survey. Canberra: Australian Institute of Health and Welfare.

Australian Institute of Health and Welfare

Board Chair
Professor Janice Reid

Director
Dr Richard Madden

Any enquiries about or comments on this publication should be directed to:

Dr Tim Armstrong
Cardiovascular Disease and Diabetes Monitoring Unit
Australian Institute of Health and Welfare
GPO Box 570
Canberra ACT 2601

Phone: (02) 6244 1129
Fax: (02) 6244 1166
E-mail: tim.armstrong@aihw.gov.au

Published by the Australian Institute of Health and Welfare

Printed by Panther Publishing and Printing

Contents

List of tables	vii
List of figures	viii
List of boxes	viii
List of abbreviations	ix
Preface.....	xi
Acknowledgments.....	xii
Summary.....	xiii
1. Introduction	1
2. Physical activity and health	3
Physical activity and all-cause mortality.....	3
Physical activity and cardiovascular disease	4
Physical activity and diabetes.....	6
Physical activity and cancer	7
Physical activity and injury prevention and control	8
Physical activity, mental health and psychosocial benefits.....	9
3. Physical activity measurement	10
Physical activity concept.....	11
Physical activity duration	11
Physical activity frequency	11
Physical activity intensity.....	11
Physical activity type.....	12
Physical activity context.....	12
Physical activity to confer a health benefit	13
4. Survey methodology.....	14
Overview.....	14
Sample size	14
Sample selection	14
Response rate.....	15
Questionnaire	15
Derivation of the physical activity measures	16
Weighting.....	18
Predictor variables of participation.....	18

5. Demographic profile of survey respondents	19
Age and sex	19
Children in the household	20
Language spoken, marital status, education level, occupation status.....	20
Body mass index.....	22
6. Physical activity patterns of Australian adults.....	24
Total sessions spent in activities.....	24
Total time spent in activities	27
Measures of physical activity.....	28
Physical activity habits (a usual week).....	33
7. Awareness and understanding of current physical activity media messages	36
Promotion of physical activity in Australia	36
Message recall.....	37
Understanding of physical activity messages	42
Intentions to become more active	44
Factors independently associated with participation.....	46
8. Trends in Australians' physical activity habits, 1997 and 1999	49
9. Discussion.....	51
Glossary	54
Appendixes.....	56
References	63

List of tables

Table 5.1: Age and sex of survey respondents (per cent), 1999.....	19
Table 5.2: Percentage of children in the household for survey respondents, 1999.....	20
Table 5.3: Language spoken, marital status, education level, occupation of survey respondents, 1999.....	21
Table 5.4: BMI categories of survey respondents by age, sex, education level (per cent), 1999.....	23
Table 6.1: Sessions of physical activity in the previous week by sex (per cent), 1999.....	25
Table 6.2: Sessions of physical activity in the previous week by age group (per cent), 1999.....	26
Table 6.3: Total time (minutes) for physical activity during the previous week, 1997 and 1999.....	27
Table 6.4: Mean minutes for physical activity during the previous week by age group and sex, 1999.....	27
Table 6.5: Percentage of people reporting no physical activity (sedentary) during the previous week, 1997 and 1999.....	29
Table 6.6: Percentage of people achieving 'sufficient' time during the previous week by sex, age group and education level, 1999.....	29
Table 6.7: Percentage of people achieving 'sufficient' time and sessions during the previous week by sex, age group and education level, 1999.....	30
Table 6.8: Trends in 'sufficient' levels of activity (per cent), 1997 and 1999.....	32
Table 6.9: Mean minutes of physical activity over the previous six months, 1997 and 1999.....	33
Table 6.10: Percentage of people achieving a 'sufficient' time in physical activity over the previous six months, 1997 and 1999.....	34
Table 7.1: Percentage of people recalling generic messages about exercise and physical activity, 1997 and 1999.....	38
Table 7.2: Percentage of people recalling the <i>Active Australia</i> campaign, 1999.....	39
Table 7.3: Percentage of people recalling the <i>Active Australia</i> tagline 'Exercise – you only have to take it regularly, not seriously', 1997 and 1999.....	40
Table 7.4: Percentage of people recalling the 'Rusty' campaign, 1999.....	41
Table 7.5: Percentage of people agreeing (combined 'strongly agree' and 'agree') with knowledge statements, 1997 and 1999.....	43
Table 7.6: Percentage of people intending to be more physically active, 1999.....	45
Table 7.7: Adjusted odds ratios for factors associated with participation in 'sufficient' physical activity, 1999.....	47
Table 8.1: Summary of changes between the 1997 and 1999 surveys.....	50
Table A3.1: Percentage of people achieving 'sufficient' levels of physical activity, 1999.....	60

List of figures

Figure 6.1:	Percentage of people achieving a 'sufficient' time in physical activities in the previous week, 1999.....	31
Figure 6.2:	Percentage of people achieving a 'sufficient' time and sessions in physical activities in the previous week, 1999	31
Figure 6.3:	Percentage of people achieving a 'sufficient' time in physical activities in the previous six months, 1999	34
Figure 7.1:	Any intention to be more active (combined intention in the next month and in the next six months), 1999.....	45

List of boxes

Box 2.1:	Heart disease in Australia	4
Box 2.2:	Stroke in Australia	4
Box 2.3:	Cardiovascular risk factors in Australia.....	5
Box 2.4:	Diabetes in Australia	6
Box 2.5:	Cancer in Australia	7
Box 2.6:	Injury prevention and control in Australia	8
Box 2.7:	Mental health in Australia	9

List of abbreviations

ACSM	American College of Sports Medicine
AIHW	Australian Institute of Health and Welfare
BMI	body mass index
CATI	Computer-Assisted Telephone Interview
CI	confidence interval
CVD	cardiovascular disease
DHAC	Department of Health and Aged Care
DHFS	Department of Health and Family Services
HDL	high-density lipoprotein
HSC	Higher School Certificate
HVRF	Hunter Valley Research Foundation
ICC	intra-class correlation
MET	metabolic equivalent

Preface

Physical inactivity is recognised as one of the most important population health risk factors. Its role as a risk factor is at least as significant as hypertension or high cholesterol in contributing to cardiovascular disease, one of Australia's major killers. In addition, physical activity protects against several cancers, reduces the risk of diabetes, improves mental health and may reduce the risk of falls and injuries in the elderly.

Overall, physical inactivity ranks second only to tobacco smoking in importance for the burden of disease and disability from all-causes in Australia (Mathers et al. 1999).

Participation in regular physical activity has important health and social benefits. In fact, physical activity can play a part as a preventive factor in five of the six National Health Priority Areas—cardiovascular disease, cancer control, mental health, diabetes mellitus and injury prevention and control.

Physical Activity Patterns of Australian Adults, released on the eve of the 2000 Sydney Olympics, provides much-needed information on national physical activity levels of Australian adults, as well as providing an indication of the impact of the *Active Australia* initiative. The Olympics is a time to focus on elite athletes and their performances, but also to think about the performance of Australia more broadly as an active nation. This report documents current patterns of physical activity participation among Australian adults in 1999 and provides information on trends from 1997.

In order to assess current patterns of physical activity and the impact of the *Active Australia* campaign, a survey of 3,841 people was conducted during November 1999. The information presented in this report includes the most up-to-date data on physical activity levels and attitudes among Australians adults.

The 1999 National Physical Activity Survey was jointly funded by the Commonwealth Department of Health and Aged Care and the Australian Institute of Health and Welfare. It follows an earlier comparable survey funded under the auspices of *Active Australia* in November 1997. The report is a valuable resource for researchers and those interested in public health policy and health promotion.

Dr Richard Madden
Director
Australian Institute of Health and Welfare

Acknowledgments

Mr Trent Harlow provided invaluable assistance in the preparation of this report. Valuable comments were received from Dr Stan Bennett, Dr Paul Magnus and Ms Sushma Mathur. The assistance of Ms Amanda Nobbs was greatly appreciated.

The report was refereed by Professor Wendy Brown (University of Queensland), Professor Neville Owen (University of Wollongong) and Mr Mark Williams (Department of Human Services, South Australia).

The authors gratefully acknowledge Mr Andrew Searles and staff of the Hunter Valley Research Foundation for managing the survey data collection.

Summary

This report presents results from a national physical activity survey of Australian adults conducted in November and December 1999. It covers current (1999) activity patterns and recent national trends. This report represents the most up-to-date information using recognised measures and methods to ensure comparable information on trends in physical activity.

A large and growing proportion of Australians see the health benefits of physical activity

- 88% of people believe that their health could be improved by being generally more active.
- 92% of people believe that health could be improved by participation in 30 minutes of moderate-intensity physical activity each day.
- There was an increase in overall knowledge of the health benefits of physical activity and awareness of physical activity messages between 1997 and 1999.
- 42% of people recognised the *Active Australia* tagline 'Exercise – you only have to take it regularly, not seriously'.
- Recall of 'Rusty', the 1999 International Year of Older People physical activity campaign, was 24% in those aged 60–75 years.

however, participation is declining...

- The average number of times each week people participated in walking, moderate and vigorous leisure-time physical activity declined between 1997 and 1999.
- The average amount of time people spent each week in physical activity declined between 1997 and 1999.
- This finding held for participation in physical activity done in the 'previous week' and over a 'usual' week.

the proportion of physically inactive people is increasing...

- The proportion of physically inactive Australians increased between 1997 and 1999 (13% to 15% respectively).
- This increase in physical inactivity was greatest for those people aged 30–44 years (12% to 17%), and among those people with tertiary levels of education (6% to 11%).

and the percentage of those achieving 'sufficient' levels of physical activity for a health benefit is declining.

- Between 1997 and 1999 there was a decline in the proportion of Australians participating in 'sufficient' physical activity to provide a health benefit (62% to 57%).
- The decline was seen for both men (63% to 60%) and women (61% to 54%).
- The decline was greatest for people aged 30–44 years (64% to 54%).
- The proportion of people aged 60–75 years participating in 'sufficient' levels of activity did not change between 1997 and 1999.

Who achieved 'sufficient' levels of physical activity in 1999?

- Participation at a 'sufficient' activity level for a health benefit was greatest among 18–29-year-olds (69%) and lowest among 45–59-year-olds (50%).
- Men (60%) were more likely than women (54%) to participate at 'sufficient' levels.
- For men, participation at a 'sufficient' activity level was greatest for those aged 18–29 years (74%) and lowest among those aged 45–59 years (50%).
- Among women, participation at a 'sufficient' activity level decreased with age from 64% in those aged 18–29 years to 48% in those 60–75 years of age.
- Participation at a 'sufficient' activity level increased with educational attainment.

Who is more likely to participate in physical activity?

- Obese Australian adults were 50% less likely than other Australian adults to reach a 'sufficient' level of physical activity compared with those of healthy weight.
- Older Australians were less likely to participate in 'sufficient' physical activity than younger people.
- Women were 20% less likely to achieve 'sufficient' physical activity compared with men.
- People with at least one child at home were 20% less likely to be 'sufficiently' active than those without.
- People who did not recall the *Active Australia* slogan 'Exercise – you only have to take it regularly, not seriously' were 19% less likely to achieve 'sufficient' levels of physical activity than people who did recall it.

Do Australians intend to increase their participation?

- In 1999, one-third of Australian adults said that they intended to become more physically active in the next month and 29% said that they were intending to become more physically active in the next six months.
- Intentions to become more physically active were greater for women than for men, and decreased with age.