



Risk Factors

Physical activity

Stage 2

Epidemiological Series Report # 2007-21

April 2007

Introduction

The following overview presents the prevalence and incidence of physical activity among the participants of the North West Adelaide Health Study, and the demographics and chronic conditions associated with physical activity. Stage 1 (baseline examination) of the study was conducted between 2000 and 2003, and Stage 2 (second examination) was conducted from 2004 to 2006.

Measurement and definition of physical activity

Physical activity levels were determined using data obtained from the self report questionnaire. Respondents were asked about the amount of walking, moderate and vigorous activity they had undertaken in the past two weeks. These questions were the same as those used in the National Health Survey in 2001 and 2004, and the responses were classified into four activity levels in a similar manner to that of the National Health Survey¹.

Incidence of physical activity

The annual incidence of increasing activity levels between Stage 1 and Stage 2 from being sedentary was 37.5 incident cases per 1000 in the adult population.

The annual incidence of decreasing physical activity levels from active to sedentary between Stage 1 and Stage 2 was 41.5 cases per 1000 in the adult population.

Prevalence of physical activity – Stage 1 & Stage 2

The proportion of participants classified as sedentary was **28.1%** (95% CI 26.7-29.6) in Stage 1 and **28.9%** (95% CI 27.3-30.6) in Stage 2 (Table 1).

Table 1: Prevalence of physical activity

	Stage 1		Stage 2	
	n	%	n	%
Sedentary	1037	28.1	858	28.9
Low exercise level	1346	36.5	1087	36.7
Moderate exercise level	891	24.1	777	26.2
High exercise level	417	11.3	244	8.2
Total	3691*	100.0	2964*	100.0

* Note: (Stage 1) 369 participants and (Stage 2) 296 participants had missing responses and were excluded

Transition to and from physical activity

Overall, 13.3% (95% CI 12.1-14.6) undertook activity in Stage 1 and were classified as sedentary in Stage 2 and 15.2% (95% CI 13.9-16.6) were classified as sedentary in Stage 1 and Stage 2 (Table 2).

Table 2: The transition to and from physical activity

Stage 1	Stage 2	n	%
Activity	Activity	1640	59.2
Activity	No activity	369	13.3
No activity	No activity	420	15.2
No activity	Activity	341	12.3
Total		2770	100.0

¹ Australian Bureau of Statistics. National Health Survey: Users Guide, 2001. Cat no 4363.0.55.001, ABS: Canberra, 2003.

The proportion of participants classified as sedentary in Stage 1 was 28.1%, compared to 28.9% in Stage 2.

Overall, 13.3% of the cohort undertook some exercise in Stage 1 but were classified as sedentary in Stage 2.

Demographic profile of people classified as sedentary

In Stage 2, those classified as sedentary were statistically significantly more likely to be females, in the older age groups, unrelated adults living together or those in a step or sole parenting arrangement, those separated or divorced, or retired or undertaking home duties. Those classified as sedentary were significantly less likely to have achieved an educational level of trade, apprenticeship, certificate or diploma or bachelor degree or higher, to have never been married, or have an income greater than \$40,000 (Table 3).

Table 3: Univariate Odds Ratios for demographic variables associated with being classified as sedentary

Variable	n	%	OR	(95% CI)	p value
Sex					
Male	369/1437	25.7	1.00		
Female	488/1528	32.0	1.36	(1.16-1.59)	<0.001
Age group					
20 to 24 years	38/228	16.5	1.00		
25 to 34 years	136/648	21.0	1.34	(0.90-1.99)	0.15
35 to 44 years	190/612	31.1	2.28	(1.54-3.36)	<0.001
45 to 54 years	175/518	33.8	2.57	(1.73-3.81)	<0.001
55 to 64 years	121/394	30.8	2.24	(1.49-3.38)	<0.001
65 to 74 years	90/290	31.1	2.27	(1.48-3.49)	<0.001
75 years and over	108/275	39.2	3.25	(5.02-7.39)	<0.001
Highest education level obtained*					
Secondary	485/1309	37.1	1.00		
Trade/apprenticeship/ cert/diploma	285/1089	26.1	0.60	(0.51-0.72)	<0.001
Bachelor degree or higher	65/528	12.3	0.24	(0.18- 0.32)	<0.001
Gross annual household income*					
Up to \$20,000	195/547	35.7	1.00		
\$20,001-40,000	227/671	33.8	0.92	(0.73-1.17)	0.50
\$40,001-60,000	153/648	23.7	0.56	(0.43-0.72)	<0.001
More than \$60,000	242/990	24.4	0.58	(0.46-0.73)	<0.001
Family structure*					
Family & children, 2 biological/adoptive parents	304/1115	27.3	1.00		
Adult living with partner, no children	214/805	26.6	0.97	(0.79-1.84)	0.74
Adult living alone	114/391	29.2	1.10	(0.85-1.42)	0.46
Adults-related/unrelated, living together	101/305	33.1	1.32	(1.01-1.73)	0.04
Step/sole/shared parenting & other	109/314	34.8	1.42	(1.09-1.86)	0.01
Marital status*					
Married or living with partner	584/1988	29.4	1.00		
Separated/divorced	95/250	37.8	1.46	(1.11-1.92)	0.006
Widowed	68/186	36.4	1.37	(1.00-1.88)	0.05
Never married	109/532	20.4	0.62	(0.49-0.78)	<0.001
Work status*					
Full time employed	354/1371	25.8	1.00		
Part time/casual employed	142/488	29.1	1.18	(0.94-1.48)	0.16
Unemployed	11/73	15.2	0.51	(0.27-0.99)	0.04
Home duties/retired	309/881	35.1	1.56	(1.29-1.87)	<0.001
Student/other	36/142	25.6	0.99	(0.67-1.47)	0.96

*Not stated category not reported

Respondents classified as sedentary were significantly more likely to be among those who were:

- female;
- in older age groups;
- adults living together or in a step or sole parent arrangement; separated or divorced,
- retired or undertaking home duties.

People who were sedentary were more likely to have diabetes, cardiovascular disease, arthritis and a current mental health condition.

Chronic condition profile of those classified as sedentary

In Stage 2, those classified as sedentary were statistically significantly more likely to have diabetes, cardiovascular disease, arthritis or a current mental health condition (Table 4).

Table 4: Univariate Odds Ratios for chronic conditions associated with being classified as sedentary

Variable	n	%	OR	(95% CI)	p value
Diabetes*					
No	749/2691	27.8	1.00		
Yes	89/204	43.7	2.01	(1.50-2.68)	<0.001
Asthma*					
No	710/2425	29.3	1.00		
Yes	131/473	27.6	0.92	(0.74-1.15)	0.46
COPD*					
No	774/2717	28.5	1.00		
Yes	47/133	35.3	1.37	(0.95-1.98)	0.09
Cardiovascular Disease*					
No	761/2735	27.8	1.00		
Yes	74/175	42.1	1.89	(1.38-2.58)	<0.001
Arthritis*					
No	629/2289	27.5	1.00		
Yes	207/608	34.0	1.36	(1.12-1.65)	0.002
Mental Health Condition*					
No	678/2454	27.6	1.00		
Yes	155/456	34.0	1.35	(1.09-1.67)	0.006

* Don't know/ refused/ not stated category not reported

Quality of life profile of people do and do not exercise

Figure 1 shows the mean scores, controlled for age and sex, of the SF-36 subscales for participants in Stage 2 who did and did not exercise. People who did not exercise scored statistically significantly lower on the all dimensions.

People classified as sedentary had significantly lower quality of life scores on all dimensions of the SF-36.

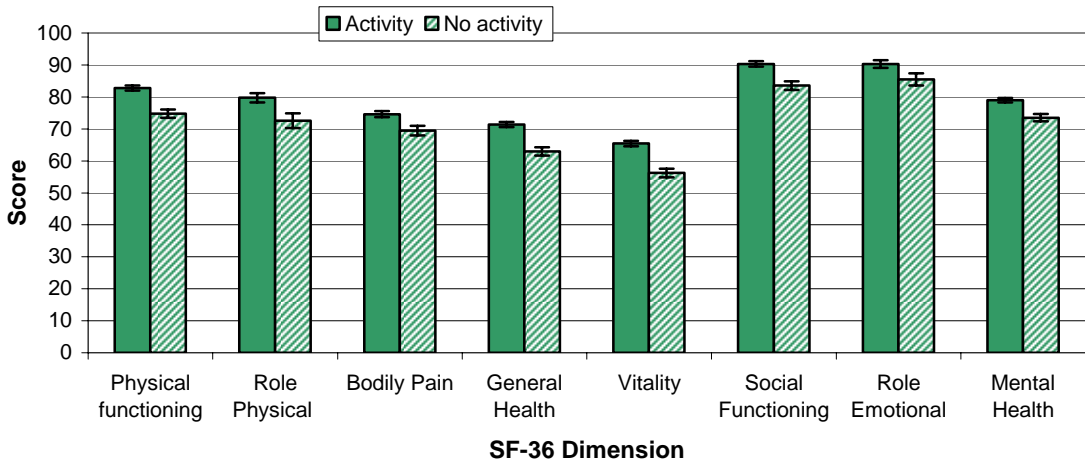


Figure 1: SF-36 mean scores for people who did and did not exercise

This document is one of a series of reports concerning Stage 2 of the North West Adelaide Health Study. Please see website for other reports in the series - www.health.sa.gov.au/pros/

CONTACT DETAILS:
 Population Research & Outcome Studies Unit – South Australian Department of Health
 PO Box 287 Rundle Mall Level 8 CitiCentre, 11 Hindmarsh Square, Adelaide SA 5000
 Telephone (08) 8226 7042 Facsimile (08) 8226 6244. Email: pros@health.sa.gov.au

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