

2.22 Level of physical activity

The proportion of the Aboriginal and Torres Strait Islander adult population classified as having sedentary, low, moderate or high physical activity levels

Data sources

Data for this measure come from the 2004–05 National Aboriginal and Torres Strait Islander Health Survey (NATSIHS).

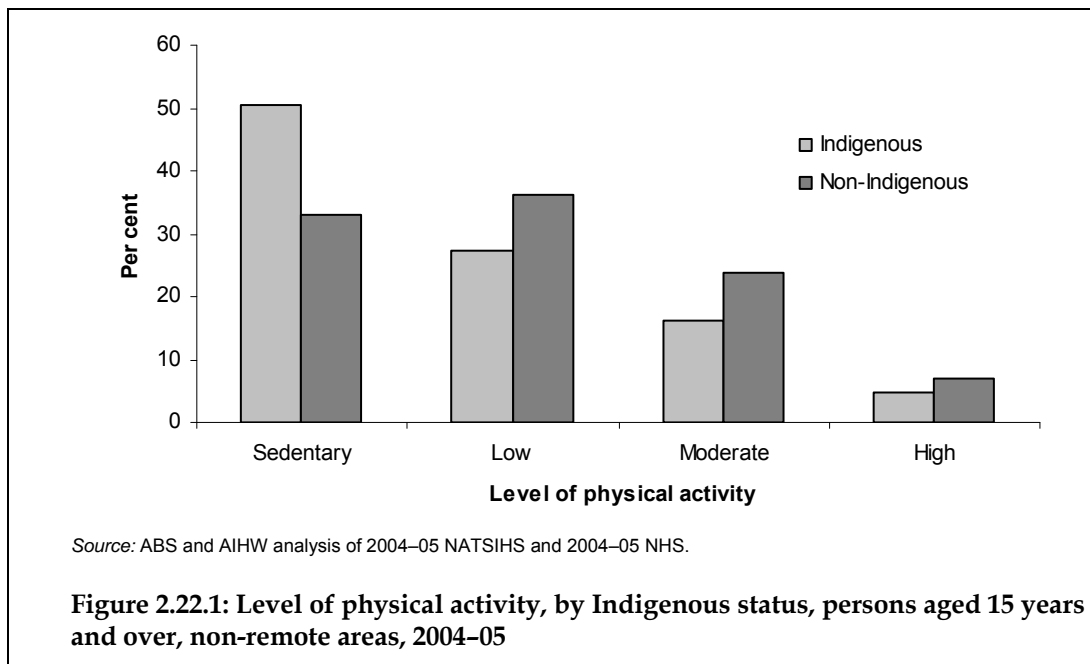
The 2004–05 NATSIHS collected information from 10,439 Indigenous Australians of all ages. This sample was considerably larger than the supplementary Indigenous samples in the 1995 and 2001 National Health Surveys. The survey was conducted in remote and non-remote areas of Australia and collected a range of information from Indigenous Australians about health-related issues including health-related actions, health risk factors, health status, socioeconomic circumstances and women's health. It is planned to repeat the NATSIHS at 6-yearly intervals, with the next NATSIHS to be conducted in 2010–11. Selected non-Indigenous comparisons are available through the 2004–05 National Health Survey (NHS).

Data analyses

Physical activity

Information on the level of physical activity of Indigenous and non-Indigenous Australians aged 15 years and over in the 2 weeks before the survey was collected in non-remote areas only and is presented below.

- In 2004–05, approximately 47% of Indigenous persons reported their exercise level as sedentary, 28% as low, 18% as moderate and 7% as high.
- After adjusting for differences in age structure, approximately 51% reported their exercise level as sedentary (very low or no exercise), 27% as low and 21% as moderate or high, compared with 33%, 36% and 31% respectively of non-Indigenous Australians (Figure 2.23.1).



Physical activity by age and sex

- Sedentary or low levels of physical activity were highest among Indigenous people aged 45–54 years and 55 years and over (83% and 85% respectively); moderate or high levels of physical activity were highest among those aged 15–24 and 25–34 years (32% and 27% respectively) (Table 2.22.1).
- A higher proportion of Indigenous females than Indigenous males reported that their level of exercise was sedentary (51% compared with 42%).
- A higher proportion of males exercised at moderate or high levels than females across all age groups in both the Indigenous and non-Indigenous populations.

Table 2.22.1: Level of physical activity, by Indigenous status, sex and age group, non-remote areas, 2004–05

Physical activity level	15–24		25–34		35–44		45–54		55+		Total		Total age-standardised ^(a)	
	Indig.	Non-Indig.	Indig.	Non-Indig.	Indig.	Non-Indig.	Indig.	Non-Indig.	Indig.	Non-Indig.	Indig.	Non-Indig.	Indig.	Non-Indig.
Per cent														
Males														
Sedentary	31*	23*	39*	26*	45*	34*	57*	36*	60*	39*	42*	32*	48*	32*
Low	25	30	24*	35*	30	35	20*	34*	24	30	25*	33*	24*	33*
Moderate	24	26	27	25	19	23	19 ^(b)	24	14*	27*	22	25	20*	25*
High	19	20	9*	13*	6 ^(b)	8	3 ^(b)	5	n.p.	3	10	9	7*	9*
Total number^(c)	35,604	1,330,358	23,150	1,352,832	18,468	1,418,963	13,654	1,323,380	10,995	2,147,296	101,870	7,572,828	101,870	7,572,828
Females														
Sedentary	46*	31*	50*	29*	51*	32*	55*	32*	60*	41*	51*	34*	53*	34*
Low	33	39	30*	42*	33*	42*	32*	42*	26	34	31*	39*	30*	39*
Moderate	15*	22*	16*	23*	14*	22*	10*	22*	12*	22*	14*	22*	13*	22*
High	5 ^(c)	8	3 ^(b)	6*	2 ^(d)	4	n.p.	3	n.p.	2	3*	4*	2*	4*
Total number^(c)	34,789	1,275,738	26,616	1,372,860	22,114	1,440,884	15,246	1,347,588	12,787	2,334,857	111,552	7,771,928	111,552	7,771,928
Persons														
Sedentary	39*	27*	45*	28*	48*	33*	56*	34*	60*	40*	47*	33*	51*	33*
Low	29*	34*	27*	39*	31*	39*	27*	38*	25*	32*	28*	36*	27*	36*
Moderate	20*	24*	21	24	16*	22*	14*	23*	13*	25*	18*	24*	16*	24*
High	12	14	6*	10*	4 ^(b)	6*	3 ^(b)	4	1 ^(d)	3	7	7	5*	7*
Total number^(c)	70,393	2,606,096	49,766	2,725,692	40,582	2,859,847	28,900	2,670,968	23,781	4,482,153	213,422	15,344,756	213,422	15,344,756

* Represents statistically significant differences in the Indigenous and non-Indigenous comparisons.

(a) Directly age-standardised proportions.

(b) Estimate has a relative standard error of between 25% and 50% and should be used with caution.

(c) Includes physical activity level not stated.

(d) Estimate has a relative standard error greater than 50% and is considered too unreliable for general use.

Source: ABS and AIHW analysis of 2004–05 NATSIHS and 2004–05 NHS.

Physical activity by state/territory

- Sedentary or low levels of physical activity among Indigenous Australians aged 15 years and over ranged from 70% in Tasmania to 78% in New South Wales (Table 2.22.2a).
- A higher proportion of Indigenous Australians than non-Indigenous Australians reported their exercise level as sedentary in all states and territories. Data were not available for non-Indigenous Australians in the Northern Territory (Table 2.22.2b).

Table 2.22.2a: Level of physical activity, by state/territory, Indigenous persons aged 15 years and over, non-remote areas, 2004–05

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Aust.
	Per cent								
Sedentary	51	38	46	46	48	37	37	40	47
Low	27	33	27	25	25	33	34	34	28
Moderate	16	22	15	24	18	22	19	20	18
High	5	6 ^(a)	9	5	6 ^(a)	8	10	7 ^(a)	7
Total^(b)	100	100	100	100	100	100	100	100	100
Total number ^(b)	81,264	18,399	57,337	21,965	12,473	10,929	2,596	6,264	211,226

(a) Estimate has a relative standard error of between 25% and 50% and should be used with caution.

(b) Includes physical activity level not stated.

Source: ABS and AIHW analysis of 2004–05 NATSIHS.

Table 2.22.2b: Level of physical activity, by state/territory and Indigenous status, persons aged 15 years and over, non-remote areas, 2004–05

	New South Wales		Victoria		Queensland		Western Australia		South Australia		Tasmania		Australian Capital Territory		Northern Territory ^(a)		Australia	
	Indig.	Non-Indig.	Indig.	Non-Indig.	Indig.	Non-Indig.	Indig.	Non-Indig.	Indig.	Non-Indig.	Indig.	Non-Indig.	Indig.	Non-Indig.	Indig.	Non-Indig.	Indig.	Non-Indig.
	Per cent																	
Sedentary	54*	35*	42*	31*	51*	35*	52*	30*	52*	34*	38	33	37*	24*	51	n.a.	51*	33*
Low	27*	36*	32	37	27*	34*	23*	37*	25*	38*	35	36	34	40	29	n.a.	27*	36*
Moderate	15*	23*	22	24	14*	23*	22	26	17	22	21	25	23	27	16	n.a.	16*	24*
High	4*	7*	4 ^(b)	7	6	7	3*	8*	4 ^(b)	6	6	7	7	9	5 ^(b)	n.a.	5*	7*
Total^(c)	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Total number ^(c)	81,264	5,208,965	18,399	3,944,895	57,337	2,899,135	21,965	1,448,876	12,473	1,164,894	10,929	352,957	2,596	252,744	6,264	n.a.	211,226	15,344,756

* Represents statistically significant differences in the Indigenous and non-Indigenous comparisons.

- (a) The National Health Survey sample does not support a non-Indigenous Northern Territory estimate.
 (b) Estimate has a relative standard error of between 25% and 50% and should be used with caution.
 (c) Includes physical activity level not stated.

Note: Data are age-standardised.

Source: ABS and AIHW analysis of 2004–05 NATSIHS and 2004–05 NHS.

Physical activity by selected health characteristics

- Approximately 58% of Indigenous Australians in non-remote areas with fair/poor health status reported exercising at sedentary levels compared with 48% of Indigenous Australians with excellent/very good/good health status (Table 2.22.3). Over three-quarters (78%) of Indigenous people aged 15 years and over who were overweight or obese reported exercising at low or sedentary levels. Approximately 79% of Indigenous Australians with a long-term health condition reported sedentary or low levels of physical activity.
- Approximately 59% of Indigenous Australians aged 18 years and over in non-remote areas who were current smokers reported sedentary levels of physical activity, compared with 45% of Indigenous Australians who never smoked (Table 2.22.4).

Table 2.22.3: Level of physical activity, summary health characteristics, by Indigenous status, persons aged 15 years and over, non-remote areas, 2004–05

	Self-assessed health status						Long-term conditions									Overweight/obesity					
	Excellent/very good			Fair/poor			Diabetes/high sugar levels			Heart & circulatory problems			High blood pressure			Total with long-term health condition			Overweight/obese		
	Indig.	Non-Indig.	Rate ratio ^(a)	Indig.	Non-Indig.	Rate ratio ^(a)	Indig.	Non-Indig.	Rate ratio ^(a)	Indig.	Non-Indig.	Rate ratio ^(a)	Indig.	Non-Indig.	Rate ratio ^(a)	Indig.	Non-Indig.	Rate ratio ^(a)	Indig.	Non-Indig.	Rate ratio ^(a)
	%	%		%	%		%	%		%	%		%	%		%	%		%	%	
Sedentary	48	30	1.6*	58	48	1.2*	50	35	1.4*	54	35	1.5*	59	34	1.7*	51	33	1.5*	50	32	1.5*
Low	28	37	0.8*	25	34	0.8*	26	35	0.7	29	37	0.8*	30	39	0.8	28	37	0.8*	28	37	0.8*
Moderate	18	25	0.7*	14	16	0.9	17 ^(b)	23	0.7	14	23	0.6*	9 ^(b)	23	0.4*	16	24	0.7*	15	24	0.6*
High	5	7	0.7*	2 ^(b)	3	0.6	5 ^(c)	6 ^(b)	0.8	2 ^(c)	5	0.4*	— ^(c)	4 ^(b)	0.1*	4	7	0.7*	6	7	0.9
Total^(d)	100	100	..	100	100	..	100	100	..	100	100	..	100	100	..	100	100	..	100	100	..

* Represents results with statistically significant differences in the Indigenous/non-Indigenous comparisons.

(a) Indigenous rate divided by non-Indigenous rate.

(b) Estimate has a relative standard error of between 25% and 50% and should be used with caution.

(c) Estimate has a relative standard error greater than 50% and is considered too unreliable for general use.

(d) Includes physical activity level not stated.

Note: Data are age-standardised.

Source: ABS and AIHW analysis of 2004–05 NATSIHS and 2004–05 NHS.

Table 2.22.4: Level of physical activity by smoker and Indigenous status, persons aged 18 years and over, non-remote areas, 2004–05

	Current smoker			Ex-smoker			Never smoked		
	Indigenous	Non-Indigenous	Rate ratio ^(a)	Indigenous	Non-Indigenous	Rate ratio ^(a)	Indigenous	Non-Indigenous	Rate ratio ^(a)
	%	%		%	%		%	%	
Sedentary	59	44	1.3	46	29	1.6	45	32	1.4
Low	24	32	0.7	30	38	0.8	32	38	0.9
Moderate	14	20	0.7	20	26	0.8	14	23	0.6
High	3	4	0.7	4	7	0.5	7	7	1.0
Total^(b)	100	100	..	100	100	..	100	100	..

(a) Indigenous rate divided by non-Indigenous rate.

(b) Includes physical activity level not stated.

Note: Data are age-standardised.

Source: AIHW analysis of 2004–05 NATSIHS.

Time series analyses

- The level of sedentary physical activity for Indigenous Australians aged 15 years and over increased between 2001 and 2004–05 from 37% to 47%. The level of low and moderate physical activity declined over the period (from 57% in 2001 to 46% in 2004–05), and the level of high physical activity remained the same (7%) (Figure 2.22.2).
- After adjusting for differences in age structure, the disparity between Indigenous and non-Indigenous Australians in the proportion reporting sedentary levels of exercise was larger in 2004–05 than in 2001 (Table 2.22.5).

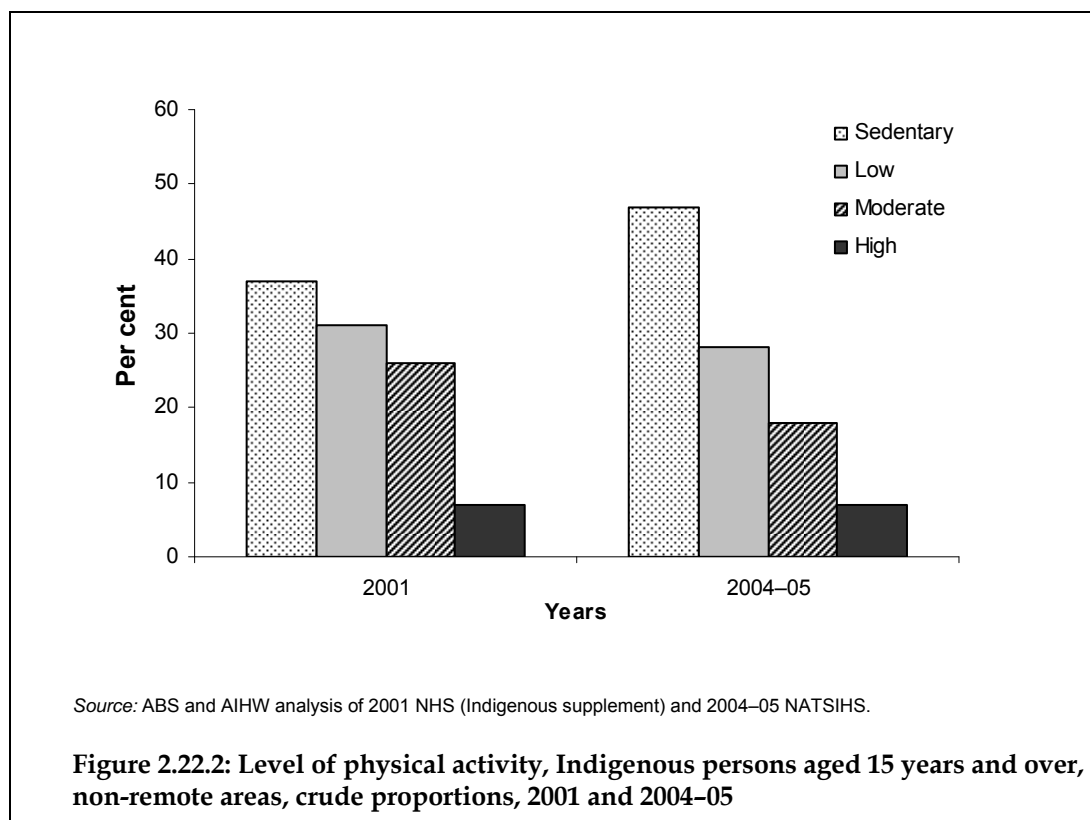


Table 2.22.5: Level of physical activity, persons aged 15 years and over, by Indigenous status, non-remote areas, age standardised proportions, 2001 and 2004-05^(a)

	2001		2004-05	
	Indigenous	Non-Indigenous	Indigenous	Non-Indigenous
	(per cent)			
Sedentary	42	31	51	33
Low	29	38	27	36
Moderate	24	24	16	24
High	5	7	5	7
Total number	197,086	14,744,464	213,422	15,344,756

Note: Data are age-standardised.

Source: ABS and AIHW analysis of 2001 NHS (Indigenous supplement), 2004–05 NATSIHS and 2004–05 NHS.

Data quality issues

National Aboriginal and Torres Strait Islander Health Survey (NATSIHS)

The NATSIHS uses the standard Indigenous status question. The NATSIHS sample was specifically designed to select a representative sample of Aboriginal and Torres Strait Islander Australians and thus overcome the problem inherent in most national surveys with small and unrepresentative Indigenous samples. As with other surveys, the NATSIHS is subject to sampling and non-sampling errors. Calculations of standard errors and significance testing help to establish the accuracy of the estimates and differences.

Information recorded in this survey is essentially 'as reported' by respondents. The ABS makes every effort to collect accurate information from respondents, particularly through careful questionnaire design, pre-testing of questionnaires, use of trained interviewers and assistance from Indigenous facilitators. Nevertheless, some responses may be affected by imperfect recall or individual interpretation of survey questions.

Non-Indigenous comparisons are available through the National Health Survey (NHS). The NHS was conducted in Major Cities, Inner and Outer Regional areas and Remote areas, but Very Remote areas were excluded from the sample. Time series comparisons are available through the 1995 and 2001 National Health Surveys.

In remote communities there were some modifications to the NATSIHS content in order to accommodate language and cultural appropriateness in traditional communities and help respondents understand the concepts. Some questions were excluded and some reworded. Also, paper forms were used in communities in remote areas and computer-assisted interview (CAI) instruments were used in non-remote areas. The CAI process included built-in edit checks and sequencing.

Further information on NATSIHS data quality issues can be found in the 2004–05 NATSIHS publication (ABS 2006).

Physical activity data

The information is 'as reported' by respondents and reflects their perception of the activity undertaken, the intensity of their participation, their level of fitness, etc. Information about physical activity undertaken by persons aged 15 to 17 years was reported by an adult within the household, usually a parent. The child may or may not have been consulted. As a result, data for this age group should be interpreted with particular care.

In general, the use of a 2-week reference period was not considered to pose significant recall problems for respondents. For many people, participation in exercise is regular and/or for a set period each session. However, to the extent that persons undertook exercise in less formal circumstances or that the reference period was atypical of usual exercise patterns, the accuracy of the information provided may have been affected.

Recent developments in the area of statistics on exercise or physical activity have tended to move away from the use of metabolic equivalent level (MET) values in deriving exercise level, and have placed more emphasis on measures of time spent exercising. Retention of the exercise level approach as described above was mainly for the purpose of consistency and comparability with data from the 1995 and 2001 National Health Surveys. However, measures of time exercising are also available as outputs from this survey (ABS 2005).

Survey respondents are required to recall recent activity in minutes without being primed and without independent checks. Diary recording (as used in the ABS Time Use Survey) or independent observation would probably produce higher quality data; however, these are more resource-intensive.

(continued)

Data quality issues (continued)

Respondents are required to provide an estimate of time spent on certain types of activity. Many come up with a broad rounded estimate or guess. Others attempt to add together in their heads the time spent in each exercise session, possibly for several different activities.

The differences of intensity between different activities is not always clear for respondents, although explanatory instructions are included. Mutual exclusivity of concepts remains a problem.

A well-recognised reporting issue for self-report surveys is the tendency of respondents to report in a socially desirable way. For example, the less active may want to over-report activity to appear healthier.

Survey questions about duration of exercise differ slightly in the questionnaire for remote areas and may affect the comparability of results.

Despite the limitations of the survey data, users have generally considered the data produced to be of sufficient quality for the very broad measures of physical activity required (ABS 2005).

A reliable tool for measuring Aboriginal and Torres Strait Islander physical activity levels has not yet been developed. A study to determine the reliability of the Active Australian Survey in measuring Aboriginal and Torres Strait Islander populations revealed that it was not a reliable tool (not culturally appropriate)(Marshall & Miller 2004). The Active Australian Survey uses very similar questions to the National Health Survey to determine physical activity levels. For this reason the data should be interpreted cautiously.

References

ABS (Australian Bureau of Statistics) 2005. Physical activity: review of strategic statistical issues for future National Health Surveys. Discussion paper. Canberra: ABS.

ABS 2006. National Aboriginal and Torres Strait Islander Health Survey 2004–05. ABS cat. no. 4715.0. Canberra: ABS.

Marshall A & Miller R 2004. Measuring physical activity in urban Indigenous Australians. Final report. Brisbane: University of Queensland.