Northern Territory
Physical Activity Survey 2003

Non-Indigenous Population

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Summary of key findings

Introduction

This survey was a first for the Northern Territory. It was undertaken by the Department of Health and Community Services (DHCS), in partnership with the National Heart Foundation (NT Division). Its primary aim was to measure levels of physical activity undertaken by residents of the Northern Territory aged between 18 and 54 years. The survey also gathered information on Territorians’ knowledge and attitude in relation to current recommendations for participation in physical activity.

Methods

The survey was conducted through telephone interviews in July 2003. From an initial randomly selected eligible sample of 462 households, 349 interviews were completed, giving a response rate of 75.5%. Only 6% of respondents were of Aboriginal and/or Torres Strait Island origin. Records from these respondents were unlikely to be representative of all Indigenous people in the NT and were removed from the final analyses. Survey results therefore apply to 328 non-Indigenous Territorians only.

Levels of physical activity

‘Sufficient’ physical activity was defined as the accumulation of 150 minutes of moderate activity, over at least 5 sessions a week. People who participated in some activity, but either not enough in total or not regularly enough for health benefits were classified as ‘insufficiently’ active. People who reported doing no activity at all were classified as ‘sedentary’.

The key findings of this survey were that 55% of non-Indigenous Territorians aged 18-54 years reported engaging in sufficient physical activity for health benefits; 35% reported insufficient levels of activity and 10% reported no activity and were classified as sedentary.

Gender differences in participation and self-perception of physical activity levels were noticeable. Men were significantly more likely to be sedentary than women (14% compared with 5%). Three-quarters of the sedentary men described themselves as active, compared with 19% of women. Seventy-eight percent of the insufficiently active men considered themselves active, compared with 58% of the women.

Groups at greater risk of physical inactivity also included respondents in the 35-44 years age group, respondents with low levels of education, those with 3 children or more, respondents who were not in the workforce and those who were overweight or obese. Women were more likely to report walking 150 minutes or more per week than men (37% compared with 32%).

Knowledge

Most respondents (90%) correctly agreed that 30 minutes of daily moderate physical activity conferred health benefits. Of concern was the lower level of agreement (75%) with the concept of accumulation of total daily physical activity in bouts of 10 minutes, and the high, and incorrect, level of agreement (69%) with the need to engage in vigorous physical activity for health benefits.
**Physical activity levels amongst the NT non-Indigenous population**

**Intention to become more active, self-efficacy and barriers to activity**

Respondents reporting insufficient activity levels were significantly more likely to intend to become more active (70%) than sedentary respondents (45%) or those who were sufficiently active (49%). Those having received doctor’s advice on exercise were more likely to intend to become more active than those who had not (19% and 11% respectively). More than half of the respondents (57% of the sedentary and 53% of the insufficiently active) lacked confidence to find 30 minutes on 5 or more days of the week, as recommended by the *National Physical Activity Guidelines for Australians.*

The main barriers to activity were lack of time (53%), followed by ‘I am active enough’ (21%) and ‘no motivation/can’t be bothered’ (16%).

**Physical activity and body mass index (BMI)**

Overall, 5% of survey respondents were classified as underweight, 43% as of acceptable weight, 35% as overweight and 17% as obese. Physical activity levels were inversely related to BMI categories. Sedentary respondents were more likely to be overweight (51%) than respondents reporting insufficient activity (35%) or those reporting sufficient activity (33%). A quarter of the insufficiently active respondents were obese.

**Miscellaneous**

A majority of respondents had access to a shower (68%) and a safe storage area for bicycles (57%) in their workplace. There was no difference in levels of participation in physical activity between respondents who owned a dog and those who did not.

**Recommendations**

1. Develop intersectoral strategies and programs to increase Territorians’ levels of participation in regular moderate physical activity.
2. Promote current physical activity guidelines through a mass media campaign, with a particular emphasis on the concept of accumulation of activity.
3. Promote the reintegration of physical activity into everyday life through active workplaces and active transport.
4. Foster the development of safe and supportive local environments for physical activity and encourage walking or cycling.
5. Develop equity based programs specific to groups identified at greater risk of inactivity.
6. Encourage and support the primary health care sector to promote physical activity.
7. Investigate the availability of (or develop) a mechanism to monitor physical activity levels of Indigenous Territorians.
8. Monitor, in coordination with other States and Territory, NT population levels of physical activity levels regularly. Future surveys should be undertaken at the same time of the year to limit seasonal variations and allow for comparisons in participation.
1  Physical activity levels at a glance

Table 1-1: Physical activity levels by demographic characteristics, NT 2003

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>Sedentary (%)</th>
<th>Insufficient (%)</th>
<th>Sufficient (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Sex</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>14</td>
<td>31</td>
<td>55</td>
</tr>
<tr>
<td>Female</td>
<td>5</td>
<td>39</td>
<td>56</td>
</tr>
<tr>
<td><strong>Age (years)</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>18-24</td>
<td>9</td>
<td>38</td>
<td>53</td>
</tr>
<tr>
<td>25-34</td>
<td>8</td>
<td>36</td>
<td>56</td>
</tr>
<tr>
<td>35-44</td>
<td>13</td>
<td>31</td>
<td>57</td>
</tr>
<tr>
<td>45-54</td>
<td>9</td>
<td>36</td>
<td>55</td>
</tr>
<tr>
<td><strong>Education</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Less than 12 years</td>
<td>19</td>
<td>40</td>
<td>41</td>
</tr>
<tr>
<td>HSC or equivalent</td>
<td>6</td>
<td>32</td>
<td>61</td>
</tr>
<tr>
<td>TAFE</td>
<td>10</td>
<td>37</td>
<td>52</td>
</tr>
<tr>
<td>University</td>
<td>2</td>
<td>30</td>
<td>67</td>
</tr>
<tr>
<td><strong>Marital status</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Never married</td>
<td>12</td>
<td>29</td>
<td>59</td>
</tr>
<tr>
<td>Married/defacto</td>
<td>8</td>
<td>38</td>
<td>54</td>
</tr>
<tr>
<td>Separated/divorced/widowed</td>
<td>12</td>
<td>38</td>
<td>50</td>
</tr>
<tr>
<td><strong>Number of children</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>0</td>
<td>11</td>
<td>36</td>
<td>53</td>
</tr>
<tr>
<td>1-2</td>
<td>5</td>
<td>34</td>
<td>61</td>
</tr>
<tr>
<td>3 or more</td>
<td>18</td>
<td>32</td>
<td>49</td>
</tr>
<tr>
<td><strong>Employment status</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>In the workforce</td>
<td>9</td>
<td>33</td>
<td>57</td>
</tr>
<tr>
<td>Not in the workforce</td>
<td>14</td>
<td>46</td>
<td>41</td>
</tr>
<tr>
<td>Work more 20 hours/week</td>
<td>10</td>
<td>35</td>
<td>56</td>
</tr>
<tr>
<td>Work less 20 hours/week</td>
<td>12</td>
<td>44</td>
<td>44</td>
</tr>
<tr>
<td><strong>Body Mass Index</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Underweight</td>
<td>0</td>
<td>60</td>
<td>40</td>
</tr>
<tr>
<td>Acceptable weight</td>
<td>6</td>
<td>25</td>
<td>69</td>
</tr>
<tr>
<td>Overweight</td>
<td>14</td>
<td>33</td>
<td>53</td>
</tr>
<tr>
<td>Obese</td>
<td>11</td>
<td>50</td>
<td>39</td>
</tr>
<tr>
<td><strong>Dog ownership</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>9</td>
<td>35</td>
<td>56</td>
</tr>
<tr>
<td>No</td>
<td>11</td>
<td>34</td>
<td>55</td>
</tr>
</tbody>
</table>
2 Introduction

2.1 Purpose of the survey

This survey was a first for the Northern Territory (NT). It was undertaken by the Department of Health and Community Services (DHCS), in partnership with the National Heart Foundation (NT Division). Its primary aim was to measure levels of physical activity undertaken by residents of the Northern Territory aged between 18 and 54 years. The survey also gathered information on Territorians’ knowledge and attitude in relation to current recommendations for participation in physical activity.

The results presented in this report will guide program planning for activities aimed at encouraging and supporting Territorians to become more physically active. They will also provide baseline data to measure the effectiveness of future interventions and establish long term trends.

The survey used Computer Assisted Telephone Interview (CATI) methodology, a technique that combines interviewing and data entry. While efficient and reliable, this method is however limited in its ability to reach all sections of the population. It was therefore acknowledged that a different approach would be required to collect data from remote Indigenous communities.

2.2 Benefits of physical activity

Over the last decade physical activity has been recognised as a critical element of a healthy lifestyle and a major contributor to the prevention and management of chronic diseases. Regular moderate physical activity improves quality of life and life expectancy among adults, even if physical activity is adopted later in life. Its most significant benefits are in cardiovascular health where it can halve the risk of heart disease and stroke, with evidence of a dose-response relationship (i.e. the greater the participation, the greater the positive health outcomes).

Scientific evidence is accumulating on the protective effect of physical activity against some cancers (i.e. colon and breast cancer) and a dose-response association has also been observed. Physical activity is of central importance in the prevention of type 2 diabetes. Research has shown that modest weight loss and at least 150 minutes of moderate activity per week could prevent up to 58 percent of new cases of diabetes, amongst persons at high risk. For people with established diabetes, regular physical activity improves blood glucose control and reduces the risk of cardiovascular events.

Physical activity contributes to the prevention of falls in the elderly by maintaining flexibility, muscle strength and balance, and reducing loss of bone density. Since lifelong bone deposition occurs during childhood and peaks in adolescence, it is important to encourage regular activity among children and adolescents to limit the risk of osteoporosis or hip fracture in later years.

Physical activity appears to play an important role in mental health, where it has been associated with a reduction in the symptoms of depression and anxiety, lower levels of stress and increased self-esteem. However, to date there is no solid evidence to confirm this widely held perspective.
Increasing population levels of physical activity, in tandem with a controlled caloric intake, is a key strategy for the prevention of obesity, a world-wide epidemic that is affecting Australia. Regular moderate physical activity is also central to long-term weight maintenance, especially after weight loss.

In addition to the health benefits listed above, physical activity is associated with numerous social, economic and environmental benefits. Leisure-time physical activity helps people participate more fully in the community and build non-family support networks. It increases personal confidence, improves quality of life and decreases anti-social behaviour.

Economic gains are expected in an active community from savings in health care costs and household expenditure associated with participation in recreation and sports. Various sectors can benefit from active recreation opportunities such as tourism and transport.

Environmental benefits can also be realised through active modes of transport (e.g. walking/cycling to work or the corner store). They include reduced air pollution and traffic congestion, and decreased space required to store, drive and park motor vehicles.

### 2.3 Costs of physical inactivity

National figures indicate that physical inactivity is responsible for 8000 deaths per year and an estimated $377m in direct health care costs. Indirect costs, including time taken off work and the social costs of physical inactivity, more than double this amount.

In Australia, physical inactivity is responsible for about 7% of the total burden of disease. It is second only to tobacco smoking, as a risk factor for ill health and injury; for women, it represents the highest risk factor.

### 2.4 How much physical activity?

Physical activity is usually described in terms of frequency (number of sessions per week), duration (minutes per session per week), intensity (moderate or vigorous) and the context in which it is undertaken (leisure time, yard work, etc).

The *National Physical Activity Guidelines for Australians* recommend at least 30 minutes of moderate-intensity physical activity on most, preferably all, days of the week. The 30 minutes need not be continuous and can be accumulated in bouts of at least 10 minutes. This recommendation is usually interpreted as amounting to 150 minutes of activity per week over at least 5 sessions.

Moderate activity is defined as activity that increases the heart rate, such as brisk walking, but does not make a person ‘huff and puff’. Time spent on vigorous activities, such as running, is multiplied by two and added to total time spent on moderate activity to determine total activity time.

---

*a* Moderate activity is defined as activity that increases the heart rate, such as brisk walking, but does not make a person ‘huff and puff’.

*b* These guidelines apply to adults only. Recommendations for children and youths are being developed.
Physical activity levels amongst the NT non-Indigenous population

Although measurement of activity has generally been restricted to leisure time activity, incidental and/or occupational activity is important and contributes to overall daily activity and therefore energy expenditure. This is reflected in the Guidelines which recommend to ‘be active every day in as many ways as you can’.

The recommendations of the Guidelines refer to minimum levels of physical activity required for general health benefits. They are not intended for weight loss or high level fitness. Further health benefits can be gained through greater amounts of moderate and/or vigorous physical activity. It is generally acknowledged however that, from a population health perspective, the greatest health benefits are achieved when people move from being sedentary to participating in some moderate activity.\(^{14}\)

It is also important to note that, in spite of some progress in this area, the precise dose-response relationship between physical activity and specific diseases is not yet clearly established.

3 Methods

3.1 Survey design

Sample selection

All households in the Northern Territory with a telephone connected and the telephone number listed in the Electronic White Pages (EWP) were eligible for selection in the sample. Based on best estimates of household composition and response rates, an initial sample size of 920 was anticipated to result in approximately 360 interviews with persons eligible for inclusion in the study.

Within each household, the person aged between 18 and 54 years with the most recent birthday was selected for interview. Only one person per household was interviewed. Households whose occupants were aged 55 years and over were not eligible for the study and occupants were politely informed of this by the interviewer. There was no replacement for non–contactable persons.

Introductory letter

A letter introducing the health survey (Appendix 1) was sent to the household of each selected telephone number. This informed people of the purpose of the survey and indicated that they could expect to be contacted by telephone within the time frame of the survey. Overall, 45% of the respondents reported receiving the letter.

Questionnaire

The survey questionnaire was developed by the Physical Activity and Nutrition Program (DHCS), in collaboration with Health Gains Planning (DHCS) and input from the Population Research and Outcome Studies Unit (PROS), South Australian Department of Human Services, South Australia.

\(^{11}\)

\(^{6}\) A higher threshold of physical activity is needed for weight loss. This threshold is however difficult to establish precisely as it is dependent on the energy intake from the diet. The National Health and Medical Research Council advises that 60 minutes of moderate activity on most days of the week are necessary to achieve weight loss, while effective weight maintenance after weight loss requires 60-90 minutes of moderate activity on most days of the week.\(^{39}\)
Topics covered and the number of questions asked in this survey are listed in Table 3-1.

### Table 3-1: Survey topics, NT 2003

<table>
<thead>
<tr>
<th>Areas covered</th>
<th>Number of questions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical activity levels</td>
<td>7</td>
</tr>
<tr>
<td>Intention to be more active</td>
<td>3</td>
</tr>
<tr>
<td>Knowledge of physical activity message</td>
<td>5</td>
</tr>
<tr>
<td>Self-efficacy</td>
<td>5</td>
</tr>
<tr>
<td>Reasons for not being active</td>
<td>1</td>
</tr>
<tr>
<td>Other physical activity issues</td>
<td>8</td>
</tr>
<tr>
<td>Demographics</td>
<td>10</td>
</tr>
</tbody>
</table>

Where possible, questions were used that had been validated and previously included in other surveys. Questions relating to levels of physical activity were taken from the Active Australia Survey questionnaire, which has proved to have strong measurement properties and is the recommended instrument for population monitoring of physical activity in Australia\(^d\)\(^1\)\(^5\). These questions apply to the week preceding the interview only.

The survey questionnaire was pilot tested (n=50) and slightly modified on the basis of the information received.

### 3.2 Data collection

As the DHCS does not have a CATI facility, the data collection was undertaken by the South Australian Department of Human Services on behalf of the DHCS. The survey commenced on 22 July 2003 and concluded on 30 July 2003. Telephone calls were made between 9.30 am and 9.00 pm, seven days a week. Professional interviewers conducted the interviews and were supervised by PROS personnel, who monitored the progress of survey activities.

**Participation**

An initial sample of 920 potential households was drawn. Sample loss of 304 households occurred due to fax/modem connections (15), non-connected numbers (184), non-residential numbers (19), and no contact made after 10 calls (86), leaving an eligible sample of 616 households.

Of the 616 households contacted, 154 were ineligible to be included in the survey as no household member was in the eligible age group. This reduced the eligible sample to 462. The final participation rate, calculated as shown in Table 3-2, was 75.5%, which compares favourably with other CATI surveys.

\(^d\) The Active Australia Survey has been implemented nationally through the three National Physical Activity Surveys of 1997, 1999 and 2000\(^1\)\(^7\), and the Australian Diabetes, Obesity and Lifestyle Study (AusDiab) in 1999-00\(^4\)\(^0\).
Table 3-2: Participation in the Physical Activity Survey, NT 2003

<table>
<thead>
<tr>
<th>Initial sample (a)</th>
<th>920</th>
</tr>
</thead>
<tbody>
<tr>
<td>% of initial sample (a)</td>
<td>% of new eligible sample (c)</td>
</tr>
<tr>
<td>Fax/modem</td>
<td>15</td>
</tr>
<tr>
<td>Non-connected numbers</td>
<td>184</td>
</tr>
<tr>
<td>Non-residential numbers</td>
<td>19</td>
</tr>
<tr>
<td>No contact made after 10 calls</td>
<td>86</td>
</tr>
<tr>
<td>Total sample loss (b)</td>
<td>304</td>
</tr>
</tbody>
</table>

Eligible sample (c) = (a –b) = 616

| Number ineligible households (d) (nobody in household in age range) | 154 | 16.7 |

New eligible sample (e) = (c- d) = 462

<table>
<thead>
<tr>
<th>Participation within (e)</th>
<th>462</th>
<th>50.2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Refusals (age not established)</td>
<td>76</td>
<td>8.3</td>
</tr>
<tr>
<td>Unable-ill</td>
<td>2</td>
<td>0.2</td>
</tr>
<tr>
<td>Unable to speak English</td>
<td>12</td>
<td>1.3</td>
</tr>
<tr>
<td>Respondent unavailable</td>
<td>22</td>
<td>2.4</td>
</tr>
<tr>
<td>Terminated</td>
<td>1</td>
<td>0.1</td>
</tr>
<tr>
<td>Completed interviews</td>
<td>349</td>
<td>37.9</td>
</tr>
</tbody>
</table>

3.3 Data processing

Data analysis

Data from the CATI system were imported into SPSS Version 11.0. Data were manipulated and analysed using STATA Version 7. Data analysis was conducted by the DHCS.

Weighting

Weighting was used to correct for disproportionality of the sample with respect to the population of interest. Data were independently weighted to reflect the population age and sex structure of the NT’s non-Indigenous population. The data were weighted by age, sex and probability of selection in the household. Probability of selection in the household was calculated on the number of adults aged between 18 and 54 years in the household and the number of listings in the White Pages that reach the household.
Data interpretation
It is important to note that the weighting of the data results in rounding effects for the numbers. In all instances, the percentages should be the point of reference rather than the actual numbers of respondents. For example cell sizes presented as 1, 2 and 4 could in fact be 1.3, 2.4 and 4.4, which results in a slight variation from the totals presented (7 versus 8). The percentages presented in this report have been processed on the figures pre-rounding.

Chi-squared tests were conducted and the significance level was determined at 0.05. Thus results in this survey are considered to be statistically significant (i.e. unlikely to have arisen by chance) if P<0.05.

4 Demographic profile
Of the 349 respondents, only 21 or 6% reported being of Aboriginal and/or Torres Strait Island origin. Records from these respondents have been excluded from all analyses presented in this report, because they were unlikely to be representative of all Indigenous people in the NT. The following results therefore refer to the responses of 328 non-Indigenous Territorians.

A demographic profile of these respondents by sex, age, education, employment status, marital status, number of children, country of origin and dog ownership is given in Table 4-1.
Table 4-1: Sex, age, education, employment status, marital status, number of children, country of origin and dog ownership of respondents, NT 2003

<table>
<thead>
<tr>
<th>Category</th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Sex</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>172</td>
<td>52</td>
</tr>
<tr>
<td>Female</td>
<td>156</td>
<td>48</td>
</tr>
<tr>
<td><strong>Age (years)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>18-24</td>
<td>59</td>
<td>18</td>
</tr>
<tr>
<td>25-34</td>
<td>104</td>
<td>32</td>
</tr>
<tr>
<td>35-44</td>
<td>92</td>
<td>28</td>
</tr>
<tr>
<td>45-54</td>
<td>72</td>
<td>22</td>
</tr>
<tr>
<td><strong>Education</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Less than 12 years</td>
<td>82</td>
<td>25</td>
</tr>
<tr>
<td>HSC or equivalent</td>
<td>71</td>
<td>22</td>
</tr>
<tr>
<td>TAFE</td>
<td>90</td>
<td>27</td>
</tr>
<tr>
<td>University</td>
<td>85</td>
<td>26</td>
</tr>
<tr>
<td><strong>Employment status</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>In the workforce</td>
<td>295</td>
<td>90</td>
</tr>
<tr>
<td>Not in the workforce</td>
<td>32</td>
<td>10</td>
</tr>
<tr>
<td><strong>Marital status</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Married/De facto</td>
<td>208</td>
<td>64</td>
</tr>
<tr>
<td>Never married/ Separated/</td>
<td>119</td>
<td>36</td>
</tr>
<tr>
<td>Widowed</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Number of children</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nil</td>
<td>180</td>
<td>55</td>
</tr>
<tr>
<td>1 or more</td>
<td>148</td>
<td>45</td>
</tr>
<tr>
<td><strong>Country of origin</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Australia</td>
<td>284</td>
<td>87</td>
</tr>
<tr>
<td>UK &amp; New Zealand</td>
<td>24</td>
<td>7</td>
</tr>
<tr>
<td>All other countries</td>
<td>20</td>
<td>6</td>
</tr>
<tr>
<td><strong>Dog ownership</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>191</td>
<td>58</td>
</tr>
<tr>
<td>No</td>
<td>137</td>
<td>42</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>328</td>
<td>100</td>
</tr>
</tbody>
</table>

Note: Rounding of the data can result in totals not adding.
5 Levels of physical activity

5.1 Definitions

The *Active Australia Survey: a guide and manual for implementation, analysis and reporting of the Active Australia Survey*\(^\text{13}\) recommends either of two measures to calculate ‘sufficient’ physical activity for health benefits:

1. the accumulation of a sufficient amount of activity over a week, or
2. the accumulation of a sufficient amount of activity by participation in a sufficient number of sessions over a week.

In this survey, the second measure was chosen as it addresses both criteria of the *National Physical Activity Guidelines for Australians*\(^1\) (see p 10): duration and frequency\(^e\).

Thus ‘sufficient’ physical activity for health benefits was calculated as the accumulation of at least 150 minutes of activity over at least 5 sessions of activity over 1 week. Time spent on vigorous activity was multiplied by two and added to time spent on moderate activity to determine total activity time.

Survey participants reporting no activity at all were classified as inactive or ‘sedentary’. The remainder were classified as ‘insufficiently’ active (i.e. participating in some activity but either not enough in total or not often enough for health benefits).

Historically a number of different survey instruments have been used in Australia to monitor population levels of physical activity. Thus different definitions have been used in other surveys. The NT survey results can therefore only be compared to those surveys that have used the same definitions.

5.2 Demographic factors associated with levels of physical activity

Overview

The primary aim of the survey was to establish levels and patterns of participation in physical activity. The key finding of this survey, presented in Table 5-1, is that 55% of non-Indigenous Territorians, aged 18-54 years, reported engaging in sufficient physical activity for health benefits, while 35% reported insufficient levels of activity and 10% reported no activity at all (sedentary).

Although the proportions of men and women reporting sufficient levels of physical activity were similar (55% and 56%), men were significantly more likely to be sedentary than women (14% compared with 5%). Patterns of participation were very similar across age groups, with over half of the respondents (53% to 56%) in each age category reporting sufficient activity for health benefits. While the differences observed were not statistically significant, the highest proportion of sedentary respondents (13%) was observed in the 35-44 years age group (compared to 9% in the other groups).

\(^e\) The survey implementation manual cautions that ‘there are some problems with this measure in that it assumes each session is undertaken on a different day. Further, the length of time spent in each session is unknown… However, it is the best approximation to the Guidelines available using the current survey questions’.\(^\text{13}\)
Table 5-1: Participation in physical activity* by sex and age, NT 2003

<table>
<thead>
<tr>
<th>Sex</th>
<th>Sedentary n</th>
<th>%</th>
<th>Insufficient n</th>
<th>%</th>
<th>Sufficient n</th>
<th>%</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>24</td>
<td>14</td>
<td>53</td>
<td>31</td>
<td>94</td>
<td>55</td>
<td>&lt;0.01</td>
</tr>
<tr>
<td>Female</td>
<td>7</td>
<td>5</td>
<td>62</td>
<td>39</td>
<td>87</td>
<td>56</td>
<td></td>
</tr>
<tr>
<td>Age (years)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>&gt;0.05</td>
</tr>
<tr>
<td>18-24</td>
<td>6</td>
<td>9</td>
<td>22</td>
<td>38</td>
<td>31</td>
<td>53</td>
<td></td>
</tr>
<tr>
<td>25-34</td>
<td>8</td>
<td>8</td>
<td>38</td>
<td>36</td>
<td>59</td>
<td>56</td>
<td></td>
</tr>
<tr>
<td>35-44</td>
<td>12</td>
<td>13</td>
<td>28</td>
<td>31</td>
<td>52</td>
<td>57</td>
<td></td>
</tr>
<tr>
<td>45-54</td>
<td>6</td>
<td>9</td>
<td>26</td>
<td>36</td>
<td>39</td>
<td>55</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>32</td>
<td>10</td>
<td>115</td>
<td>35</td>
<td>181</td>
<td>55</td>
<td></td>
</tr>
</tbody>
</table>

*Excludes household chores and gardening.

The following figures describe NT non-Indigenous participation in physical activity by education, marital status, number of children, employment status, number of working hours, income and dog ownership.

**Education**

A positive association between levels of physical activity and education was noticeable (see Figure 5-1). University educated respondents reported the highest level of participation in sufficient activity (67%). The proportion of sedentary respondents was highest among respondents in the ‘less than 12 years’ group (19%). It decreased to 10% in the TAFE group, 6% in the ‘HSC or equivalent’ group and 2% for university educated respondents. Results were statistically significant (P<0.01).

**Figure 5-1: Levels of physical activity by education, NT 2003**
Marital status

As shown in Figure 5-2, participation in physical activity was similar in the different categories of marital status. The highest proportion of people reporting sufficient activity (59%) was observed in the ‘Never married’ category (compared with 54% in the ‘Married/De facto and 50% in the ‘Separated/divorced/widowed’ category). The lowest proportion of ‘sedentary’ respondents was in the ‘Married/de facto’ category (compared with 12% in the other two categories). The differences observed were not statistically significant (P>0.05).

Figure 5-2: Levels of physical activity by marital status, NT 2003

Number of children

Levels of physical activity by the number of children are illustrated in Figure 5-3. Although not statistically significant (P>0.05), respondents with 1 or 2 children were more likely to report sufficient levels of activity (61%), than those without children (53%) or those who had 3 or more children (49%).

The highest proportion of sedentary respondents was found amongst people with 3 or more children (18%), followed by those without children (11%) and those with 1-2 children (5%).

The proportions of people reporting 'insufficient' levels of activity were similar across categories and ranged from 32% to 36%.
Figure 5-3: Levels of physical activity by number of children, NT 2003

Employment

Participation in physical activity by employment status is reported in Figure 5-4. Although not statistically significant (P>0.05), respondents who were in the workforce were more likely to be sufficiently active than those who were not in the workforce (57% compared with 41%). Forty-six percent of respondents who were not in the workforce reported insufficient levels of activity.

Figure 5-4: Levels of physical activity by employment status, NT 2003
**Number of working hours**

Figure 5-5 illustrates participation in physical activity by the number of working hours. Respondents who worked more than 20 hours a week were more likely to report higher levels of participation in sufficient activity than those who worked less than 20 hours per week (56% compared with 44%). The proportions of sedentary respondents were the same for the 2 groups. The differences observed were however not statistically significant (P>0.05).

**Figure 5-5: Levels of physical activity by working hours, NT 2003**

![Bar chart showing levels of physical activity by working hours](image)

**Household income**

The proportions of respondents in the different physical activity categories by household income group are presented in Figure 5-6.

Although not statistically significant (P>0.05), respondents in the ‘$35000 or less’ category were more likely to report sufficient activity, and less likely to report insufficient activity, than respondents in the other income categories. Respondents in the highest income group had the lowest proportion of sedentary respondents (9% versus 12%).

Overall, in this study, income did not appear to be related to levels of physical activity.
Figure 5-6: Levels of physical activity by income, NT 2003

Dog ownership

Figure 5-7 illustrates the proportions of respondents in the different physical activity categories by dog ownership. There was no difference in reported levels of participation in activity between the group that owned a dog and that which did not.

Figure 5-7: Levels of physical activity by dog ownership, NT 2003
6 Walking

Survey participants were asked how many times (‘sessions’) they had walked continuously for at least 10 minutes for recreation, exercise or to get to or from places during the previous week. They were also asked to estimate the total time they had spent walking during the previous week. Results presented in Table 6-1 show the number of sessions and the mean number of minutes, by sex.

Men were more likely to report no walking session than women (28% compared with 16%). Approximately half of the women (47%) reported 1-4 sessions of walking, compared with 28% for men. A greater proportion of men reported walking 5 or more sessions than women (44% compared with 37%).

Women were more likely to report walking 150 minutes or more per week than men (37% compared with 32%).

All results were statistically significant.

Table 6-1: Walking sessions and times by sex, NT, 2003

<table>
<thead>
<tr>
<th></th>
<th>Men</th>
<th></th>
<th>Women</th>
<th></th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>n</td>
<td>%</td>
<td>n</td>
<td>%</td>
<td></td>
</tr>
<tr>
<td>Number of walking sessions</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Nil</td>
<td>47</td>
<td>28</td>
<td>25</td>
<td>16</td>
<td></td>
</tr>
<tr>
<td>1-4</td>
<td>48</td>
<td>28</td>
<td>74</td>
<td>47</td>
<td></td>
</tr>
<tr>
<td>5 or more</td>
<td>76</td>
<td>44</td>
<td>57</td>
<td>37</td>
<td></td>
</tr>
<tr>
<td>Total walking time</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>&lt;0.05</td>
</tr>
<tr>
<td>Mean number of minutes/per week</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nil</td>
<td>47</td>
<td>27</td>
<td>25</td>
<td>16</td>
<td></td>
</tr>
<tr>
<td>&lt;150</td>
<td>70</td>
<td>41</td>
<td>74</td>
<td>47</td>
<td></td>
</tr>
<tr>
<td>150 or more</td>
<td>55</td>
<td>32</td>
<td>58</td>
<td>37</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>172</td>
<td>100</td>
<td>156</td>
<td>100</td>
<td></td>
</tr>
</tbody>
</table>
7 Knowledge of physical activity

Knowledge of physical activity recommendations was established using a series of questions to which respondents were asked to rate their agreement with, on a 5 point scale ranging from ‘strongly agree’ to ‘strongly disagree’. The tables presenting these results are stratified by reported levels of physical activity. Respondents’ responses were grouped into 2 categories: ‘agree’ (combining ‘strongly agree’, ‘agree’) and ‘disagree’ (combining ‘disagree’, ‘strongly disagree’, ‘don’t know’, ‘refused’). There were no responses in the ‘neither agree nor disagree’ category.

Table 7-1 presents survey participants’ responses to statement S1. On average, 90% of respondents correctly agreed with the statement. While not significant, the highest level of agreement was observed in the sedentary group (97%).

S1: ‘Taking the stairs at work or generally being more active for at least 30 minutes each day is enough to improve your health.’

Table 7-1: Knowledge of physical activity (S1), NT 2003

<table>
<thead>
<tr>
<th></th>
<th>Sedentary</th>
<th></th>
<th>Insufficient</th>
<th></th>
<th>Sufficient</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>n</td>
<td>%</td>
<td>n</td>
<td>%</td>
<td>n</td>
<td>%</td>
</tr>
<tr>
<td>Agree</td>
<td>31</td>
<td>97</td>
<td>107</td>
<td>93</td>
<td>158</td>
<td>87</td>
</tr>
<tr>
<td>Disagree</td>
<td>1</td>
<td>2</td>
<td>8</td>
<td>7</td>
<td>24</td>
<td>13</td>
</tr>
<tr>
<td>Total</td>
<td>32</td>
<td>100</td>
<td>115</td>
<td>100</td>
<td>181</td>
<td>100</td>
</tr>
</tbody>
</table>

P>0.05 Note: Rounding of the data can result in totals not adding.

Table 7-2 presents respondents’ responses to statement S2. Again, a high proportion of respondents correctly agreed with the statement across all 3 categories (89% to 93%). Differences observed between activity groups were not statistically significant.

S2: ‘Half an hour of brisk walking on most days is enough to improve your health’

Table 7-2: Knowledge of physical activity (S2), NT 2003

<table>
<thead>
<tr>
<th></th>
<th>Sedentary</th>
<th></th>
<th>Insufficient</th>
<th></th>
<th>Sufficient</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>n</td>
<td>%</td>
<td>n</td>
<td>%</td>
<td>n</td>
<td>%</td>
</tr>
<tr>
<td>Agree</td>
<td>29</td>
<td>91</td>
<td>107</td>
<td>93</td>
<td>162</td>
<td>89</td>
</tr>
<tr>
<td>Disagree</td>
<td>3</td>
<td>9</td>
<td>8</td>
<td>7</td>
<td>19</td>
<td>11</td>
</tr>
<tr>
<td>Total</td>
<td>32</td>
<td>100</td>
<td>115</td>
<td>100</td>
<td>181</td>
<td>100</td>
</tr>
</tbody>
</table>

P>0.05
Table 7-3 presents respondents’ responses to S3. On average, 69% of respondents incorrectly agreed with the statement. Differences observed were not statistically significant.

S3: ‘To improve your health it is ESSENTIAL for you to do vigorous exercise for at least 20 minutes each time, 3 times a week’.

Table 7-3: Knowledge of physical activity (S3), NT 2003

<table>
<thead>
<tr>
<th></th>
<th>Sedentary</th>
<th></th>
<th>Insufficient</th>
<th></th>
<th>Sufficient</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>n</td>
<td>%</td>
<td>n</td>
<td>%</td>
<td>n</td>
<td>%</td>
</tr>
<tr>
<td>Agree</td>
<td>20</td>
<td>64</td>
<td>76</td>
<td>66</td>
<td>129</td>
<td>71</td>
</tr>
<tr>
<td>Disagree</td>
<td>11</td>
<td>36</td>
<td>39</td>
<td>34</td>
<td>52</td>
<td>29</td>
</tr>
<tr>
<td>Total</td>
<td>32</td>
<td>100</td>
<td>115</td>
<td>100</td>
<td>181</td>
<td>100</td>
</tr>
</tbody>
</table>

P>0.05  Note: Rounding of the data can result in totals not adding.

Table 7-4 shows participants’ responses to statement S4. The majority of respondents in all 3 categories (average of 75%) correctly agreed with the statement. Differences observed were not statistically significant.

S4: ‘Exercise doesn’t have to be done all at one time - blocks of 10 minutes are okay’.

Table 7-4: Knowledge of physical activity (S4), NT 2003

<table>
<thead>
<tr>
<th></th>
<th>Sedentary</th>
<th></th>
<th>Insufficient</th>
<th></th>
<th>Sufficient</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>n</td>
<td>%</td>
<td>n</td>
<td>%</td>
<td>n</td>
<td>%</td>
</tr>
<tr>
<td>Agree</td>
<td>26</td>
<td>81</td>
<td>82</td>
<td>72</td>
<td>138</td>
<td>76</td>
</tr>
<tr>
<td>Disagree</td>
<td>6</td>
<td>19</td>
<td>32</td>
<td>28</td>
<td>43</td>
<td>24</td>
</tr>
<tr>
<td>Total</td>
<td>32</td>
<td>100</td>
<td>115</td>
<td>100</td>
<td>181</td>
<td>100</td>
</tr>
</tbody>
</table>

P>0.05  Note: Rounding of the data can result in totals not adding.

Table 7-5 presents responses to statement S5. A high proportion of respondents (93%) in all three categories of activity correctly agreed with the statement. There were no statistically significant differences between activity levels groups.

S5: ‘Moderate exercise that increases your heart rate slightly can improve your health’.

Table 7-5 Knowledge of physical activity (S5), NT 2003

<table>
<thead>
<tr>
<th></th>
<th>Sedentary</th>
<th></th>
<th>Insufficient</th>
<th></th>
<th>Sufficient</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>n</td>
<td>%</td>
<td>n</td>
<td>%</td>
<td>n</td>
<td>%</td>
</tr>
<tr>
<td>Agree</td>
<td>30</td>
<td>93</td>
<td>106</td>
<td>92</td>
<td>169</td>
<td>93</td>
</tr>
<tr>
<td>Disagree</td>
<td>2</td>
<td>7</td>
<td>9</td>
<td>8</td>
<td>12</td>
<td>7</td>
</tr>
<tr>
<td>Total</td>
<td>32</td>
<td>100</td>
<td>115</td>
<td>100</td>
<td>181</td>
<td>100</td>
</tr>
</tbody>
</table>

P>0.05

8  Self-perception

Survey respondents were asked to describe how physically active they were by selecting a category on a 5 point scale that ranged from ‘extremely active’ to ‘don’t do any
activity’. Results presented in Table 8-1 were grouped into 2 categories: ‘active’ (combining ‘extremely active’ and ‘quite active’) and ‘inactive’ (combining ‘not very active’, ‘don’t do any activity’ and ‘don’t know’).

Three-quarters of the sedentary men described themselves as active compared with 19% of the women. This gender difference in perception of activity was observed again in the insufficient category where 78% of the men, compared with 58% of the women, considered themselves active. Similar proportions of men and women (85%) described themselves as active, in the sufficiently active group.

Table 8-1: Levels of activity by own perception of physical activity levels and sex, NT 2003

<table>
<thead>
<tr>
<th>Perception</th>
<th>Sedentary</th>
<th></th>
<th>Insufficient</th>
<th></th>
<th>Sufficient</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>n</td>
<td>%</td>
<td>n</td>
<td>%</td>
<td>n</td>
<td>%</td>
</tr>
<tr>
<td>Males</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Active</td>
<td>18</td>
<td>73</td>
<td>41</td>
<td>78</td>
<td>81</td>
<td>86</td>
</tr>
<tr>
<td>Not active</td>
<td>7</td>
<td>27</td>
<td>12</td>
<td>22</td>
<td>13</td>
<td>14</td>
</tr>
<tr>
<td>Total</td>
<td>24</td>
<td>100</td>
<td>53</td>
<td>100</td>
<td>94</td>
<td>100</td>
</tr>
<tr>
<td>Females</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Active</td>
<td>1</td>
<td>19</td>
<td>36</td>
<td>58</td>
<td>73</td>
<td>84</td>
</tr>
<tr>
<td>Not active</td>
<td>6</td>
<td>81</td>
<td>26</td>
<td>42</td>
<td>14</td>
<td>16</td>
</tr>
<tr>
<td>Total</td>
<td>7</td>
<td>100</td>
<td>62</td>
<td>100</td>
<td>87</td>
<td>100</td>
</tr>
</tbody>
</table>

P<0.001  Note: Rounding of the data can result in totals not adding.
9 Intention to become more active

9.1 Intention to become more active and levels of activity

Table 9-1 presents the proportion of respondents intending to become more active by reported level of activity. Respondents reporting insufficient activity levels were more likely to intend to become more active (70%) than sedentary respondents (45%) or those who were sufficiently active (49%). The differences observed were statistically significant (P<0.01).

Table 9-1: Intention to become more active by levels of activity, NT 2003

<table>
<thead>
<tr>
<th>Intend to be more active</th>
<th>Sedentary n</th>
<th>Sedentary %</th>
<th>Insufficient n</th>
<th>Insufficient %</th>
<th>Sufficient n</th>
<th>Sufficient %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>14</td>
<td>45</td>
<td>80</td>
<td>70</td>
<td>89</td>
<td>49</td>
</tr>
<tr>
<td>No</td>
<td>15</td>
<td>48</td>
<td>34</td>
<td>30</td>
<td>91</td>
<td>50</td>
</tr>
<tr>
<td>Unknown</td>
<td>2</td>
<td>6</td>
<td>0</td>
<td>0</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Total</td>
<td>32</td>
<td>100</td>
<td>115</td>
<td>100</td>
<td>181</td>
<td>100</td>
</tr>
</tbody>
</table>

P<0.001 Note: Rounding of the data can result in totals not adding.

9.2 Intention to become more active and health professional's advice

Sixteen percent of respondents reported getting some advice on physical activity or exercise the last time they had seen their general practitioner or a health professional.

Table 9-2 shows that, although not statistically significant, people having received advice on exercise from their doctor or a health professional were more likely to intend to become more active than those who had not (18% and 11% respectively).

Table 9-2: Intention to become more active and doctor/health professional’s advice, NT 2003

<table>
<thead>
<tr>
<th>Received advice</th>
<th>Intend to become more active</th>
<th>Do not intend to become more active</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>n</td>
<td>%</td>
</tr>
<tr>
<td>Yes</td>
<td>38</td>
<td>18</td>
</tr>
<tr>
<td>No</td>
<td>167</td>
<td>82</td>
</tr>
<tr>
<td>Total</td>
<td>204</td>
<td>100</td>
</tr>
</tbody>
</table>

P=0.058 Note: Rounding of the data can result in totals not adding.
9.3 Reasons for intending to become more active

Respondents were asked the reason behind their intention to become more active (single response only). Results are presented in Table 9-3. The most frequently cited reasons for intending to become more physically active were to improve fitness (52%) and for weight management (12%).

Table 9-3: Reason for intending to become more physically active, NT 2003

<table>
<thead>
<tr>
<th>Reason</th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>To improve fitness</td>
<td>107</td>
<td>52</td>
</tr>
<tr>
<td>For weight management</td>
<td>25</td>
<td>12</td>
</tr>
<tr>
<td>Other</td>
<td>23</td>
<td>11</td>
</tr>
<tr>
<td>To feel good</td>
<td>13</td>
<td>6</td>
</tr>
<tr>
<td>Have more time</td>
<td>12</td>
<td>6</td>
</tr>
<tr>
<td>Training</td>
<td>10</td>
<td>5</td>
</tr>
<tr>
<td>Sport (seasonal)</td>
<td>9</td>
<td>5</td>
</tr>
<tr>
<td>The weather is better</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>Was told by doctor</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>204</td>
<td>100</td>
</tr>
</tbody>
</table>

Note: Rounding of the data can result in totals not adding.
10 Self-efficacy

Self-efficacy, or confidence in being able to carry out a task successfully, has been known to influence participation in physical activity. Respondents were asked how confident they were to find 30 minutes a day to be active (on 1, 2, 3, 4, 5 or more days of the week). They had to rate their agreement with the question on a 5 point scale that ranged from ‘not at all confident’ to ‘very confident’.

Levels of self-efficacy for participants reporting no activity and insufficient levels of activity are presented in Table 10-1. Respondents’ responses were grouped into 2 categories: ‘confident’ (combining ‘somewhat confident’, ‘moderately confident’ and ‘very confident’) and ‘not confident’ (combining ‘not at all confident’, ‘don’t know’ and ‘refused’).

Overall, levels of self-efficacy decreased as the number of days increased, for both sedentary and insufficiently active respondents. Insufficiently active respondents were more likely to be confident to find 30 minutes a day for physical activity than sedentary respondents. The difference was significant for up to 4 days of the week.

More than half of the respondents (57% of the sedentary and 53% of the insufficiently active) lacked confidence to find 30 minutes in 5 or more days of the week, as recommended by the National Physical Activity Guidelines for Australians.¹

Table 10-1: Levels of physical activity and self efficacy, NT 2003

| Confident to find 30 minutes on | Sedentary | | Insufficient | | p |
|---|---|---|---|---|
| | n | % | n | % | |
| 1 or 2 days/week | | | | | |
| Confident | 24 | 74 | 103 | 89 | <0.05 |
| Not confident | 8 | 26 | 12 | 11 | |
| Total | 32 | 100 | 115 | 100 | |
| 3 or 4 days/week | | | | | <0.05 |
| Confident | 17 | 55 | 86 | 75 | |
| Not confident | 14 | 45 | 29 | 25 | |
| Total | 32 | 100 | 115 | 100 | |
| 5 or more days/ week | | | | | >0.05 |
| Confident | 13 | 42 | 54 | 47 | |
| Not confident | 18 | 57 | 60 | 53 | |
| Total | 32 | 100 | 115 | 100 | |

Note: Rounding of the data can result in totals not adding.
11 Barriers to activity

Table 11-1 lists reasons reported by respondents for not being more active. ‘Lack of time’ was cited by a majority of respondents (53%), followed by ‘I am active enough’ (21%) and ‘no motivation/can’t be bothered’ (16%).

<table>
<thead>
<tr>
<th>Why not active</th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Have not got time</td>
<td>175</td>
<td>53</td>
</tr>
<tr>
<td>I am active enough</td>
<td>69</td>
<td>21</td>
</tr>
<tr>
<td>No motivation/can’t be bothered</td>
<td>52</td>
<td>16</td>
</tr>
<tr>
<td>Family commitments</td>
<td>35</td>
<td>11</td>
</tr>
<tr>
<td>Other</td>
<td>37</td>
<td>11</td>
</tr>
<tr>
<td>Need time to relax in spare time</td>
<td>24</td>
<td>7</td>
</tr>
<tr>
<td>My health is not good enough</td>
<td>19</td>
<td>6</td>
</tr>
<tr>
<td>I can't afford it</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>No suitable facility</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>I do not put priority on physical activity</td>
<td>5</td>
<td>1</td>
</tr>
<tr>
<td>There is no one to do it with</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>I am not sporty type</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>328</td>
<td>100</td>
</tr>
</tbody>
</table>

* Numbers in the table add up to more than 328 or 100% as multiple responses were allowed.

Table 11-2 shows the activity levels of the 69 respondents reporting that the reason they were not more active was that they were active enough (see Table 11-1). Overall, 4% of these respondents reported no activity (sedentary), 25% were insufficiently active and 71% reported being sufficiently active.

<table>
<thead>
<tr>
<th>Activity level</th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sedentary</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Insufficient</td>
<td>17</td>
<td>25</td>
</tr>
<tr>
<td>Sufficient</td>
<td>49</td>
<td>71</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>69</td>
<td>100</td>
</tr>
</tbody>
</table>
12 Physical activity and body mass index (BMI)

Body mass index (BMI) is a tool for indicating weight status in adults. Survey participants were asked about their weight and height; from these, their BMI was estimated according to the following calculation: BMI = weight (kg) / height (m)^2.

The criteria for BMI classification commonly in use in Australia at present are shown in Table 12-1.

<table>
<thead>
<tr>
<th>Descriptive term</th>
<th>BMI category</th>
</tr>
</thead>
<tbody>
<tr>
<td>Underweight</td>
<td>&lt;18.5</td>
</tr>
<tr>
<td>Acceptable weight</td>
<td>18.5 - 24.9</td>
</tr>
<tr>
<td>Overweight</td>
<td>25.0 - 29.9</td>
</tr>
<tr>
<td>Obese</td>
<td>30.0 + over</td>
</tr>
</tbody>
</table>

12.1 Proportion of non-Indigenous Territorians within each of the BMI categories

The proportions of respondents in the different BMI categories are presented in Table 12-2. Overall, 5% of respondents were classified as underweight, 43% as acceptable weight, 35% as overweight and 17% as obese.

<table>
<thead>
<tr>
<th>Body weight</th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Underweight</td>
<td>14</td>
<td>5</td>
</tr>
<tr>
<td>Acceptable weight</td>
<td>137</td>
<td>43</td>
</tr>
<tr>
<td>Overweight</td>
<td>110</td>
<td>35</td>
</tr>
<tr>
<td>Obese</td>
<td>53</td>
<td>17</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>314</td>
<td>100</td>
</tr>
</tbody>
</table>

*BMI information was not available for 14 respondents

12.2 Levels of physical activity and BMI

Table 12-3 and Figure 12-1 consider the relationship between physical activity levels and BMI from different perspectives.

In Table 12-3 respondents were grouped according to their BMI category. Those in the acceptable weight range were more likely to engage in sufficient activity (69%) than those who were overweight (53%) or those who were obese (39%). Amongst obese respondents, 11% reported being sedentary, while 50% reported insufficient levels of activity. Differences observed were statistically significant (P<0.01).

---

41,42 This table presents a combination of the National Health and Medical Research Council (NHMRC) and World Health Organization (WHO) cut-off points.
Table 12-3: Levels of physical activity by BMI category, NT 2003

<table>
<thead>
<tr>
<th>BMI category</th>
<th>Sedentary</th>
<th></th>
<th>Insufficient</th>
<th></th>
<th>Sufficient</th>
<th></th>
<th>Total</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>n</td>
<td>%</td>
<td>n</td>
<td>%</td>
<td>n</td>
<td>%</td>
<td></td>
<td>%</td>
</tr>
<tr>
<td>Underweight</td>
<td>0</td>
<td>0</td>
<td>9</td>
<td>60</td>
<td>6</td>
<td>40</td>
<td>100</td>
<td></td>
</tr>
<tr>
<td>Acceptable weight</td>
<td>8</td>
<td>6</td>
<td>34</td>
<td>25</td>
<td>94</td>
<td>69</td>
<td>100</td>
<td></td>
</tr>
<tr>
<td>Overweight</td>
<td>15</td>
<td>14</td>
<td>37</td>
<td>33</td>
<td>58</td>
<td>53</td>
<td>100</td>
<td></td>
</tr>
<tr>
<td>Obese</td>
<td>6</td>
<td>11</td>
<td>27</td>
<td>50</td>
<td>21</td>
<td>39</td>
<td>100</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>29</td>
<td>9</td>
<td>106</td>
<td>34</td>
<td>179</td>
<td>57</td>
<td>100</td>
<td></td>
</tr>
</tbody>
</table>

P<0.01

In Figure 12-1 respondents were grouped according to their activity levels. Overall physical activity levels were inversely related to BMI category. Survey participants engaging in sufficient activity were more likely to be in the acceptable weight range than those reporting insufficient activity or no activity at all (sedentary).

Sedentary respondents were more likely to be overweight (51%) than respondents reporting insufficient activity (35%) or those reporting sufficient activity (33%). A quarter of the insufficiently active respondents were obese; this compared with 20% of the sedentary and 12% of the sufficiently active respondents.

The differences observed were statistically significant (P<0.01).

Figure 12-1: BMI categories by levels of activity, NT 2003
12.3 Intention to become more active and BMI

The proportion of respondents in each BMI category, by their intention to become more physically active, is presented in Figure 12-2. Eighty-one percent of obese respondents were intending to become more physically active. A majority of overweight respondents (52%) did not intend to become more physically active. Differences observed were statistically significant (P<0.01).

Figure 12-2: Intention to become more physically active by BMI category, NT 2003

12.4 Intention to become more active for weight management and BMI

As seen in Table 9-3, some respondents cited ‘weight management’ as the reason behind their intention to become more physically active. Table 12-4 gives the proportion of these respondents within each BMI category, showing that approximately one third of them were overweight and half were obese.

Table 12-4: Intention to become more active for weight management, by BMI category, NT 2003

<table>
<thead>
<tr>
<th>BMI category</th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Underweight</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Normal weight</td>
<td>5</td>
<td>21</td>
</tr>
<tr>
<td>Overweight</td>
<td>7</td>
<td>32</td>
</tr>
<tr>
<td>Obese</td>
<td>10</td>
<td>47</td>
</tr>
<tr>
<td>Total*</td>
<td>22</td>
<td>100</td>
</tr>
</tbody>
</table>

*BMI information was not available for 3 respondents
12.5 BMI and health professional's advice on physical activity

The proportion of respondents who had received advice on physical activity the last time they had seen their doctor or a health professional, by BMI category, is presented in Table 12-5.

Although not statistically significant (P>0.05), respondents classified as overweight (23%) or obese (19%) were more likely to have received advice on physical activity, than those who were in the acceptable weight range (12%) or were underweight (8%).

Table 12-5: Doctor or Health Professional’s advice and BMI

<table>
<thead>
<tr>
<th>Advice</th>
<th>Underweight (%)</th>
<th>Acceptable weight (%)</th>
<th>Overweight (%)</th>
<th>Obese (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>8</td>
<td>12</td>
<td>19</td>
<td>23</td>
</tr>
<tr>
<td>No</td>
<td>92</td>
<td>88</td>
<td>81</td>
<td>77</td>
</tr>
<tr>
<td>Total</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
</tr>
</tbody>
</table>

P>0.05

13 Miscellaneous

Availability of end-of-trip facilities\(^g\) has been shown to influence participation in active forms of transport, such as cycling or walking. Survey respondents were asked if their workplace had a shower and a secure storage area for bicycles. Results presented in Table 13-1 indicate that a majority of respondents had access to a shower (68%) and safe storage area for bicycles (57%) in their workplace.

Table 13-1: Availability of workplace shower and bicycle storage facilities, NT 2003

<table>
<thead>
<tr>
<th>Workplace has a shower</th>
<th>Workplace has bicycle storage</th>
</tr>
</thead>
<tbody>
<tr>
<td>n</td>
<td>%</td>
</tr>
<tr>
<td>Yes</td>
<td>187</td>
</tr>
<tr>
<td>No</td>
<td>83</td>
</tr>
<tr>
<td>Don't know/refused</td>
<td>3</td>
</tr>
<tr>
<td>Total</td>
<td>274</td>
</tr>
</tbody>
</table>

Note: Rounding of the data can result in totals not adding.

\(^g\) Such as safe bicycle storage, showers, lockers etc.
14 Discussion

14.1 Physical activity levels

The key finding of this survey is that just over half (55%) of non-Indigenous Territorians aged 18-54 years reported engaging in sufficient levels of physical activity for health benefits. This result is similar to that of the 2002 Western Australian survey, which found that 55% of Western Australian adults, aged 18 years and over, reported being sufficiently active. One should note that the NT result may overestimate actual levels of activity, as it was derived from self-reported data; moreover the survey was conducted in July which corresponds to favourable weather conditions throughout the NT, likely to result in increased participation in outdoor activities, such as walking.

There has been no reliable monitoring of physical activity levels over time in the NT. Some surveys have previously included NT respondents; their results however are not directly comparable to those of this survey, as respondent numbers were too low to be representative, or surveys methods were different. Thus there are no trend data on physical activity levels for the Northern Territory. However, national estimates show that adult participation rates in physical activity have declined between 1997 and 1999.

Physical inactivity is a well established public health issue associated with adverse health outcomes. It is therefore of some concern that almost one out of two non-Indigenous Territorians is not engaging in the minimum recommended levels of physical activity for health benefits. Placed in the context of the current epidemic of overweight and obesity, this finding calls for a Territory-wide strategy to promote greater participation in physical activity. Initiatives established in other states could provide suitable models for the NT (e.g. The Premier’s Physical Activity Taskforce in Western Australia or the Physical Activity Taskforce in New South Wales).

From a population perspective, the greatest health benefits are likely to be achieved when people move from being sedentary to participating in some moderate activity. A particular aim of the proposed strategy should therefore be to reduce the number of sedentary Territorians. It is also suggested that the strategy be mindful to set in place the conditions that prevent any decline amongst those currently engaging in sufficient activity.

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b Sufficient activity for health benefits was defined as the accumulation of at least 150 minutes of activity over at least 5 sessions of activity over 1 week. Time spent on vigorous activity was multiplied by two and added to time spent on moderate activity to determine total activity time.

c Two differences between the WA and the NT surveys need to be noted. The WA survey defined sufficient activity as the accumulation of 150 minutes of moderate-intensity physical activity on 5 or more sessions per week or 60 minutes of vigorous intensity physical activity per week. This broader definition of sufficient physical activity is likely to have resulted in higher levels of sufficient activity than would have been obtained with the definition used by the NT survey. This effect may however have been counter-balanced by the fact that the WA sample, unlike the NT sample, included older adults. This would have reduced the WA levels of sufficient activity, as levels of physical activity decrease with increasing age.

j They include the National Physical Activity Surveys of 1997, 1999 and 2000, the Australian Bureau of Statistics (ABS) National Health Survey and the Northern Territory Health and Wellbeing Survey, non-Indigenous Population.
14.2 Groups at risk of inactivity

In addition to providing information on levels of activity, the survey identified population groups at greater risk of inactivity. In this survey, women were more likely to be insufficiently active than men (39% and 31% respectively), which is consistent with analyses of data from other surveys of Australian adults. Conversely, men were three times more likely to be sedentary than women (14% and 5% respectively), an important finding if the initial thrust of an NT campaign is to reduce the proportion of sedentary Territorians.

It may be that some men lack access to social support networks, which have an important influence on physical activity behaviour. Promoting the development of such networks has the potential to support sedentary men to become more active.

Other groups at greater risk of inactivity included respondents in the 35-44 years age group, respondents with low levels of education, those with 3 children or more, respondents who were not in the workforce and those who were overweight or obese. Although not all statistically significant, these results have been found elsewhere. Strategies to promote physical activity within these different groups therefore need to be considered.

14.3 Participation in walking

In this survey, a total of 72% of men and 84% of women reported walking on at least one session of ten minutes during the previous week. Although likely to have been influenced by optimal seasonal conditions, this high level of participation supports other studies showing that walking for recreation or exercise is the most popular form of physical activity.

Women were significantly more likely than men (37% compared with 32%) to walk 150 minutes or more each a week, a finding also consistent with data showing that walking is more common for women.

Walking is of strong policy interest for the promotion of physical activity amongst the sedentary, as it is free and can be undertaken by most people. A number of environmental factors can, however, influence people’s perception of the ‘walkability’ of their neighbourhood. Many of these factors are amenable to change. Safety or shade enhancements to streets, paths or playgrounds for instance, are likely to encourage local residents to walk more. Access to an efficient network of paths and tracks that lead to relevant destinations (such as shops, public open spaces, schools) is also important. Town Councils and Local Planning agencies can play a key role in the development of inviting environments that are conducive to walking or cycling, and a number of resources and guidelines have been developed to guide this process.

14.4 Knowledge

Most survey respondents (90%) correctly agreed that 30 minutes of moderate activity a day were enough to confer health benefits. There was however a lower level of agreement (75%) with the statement proposing that ‘exercise does not have to be done all at one time; blocks of 10 minutes are ok’, which suggests that the concept of accumulation of physical activity is not well understood yet.
Of concern as well was the strong agreement (69%) with the incorrect statement that ‘to improve your health it is essential to do vigorous activity’. This finding highlights the persistence of earlier recommendations, that were designed for fitness promotion and fitness for sport participation. It also shows that there may be some confusion in the community between activity for health benefits and activity for fitness.

It is therefore suggested to implement a Territory-wide media campaign to raise or increase community awareness of current Australian physical activity guidelines for health benefits; the campaign should have a special emphasis on the concept of accumulation of activity throughout the day, as it makes the goal of reaching the recommended 30 minutes a day more achievable.

14.5 Other determinants of physical activity

Socio-economic status

In this survey, income did not appear to be associated with activity. A significant relationship between education and physical activity was however discernible, with university educated respondents reporting the highest levels of sufficient activity (67%), while respondents with less than 12 years of education reported the lowest rate (41%). This finding is consistent with data suggesting that socio-economically disadvantaged people are more likely to be sedentary and above the healthy weight range.

A socio-economic gradient of activity was also observed in relation to employment. While not significant, respondents who were in the workforce were more likely to be sufficiently active than those who were not, and respondents working more than 20 hours per week were more likely to be sufficiently active than those who worked less than 20 hours. These findings are important and call for the development of equity-based programs specifically aimed at socially disadvantaged Territorians.

Self-perception, intention to become more active and levels of self-efficacy

Overestimation of activity levels amongst insufficiently active respondents was observed. A majority of sedentary and insufficiently active respondents (60% and 67% respectively) described themselves as ‘quite active’ or ‘extremely active’. Likewise, one-third of participants who cited they were ‘active enough’ as a reason for not being more active were in fact sedentary or insufficiently active. The implementation of projects promoting the use of activity monitoring tools, such as pedometers, may assist community members become more aware of their actual activity levels and encourage them to increase these levels to meet current recommendations.

This survey also asked about respondents’ intention to become more active, in order to determine their ‘stages of change’. Stages of change are phases individuals go through when changing a particular behaviour. Knowing where ‘people are at’ helps program planners match interventions with individuals’ readiness to take on information and change.

In this survey, 45% of the sedentary respondents and 70% of the insufficiently active were contemplating becoming more active. These respondents need further encouragement and support to progress to the next stage of preparation for increased activity. The development of supportive networks—such as walking groups—is
therefore a recommended strategy for this particular group. Given the hot and humid conditions that often prevail in the NT, support for the development of walking programs that take place in air-conditioned environments such as shopping centres is suggested.

Lastly it is important to note the large proportions of sedentary and insufficiently active respondents (57% and 53% respectively) who reported lacking confidence to find 30 minutes a day for physical activity on 5 or more days of the week, as recommended by the Guidelines. These results confirm the previously highlighted need to reinforce the concept of accumulation of activity throughout the day and promote the development of social support networks.

**Barriers to activity**

Consistent with other studies, the dominant barrier to regular physical activity reported in this survey was ‘lack of time’ (cited by 53% of respondents). Although the determinants behind ‘lack of time’ were not examined, this finding needs to be acknowledged as a significant obstacle to increased participation in physical activity for, possibly, a large section of the community. It is therefore important to convey that there are many ways to incorporate the recommended daily 30 minutes of physical activity into everyday life. Walking or riding to the local store or the school with the children, parking the car some distance from destination and walking the rest of the way are simple examples of incidental activities that contribute to overall activity levels and can be promoted to the community.

Workplaces can also play an active part in fostering the reintegration of activity into daily routine by promoting lunch time exercise, and displaying ‘point of decision prompts’ to encourage stair use instead of the elevator. Larger government agencies may be well placed to take the lead in developing and implementing active workplace strategies.

Other barriers to increased activity included the previously discussed view that respondents were ‘active enough’. ‘No motivation/can’t be bothered’ was also cited by 16% of respondents which suggests that a campaign promoting participation in activity should emphasise the social benefits and the ‘fun’ aspect of engaging in physical activity with others.

Of interest in this study was the fact that climate did not feature as a dominant barrier, possibly because the survey was conducted in July, which corresponds to favourable weather conditions for outdoor activities throughout the NT.

**Advice from a doctor or other health professional**

This survey found that survey respondents who had received a health professional’s advice on exercise were more likely to intend to become more active than those who had not (19% and 11% respectively). While not statistically significant, this finding is encouraging as research has shown short term increases in participation in physical activity following advice by a health professional. Supporting the promotion of physical activity within the primary health care sector is therefore a recommended strategy to increase population levels of physical activity.
Physical activity and BMI

Consistent with other studies\(^{18,33}\), the NT survey found that 35% of non-Indigenous Territorians were overweight and 17% were obese. As observed elsewhere, an inverse relationship between levels of activity and BMI category was noticeable in the NT survey. The proportion of overweight respondents increased as levels of activity decreased (from 33% to 51%); a quarter of the insufficiently active respondents were obese (compared with 20% of the sedentary and 12% of the sufficiently active respondents).

It is acknowledged that overweight or obesity in themselves may be barriers to participation in physical activity and explain the lower levels of participation in sufficient activity amongst overweight or obese respondents. Nonetheless, low levels of regular activity are likely to result in energy imbalance—whereby caloric intake exceeds energy expenditure—and lead to increased weight.\(^{34}\)

Thus encouraging active living is a key strategy of Healthy Weight 2008\(^{35}\), the national action agenda to reduce overweight and obesity amongst Australian children, young people and their families. The recommended development of programs encouraging and supporting Territorians to increase their levels of physical activity is therefore expected to contribute to the national effort to tackle overweight and obesity.

Active transport

As the evidence for the association between active commuting and reduction of all cause mortality increases\(^{36}\), it is important to be aware of both enablers and barriers to active transport (such as lack of showers). Data were not collected in this survey on the number of people riding or taking the bus and walking to work, but it is worth noting that a majority of respondents had access in their workplace to the conditions that would support active transport, such as safe storage area for bicycles (53%) and showers (69%). This survey therefore provides scope to both promote active transport to work as a way of reintegrating physical activity into everyday life, and advocate for increased provision of end-of-trip facilities in workplaces. Active transport also confers environmental benefits and supports the NT Greenhouse Gas Strategy.\(^{37}\)

15 Limitations of the survey

A major limitation of this survey was its small sample size (n=328), which may account for the low number of findings that were statistically significant. Most results, however, corroborate those found in surveys elsewhere in Australia. It is also acknowledged that results presented in this report are based on self-reported participation in physical activity and may therefore overestimate actual levels of physical activity.

The measurement of non-leisure time activity is also of interest for population monitoring but was beyond the scope of this survey.
16 Recommendations

The following recommendations are suggested to promote and monitor participation in physical activity in the NT:

1. Develop intersectoral strategies and programs to increase Territorians’ levels of participation in regular moderate physical activity.
2. Promote current physical activity guidelines\(^1\) through a mass media campaign, with a particular emphasis on the concept of accumulation of activity.
3. Promote the reintegration of physical activity into everyday life through active workplaces and active transport.
4. Foster the development of safe and supportive local environments for physical activity and encourage walking or cycling.
5. Develop equity based programs specific to groups identified at greater risk of inactivity.
6. Encourage and support the primary health care sector to promote physical activity.
7. Investigate the availability of (or develop) mechanisms to monitor physical activity levels of Indigenous Territorians.
8. Monitor, in coordination with other States and Territory, NT population levels of physical activity levels regularly. Future surveys should be undertaken at the same time of the year to limit seasonal variations and allow for comparisons in participation.
Appendix 1: Letter to householder

July 2003

Dear Householder,

I am writing to seek your assistance in an important health survey being conducted on behalf of the Northern Territory Department of Health and Community Services and the Heart Foundation (NT Division) which are involved in the delivery of health services to Northern Territorians.

One of our interviewers will be contacting your household in the next few weeks to speak to the adult in the household, aged between 18 and 54 years, who had the last birthday. The interview will be conducted over the telephone and will take around 15 minutes. Your phone number has been selected randomly from all telephone listings in the state. *All information collected will be confidential.*

Your participation in the survey is very important. The results of the survey will help authorities in planning and developing health services that meet the needs and concerns of your community.

If you have any queries about the survey please contact Annie Villeseche on 89 992623.

Yours sincerely

David Ashbridge
Assistant Secretary Health Services
Appendix 2: Survey Questionnaire, NT 2003

A. INTRODUCTION

Good …… My name is ……………
I’m calling on behalf of the Northern Territory Department of Health and Community Services and the Heart Foundation (NT Division). We are conducting a survey on a range of important health issues. [Interviewer note, read if necessary The research results will be important for the planning of future health and lifestyle programs].

We recently sent you a letter telling you about the survey.

A.1 Did you receive the letter?
(Single response)
1. Yes [   ]
2. No [   ]
3. Don’t know [   ]

Could I please speak with the person in the household, aged between 18 and 54 years, who was the last to have a birthday.

I can assure you that all information given will remain confidential. The answers from all people interviewed will be gathered together and presented in a report. No individual answers will be passed on.

As some of the next questions relate to certain groups of people only, could you please tell me:

A.2 How old you are?
(Single response)
1. Enter age ___ ___
2. Not stated or not known [999]

Sequence Guide: If A.2 < 999 Go to A.4.
If A.2 <18 and >54 End interview.

A.3 Which age group are you in? Would it be ...
(Read options - single response)
1. 18 to 24 years [   ]
2. 25 to 34 years [   ]
3. 35 to 44 years [   ]
4. 45 to 54 years [   ]
5. Refused / age not known [   ]

Sequence guide: If A.3 = 5 End interview.

A.4 Voice (ask if unsure)
(single response)
1. Male [   ]
2. Female [   ]

A.5 Including yourself, how many people aged between 18 and 54 years live in this household?
(Single response. Enter number of people between 18 and 54 year. Enter 0 if none)
1. Enter number ___ ___
2. Not stated [999]

A.6 How many children under 18 years live in your household?
(Single response. Enter number of people 18 years and under)
1. Enter number ___ ___
2. Not stated [999]

A.7 What is the postcode of the house?
(Single response, enter 5999 if postcode is not known)
1. Enter number ___ ___
2. Not stated [5999]

Sequence Guide: If A.7 < 5999 Go A.9
A.8 What town, suburb or community do you live in?
(Single response, enter town / suburb / community)
1. Enter town / suburb / community __________

B. PHYSICAL ACTIVITY BEHAVIOUR

Now some questions about physical activity.

B.1 Which best describes how physically active you are?
(Read options - single response. Interviewer note: can include the physical activity done through work)
1. Extremely active [    ]
2. Quite active [    ]
3. Not very active [    ]
4. Don’t do any activity [    ]
5. Don’t know / refused [    ]

The next questions are about any physical activities that you may have done in the last week.

B.2 In the last week, how many times have you walked continuously, for at least 10 minutes, for recreation, exercise or to get to or from places?
(Single Response. Enter number of times. Enter 0 if none)
1. None [    ] Go to B.4
2. Enter number of times _____
3. Not stated / don’t know [999]

B.3 What do you estimate was the total time that you spent walking in this way in the last week?
(Single Response. Enter number of hours AND/OR minutes.)
1. Hours _____
2. Minutes _____
3. Not stated / don’t know [999]
C. INTENTION TO BE MORE ACTIVE

B.4 This question excludes household chores or gardening. In the last week, how many times did you do any vigorous physical activity which made you breathe harder or puff and pant? (e.g. tennis, jogging, cycling, keep fit exercises).

(The following statements are about the amount of exercise you intend to do in the near future.

Which of these statements best describes how, you feel at present?

C.1 ‘You intend to be more active than you have been over the last week’

(simple response)

1. None [    ] Go to B.6
2. Enter number of times ______
3. Not stated / don’t know [999]

B.5 What do you estimate was the total time that you spent doing this vigorous physical activity in the last week?

(simple response. Enter number of hours AND/OR minutes.)

1. Hours ______
2. Minutes ______
3. Not stated / don’t know [999]

B.6 This question excludes household chores or gardening. In the last week, how many times did you do other more moderate physical activities that you have not already mentioned? (e.g. lawn bowls, golf, gentle swimming, etc)

(simple response. Enter number of times. Enter 0 if none)

1. None [    ] Go to NS
2. Enter number of times ______
3. Not stated / don’t know [999]

B.7 What do you estimate was the total time that you spent doing these activities in the last week?

(simple response. Enter number of hours AND/OR minutes.)

1. Hours ______
2. Minutes ______
3. Not stated / don’t know [999]

C.2 ‘You intend to become more active sometime over the next six months than you have been over the last week’

(simple response)

1. Yes [    ]
2. No [    ]
3. Don’t know / refused [    ]

Sequence guide: If C.2 > 1 Go to NS

C.3 What is the reason for you intending to become more active?

(Simple Response. Interviewer note: Enter reason why you intend to become more active)

1. Was told by doctor / health professional [    ]
2. For weight management [    ]
3. Training for a special event / sport [    ]
4. To feel good [    ]
5. To improve fitness [    ]
6. Have more time than before [    ]
7. The weather is better [    ]
8. Sport (seasonal) is about to start [    ]
9. Other (specify) [    ]
10. Don’t know [    ]

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D. KNOWLEDGE OF PHYSICAL ACTIVITY MESSAGE

To what extent do you agree or disagree with the following statements about physical activity?

D.1 ‘Taking the stairs at work or generally being more active for at least 30 minutes each day is enough to improve your health.’
(Read options - single response)
1. Strongly agree
2. Agree
3. Neither agree nor disagree
4. Disagree
5. Strongly disagree
6. Don't know
7. Refused

D.2 ‘Half an hour of brisk walking on most days is enough to improve your health’
(Read options - single response)
1. Strongly agree
2. Agree
3. Neither agree nor disagree
4. Disagree
5. Strongly disagree
6. Don't know
7. Refused

D.3 ‘To improve your health it is ESSENTIAL for you to do vigorous exercise for at least 20 minutes each time, 3 times a week’
(Read options - single response)
1. Strongly agree
2. Agree
3. Neither agree nor disagree
4. Disagree
5. Strongly disagree
6. Don’t know
7. Refused

D.4 ‘Exercise doesn’t have to be done all at one time—blocks of 10 minutes are okay’
(Read options - single response)
1. Strongly agree
2. Agree
3. Neither agree nor disagree
4. Disagree
5. Strongly disagree
6. Don't know
7. Refused

D.5 ‘Moderate exercise that increases your heart rate slightly can improve your health’
(Read options - single response)
1. Strongly agree
2. Agree
3. Neither agree nor disagree
4. Disagree
5. Strongly disagree
6. Don't know
7. Refused

E. SELF-EFFICACY

We would like to find out how confident you are to incorporate exercise in your lifestyle.

E.1 How confident are you that you could find 30 minutes to be active on a typical weekday [or on a day you work]?
(Read options - single response)
1. Not at all confident
2. Somewhat confident
3. Moderately confident
4. Very confident
5. Don’t know
6. Refused
E.2 How confident are you that you could find 30 minutes to be active on a typical weekend day (or days you do not work)?
(Read options - single response)
1. Not at all confident [ ]
2. Somewhat confident [ ]
3. Moderately confident [ ]
4. Very confident [ ]
5. Don’t know [ ]
6. Refused [ ]

E.3 How confident are you that you could find 30 minutes to be active on one or two days of the week?
(Read options - single response)
1. Not at all confident [ ]
2. Somewhat confident [ ]
3. Moderately confident [ ]
4. Very confident [ ]
5. Don’t know [ ]
6. Refused [ ]

Sequence guide: If E.3 = 1 Then Go to F

E.4 How confident are you that you could find 30 minutes to be active on three or four days of the week?
(Read options - single response)
1. Not at all confident [ ]
2. Somewhat confident [ ]
3. Moderately confident [ ]
4. Very confident [ ]
5. Don’t know [ ]
6. Refused [ ]

Sequence guide: If E.4 = 1 Then Go to F

E.5 How confident are you that you could find 30 minutes to be active on five or more days of the week?
(Read options - single response)
1. Not at all confident [ ]
2. Somewhat confident [ ]
3. Moderately confident [ ]
4. Very confident [ ]
5. Don’t know [ ]
6. Refused [ ]

F. REASONS WHY NOT ACTIVE

F.1 What reasons would you give for not being more active?
(Multiple response)
1. I haven’t got time [ ]
2. My health is not good enough [ ]
3. There is no one to do it with [ ]
4. I can’t afford it [ ]
5. I am too old [ ]
6. There are no suitable facilities [ ]
7. I am not the sporty type [ ]
8. No motivation [ ]
9. Can’t be bothered [ ]
10. Too fat – overweight [ ]
11. I need to rest and relax in my spare time [ ]
12. I don’t put priority on physical activity [ ]
13. I’m active enough [ ]
14. Family commitments [ ]
15. Other (specify) [ ]
16. None [ ]
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G. MISCELLANEOUS

Now, changing the subject.

G.1 Do you have a dog at home?
(Single response)
1. Yes [ ]
2. No [ ]
3. Refused [ ]

Sequence guide: If G.1 =>2, Go to G.4

G.2 In the last week, how many times did you take your dog for a walk?
(Single Response. Enter number of times. Enter 0 if none)
1. None [ ]
2. Enter number of times [ ]
3. Not stated / don't know [999]

Sequence guide: If G.2 = 1 or 3, Go to G.4

G.3 What do you estimate was the total time that you spent walking your dog in the last week?
(Single Response. Enter number of hours AND/OR minutes.)
1. Hours [ ]
2. Minutes [ ]
3. Not stated / don't know [999]

G.4 Now changing the subject back to you.

Last time you saw your GP or a health professional, did he or she give you any advice about physical activity or exercise?
(Single response)
1. Yes [ ]
2. No [ ]
3. Refused[ ]

G.5 What is your weight (undressed in the morning)?
(Single response - enter weight)
1. Kilograms [ ]
2. Stone or pounds [ ]
3. Don't know / refused [ ]

G.6 What is your height (without shoes?)
(Single response - enter height)
1. Centimetres [ ]
2. Feet or inches [ ]
3. Don't know / refused [ ]

Sequence guide: If A.9 > 3 Go to H

G.7 Does your workplace have a secure storage area for bicycles?
(Single response)
1. Yes [ ]
2. No [ ]
3. Don't know / refused [ ]
4. Work at home / not applicable [ ]

G.8 Does your workplace have showers?
(Single response)
1. Yes [ ]
2. No [ ]
3. Don't know / refused [ ]
4. Work at home / not applicable [ ]
H. DEMOGRAPHIC INFORMATION

Now to finish with some general questions.

H.1 Which of the following best describes your current marital status? Are you ..
(Read options - single response)
1. Never married [    ]
2. Married / Defacto [    ]
3. Separated / Divorced [    ]
4. Widowed [    ]
5. Refused [    ]

H.2 In which country were you born?
(Single response)
1. Australia [    ]
2. UK/Ireland [    ]
3. New Zealand [    ]
4. Austria [    ]
5. Bosnia-Herzegovina [    ]
6. Canada [    ]
7. China [    ]
8. Croatia [    ]
9. East Timor [    ]
10. France [    ]
11. Germany [    ]
12. Greece [    ]
13. Holland / Netherlands [    ]
14. Hong Kong [    ]
15. Indonesia [    ]
16. Iran [    ]
17. Italy [    ]
18. Japan [    ]
19. Malaysia [    ]
20. Papua New Guinea [    ]
21. Philippines [    ]
22. Slovenia [    ]
23. Vietnam [    ]
24. Former Yugoslav Rep. Of Macedonia [    ]
25. Former Yugoslav Rep. Of Serbia & Montenegro [    ]
26. Other (specify) [    ]
27. Refused [    ]

Sequence guide: If H.2 > 1 Go to H.4

H.3 Are you of Aboriginal or Torres Strait Islander origin?
(Single Response)
1. No [    ]
2. Aboriginal [    ]
3. Torres Strait Islander [    ]
4. Both [    ]
5. Not stated [    ]

H.4 What is the highest level of education you have COMPLETED?
(Read options - single response)
1. Never attended school/some primary school [    ]
2. Completed primary school [    ]
3. Some high school [    ]
4. Completed high school (School certificate / Year 12 / Form 6, HSC) [    ]
5. TAFE or Trade certificate or diploma [    ]
6. University, CAE or other tertiary institution degree [    ]
7. Other (specify) [    ]
8. Don’t know [    ]

H.5 Which of the following statements best describes your [household’s] financial situation over the last 12 months?
(Read options - single response)
1. [I am/we are] spending more money than [1/we] get [    ]
2. [I /we] have just enough money to get [us] through to the next pay day [    ]
3. There’s some money left over each week but [1/we] just spend it [    ]
4. [1/we] can save a bit now and then [    ]
5. [1/we] can save a lot[    ]
6. Don’t know  [    ]
7. Refused[    ]
H.6 I would now like to ask you about your household’s income. We are interested in how income relates to health, lifestyle and access to health services. Can you tell me the approximate annual gross income of your household? That is, for all people in the household before tax is taken out. I’ll read out some categories and could you please tell me into which one your household’s income falls?

(Read options - single response)
1. Less than $15,000 [ ]
2. $15,001 - $25,000 [ ]
3. $25,001 - $35,000 [ ]
4. $35,001 - $50,000 [ ]
5. $50,001 - $65,000 [ ]
6. $65,000 – $85,000 [ ]
7. More than $85,000 [ ]
8. Don’t know [ ]
9. Not stated / refused [ ]

H.7 How many residential telephone numbers, including mobile phones, can be used to speak to someone in this household?

(Single Response. Interviewer note: do not include Internet or fax numbers)
1. Enter number ______
2. Don’t know [999]

H.8 How many times [do these / does this] number(s) appear in the White Pages?

(Single Response. Interviewer note: do not include Internet or fax numbers. Total number of entries includes numbers that are listed more than once.)
1. Enter number ______
2. Don’t know [999]

H.9 In a survey like this, issues often arise that require further explanation or additional clarification or investigation. If we need to could we phone you at a later date for help?

(Single response)
1. Yes (specify - record first name only) _____________________________
2. No [ ]

That concludes the survey. On behalf of the NT Department of Health and Community Services and the Heart Foundation (NT Division), thank-you very much for taking part in this survey.
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