



A PRELIMINARY REPORT

child and adolescent
physical activity
and **nutrition**

survey 2003

(CAPANS)

Prepared by: The Premier's Physical Activity Taskforce

Source: Hands, B., Parker, H., Glasson, C., Brinkman, S. & Read, H. (2004).

Physical Activity and Nutrition Levels in Western Australian Children and Adolescents: Report.

University of Notre Dame Australia

Date: October 2004

premier's
**physical
activity**
taskforce





contents

FOREWORD	2
1. BACKGROUND.....	3
2. RESEARCH METHODS	4
3. SAMPLE DEMOGRAPHICS	5
4. KEY FINDINGS	6
4.1 Participation in Different Types of Physical Activity	6
4.1.1 Levels of physical activity	6
4.1.2 School-based activities.....	6
4.1.3 Non-school based activities	7
4.2 Active Transport	8
4.3 Physical Inactivity and Sedentary Behaviour	9
4.4 Attitudes Towards Physical Activity	9
4.4.1 Motivators to Participate in Physical Activity	9
4.4.2 Barriers to Participation in Physical Activity.....	10
4.5 Nutrition.....	11
4.5.1 Survey participation.....	11
4.5.2 Types of food eaten on the day of the survey	11
4.5.3 Food groups compared to recommended	11
4.5.4 Dietary differences between males and females	12
4.5.5 Dietary difference between metropolitan and non-metropolitan students.....	12
4.5.6 Changes in diet.....	12
4.6 Anthropometric Measures	13
4.7 Body Mass Index	13
5. RECOMMENDATIONS	14



foreword

Physical activity and good nutrition are recognised as two of the most important factors for developing and maintaining good health.

In order to assess levels of activity and nutritional habits of Western Australia's children and adolescents this survey was conducted throughout the State in late 2003. The University of Notre Dame Australia conducted the survey for the Physical Activity Taskforce.

The results indicate that our children are active in a wide variety of different ways. Bike riding, playing with pets, walking for exercise and walking the dog are the most prevalent activities for both males and females in metropolitan and non-metropolitan areas. However, levels of activity decline as children get older.

The survey also shows that over the past 18 years, across all age groups measured, the Body Mass Index (BMI) of children has increased. Alarming, the number of children who are overweight and obese increased from just over 9% of males and 10% of females in 1985 to 23% of males and 30% of females in 2003.

The nutritional intake of children has also changed. More children are eating confectionery and snack foods and less are eating foods vital to their health such as vegetables, fruit and milk products.

The results will guide the development of effective programs and other interventions to promote physical activity and improved nutrition. The results will also serve as a baseline measure, against which we can make an objective assessment of the effectiveness of these efforts.

The challenge is to respond to this information in a comprehensive and effective way to ensure that, over the next few years, we can turn around these trends in our children's health. It is particularly important to develop healthy traits in children as research shows that if established early in life these habits are carried through to adulthood.

This response must involve a range of State Government departments, local governments, schools and other organisations. Our environment needs to be conducive to physical activity by providing pavements and cycle ways. Activity needs to be a part of every child's day, whether at school, after school or at home. School canteen managers and parents need to provide the range of foods that contribute to children's wellbeing.

The Physical Activity Taskforce is working hard to achieve these changes with the involvement of government and private sectors, working in partnership to implement a whole of community plan for physical activity in Western Australia. These organisations share the common goal of improving the nutrition and increasing the levels of physical activity of our children.

This survey was a collaborative effort of the Physical Activity Taskforce, the University of Notre Dame, the Department of Health and Healthway.

M C Wauchope
Chairperson
Physical Activity Taskforce



1. background

In June 2001, the Premier's Physical Activity Taskforce was established to oversee the development and implementation of a whole of community approach to increasing the levels of physical activity in Western Australia.

This was in response to an increasing awareness at the state, national and international levels of a significant decline in physical activity in the community. Similarly, there is growing concern about the increasing prevalence of overweight and obesity, which is related to both inadequate physical activity levels and over nutrition.

While information about adult physical activity levels has been gathered through two surveys (Bull, Milligan, Rosenberg, & MacGowan, 2000; McCormack, Milligan, Giles-Corti, & Clarkson, 2003), little was known about child and youth patterns in Western Australia. In 2003, the Premier's Physical Activity Taskforce initiated a survey of the physical activity levels of children and youth, which was funded by Healthway and the Department of Health. Given the increasing concern about overweight and obesity, the Department of Health was approached to include measures of nutrition.

The Premier's Physical Activity Taskforce commissioned the University of Notre Dame Australia to gather information on current levels of physical activity, nutrition, and anthropometric measures of Western Australian children and adolescents. The survey was designed to provide baseline information for tracking future trends and for informing and monitoring health promotion interventions and was overseen by the Evaluation and Monitoring Working Group of the Taskforce.



2. research methods

2.1 Timeline

Development of the survey methods began in April 2003 with pilot testing in July and the survey was conducted in schools from September to December 2003. Initial findings were available in April 2004 with a final report in December 2004.

2.2 Target Population

The target sample size was 2,880 Western Australian children and adolescents in the school years 3, 5, 7, 8, 10 and 11.

The sample was structured to obtain proportional representation according to the State's general population figures.

2.3 School Participation

In total, 17 secondary schools and 19 primary schools agreed to participate. Active consent from both parents/carers and the students was obtained prior to participation in the survey.

2.4 Data Collection Tools

The research team visited each school on three occasions over nine days. During that time students completed a physical activity questionnaire, recorded steps for seven days using a pedometer, and completed a pedometer diary, a 24-hour dietary record and a food frequency questionnaire.

In addition, anthropometric measurements of height, weight and waist girth were taken. Body Mass Index (BMI) was derived for each student. This is a weight to height ratio (kg/m^2) widely used to identify overweight and obesity.



3. sample demographics

Table 1: Sample Demographics			
Characteristics	Number (n)	Percent (%)	Western Australia Population %*
Gender			
Male	1130	49.7	49.8
Female	1144	50.3	50.2
TOTAL	2274		
Age Group			
7 years	98	4.3	
8 years	310	13.6	
9 years	125	5.5	
10 years	365	16.1	
11 years	103	4.5	
12 years	419	18.4	
13 years	308	13.5	
14 years	93	4.1	
15 years	270	11.9	
16 years	177	7.8	
Location			
Non-metropolitan	611	26.9	
Metropolitan	1663	73.1	
Country of Birth			
Australia	2022	88.9	67.8
England	61	2.7	11.0
New Zealand	35	1.5	2.5
South Africa	20	0.9	
Scotland	13	0.6	
Other	123	5.4	
Aboriginality			
Aboriginal or Torres Strait Islander	92	4.0	3.2
Primary Language Spoken			
English	2123	93.4	84.0
Chinese	12	0.5	
Italian	12	0.5	
Vietnamese	12	0.5	
Macedonian	8	0.4	
Other	107	4.7	
School Level			
Primary School (7-12 yrs)	1420	62.4	
Secondary School (13-16 yrs)	854	37.6	

*From the Australian Bureau of Statistics (ABS) 2001 Census. Note statistics are whole population representative, rather than specific to children or adolescents unless stated otherwise.



4. key findings

4.1 Participation in Different Types of Physical Activity

4.1.1 Levels of physical activity

- Compared with primary school students, more high school students reported doing no vigorous sport, exercise or dance. Approximately 11% of primary school males and 13% of primary school females reported none; compared with 25% of secondary males and 32% of secondary females;
- Almost 30% of primary school males and females reported doing no active play. This increased to over 50% of secondary males and females;
- About half of all students surveyed reported doing no active transport. Amongst those secondary students who did, males walked on average 79 minutes per week to and from school, and females 97 minutes to and from school. (Data on minutes not available for primary school students);
- Fewer students cycled to and from school and primary school students were more likely to do so than secondary students. The prevalence of cycling to school ranged from 26.4% in metropolitan primary males to only around 3% of secondary females;
- Amongst secondary students who did cycle, on average males cycled 104 minutes per week and females cycled 123 minutes per week;
- School based physical education and sport provided an important component of students' physical activity participation. The vast majority (over 90%) reported doing some physical education and/or sport at school. For secondary students this involved an average of 153 minutes per week for males and 113 minutes per week for females;

- On average, primary school males took 12,464 steps on school days, while primary school females took 10,673 steps per school day. Similarly, secondary school males did more steps on average on a school day (13,741 per day) than females (11,309 per day); and
- On weekends, primary school males (10,956 per day) and females (9,839 per day) reduced the number of steps they took compared to school days. Conversely, there was a very slight increase in steps by male and female secondary students on weekend days, compared with school days.

4.1.2 School-based activities

- Of all activities reported, physical education (PE) and school sport classes were the most prevalent types of activities for both males and females across primary and secondary school levels;
- Nevertheless, nearly one in five metropolitan secondary females reported no school based physical education or sport compared with one in seven metropolitan males (18.3% vs 14.1%);
- Most students reported being very active 'quite often' or 'always' during PE or sport;
- There was no difference in the frequency of PE and sport for primary students, however secondary females participated in fewer sessions than their male counterparts (1.9 versus 2.5 sessions per week) and for shorter durations (112.7 versus 152.9 minutes);
- Participation in PE and sport was 96% for non-metropolitan secondary females, compared with 81.7% for their metropolitan peers; and
- 11.8% of primary males and 7.6% of primary school females, and 10.3% of secondary males and 16.7% of secondary females reported that they did not participate in PE or if they did, they were rarely active.



key findings (continued)

4.1.3 Non-school based activities

In this section of the survey, students reported how often they were 'very active' over the previous seven days right after school, in the evenings and on the previous weekend

- Overall slightly more males than females reported 'out of school' activity levels;
- Students were more likely to be engaged in physical activity right after school or on the weekend than in the evening;
- As students got older, both males and females reported spending less time on non-school based physical activities;
- A significant percentage of children across primary and secondary school reported participation in physical activity during the previous weekend and they participated in two or three physical activities;
- More males reported involvement in sports, dance or games at least six times during the previous weekend;
- More secondary females (20%) reported no activity, than secondary males or primary students during the previous weekend; and
- In addition, secondary females (30%) reported participating in one session of physical activity during the previous weekend.

Sport, exercise and dance (some of these activities could take place in school time)

This category included moderate and vigorous intensity activities

- For males, both soccer and Australian Rules Football were the most popular activities;
 - Soccer was the most common activity among primary school males (55.2%);

- Australian Rules Football was more popular with secondary school males (46.2%);
- Among females dance, netball and swimming laps were the most popular activities;
 - After dance (51.5% primary, 43.6% secondary), swimming laps (47.7% primary and 29.6% secondary) was second most popular activity in primary school females but was replaced by netball (44.6% primary and 33.3% secondary) in secondary school females;
- The overall number of activities was similar for secondary students attending metropolitan and non-metropolitan schools;
- Primary school students reported more activities than secondary students, regardless of school location;
- The drop off in participation from primary to secondary schools was greater for metropolitan students than non-metropolitan in many activities; and
- The Western Australian sample reported much higher participation in sports over the past twelve months (81.6% of males and 76.8% of females) than the Australian average (69% of males and 54% of females) (Australian Bureau of Statistics, 2004, Report No. 4901.0).

Active play

This category included moderate intensity activities such as bike riding, playing with pets, scooter, and skateboard and vigorous intensity activities such as jogging/running, rollerblading, and skipping.

- Bike riding, playing with pets, walking for exercise, and walking the dog were the most prevalent activities for males and females in both metropolitan and non-metropolitan areas;



key findings (continued)

Table 2: Total Percentage Walked or Cycled To and From School Over Study Week						
	Year 3		Year 5 and 7		Year 8, 10 and 11	
	Male n= 210	Female n= 205	Male n= 493	Female n= 433	Male n= 433	Female n= 509
Total % walked or cycled to school over study week	27.4	39.3	36.6	32.0	41.2	33.1
Total % walked or cycled from school over study week	24.5	42.4	38.6	32.5	40.8	42.5

- Primary and secondary school males reported bike riding as the most popular activity;
- Primary school females reported playing with pets as the most popular activity;
- Secondary school females reported walking for exercise as the most popular activity;
- There is a steady decline with age in the number of activities participated in;
- Primary males and females reported means of 3.4 and 3.1 activities, respectively; and
- Secondary males and females reported means of 2.0 and 1.9 activities, respectively.

Household chores

- Primary and secondary school females reported household chores as the most prevalent activity after school PE and sport;
- Primary males rated household chores as the third most prevalent activity; and
- Secondary males rated household chores as the second most prevalent activity.

4.2 Active transport

Students reported travel to and from school through three survey instruments:

1. A questionnaire that asked about travel to school on the day of the survey and travel home from school the previous day.
2. A questionnaire that asked typical mode of travel over the school year.
3. Data from pedometer diaries recording how they travelled to and from school each day for the eight days of the study.

Findings from these questionnaires included:

- Approximately 50% of the sample reported no active transport at any time; and
- The percentage of males who reported walking or cycling to and from school on the day of the survey increased with age.



key findings (continued)

4.3 Physical Inactivity and Sedentary Behaviour

4.3.1 Physical inactivity

- Less than one in seven primary school students reported no sport, exercise or dance activities.
- However, approximately one in four secondary males and one in three secondary females reported no physical activity.

4.3.2 Sedentary activities

Sedentary activities, such as watching television or videos, playing computer games, reading, studying or talking on the phone were reported separately for weekdays, Saturday and Sunday. Years 5 to 11 reported duration in hours and/or minutes.

- Secondary school males spent more time than primary school males engaged in sedentary activities during the week;
- Over the weekend, there was little difference for males and females between age groups in sedentary activities (mean hours spent ranged from 17–20);
- On week days, primary school males spent an average of 2.2 hours per day watching TV and primary school females 2.1 hours;
- On week days, secondary school males spent an average of 3.9 hours per day watching TV and secondary school females 4.3 hours;
- Across age groups watching videos during week days ranged from 1.7–3.2 hours and playing computer or video games ranged from 4.3–8.8 hours;
- Across age groups, females spent between 10.2–17.3 hours a week on screen based sedentary behaviours;

- Across age groups, males reported between 14.7–20.6 hours per week on screen based sedentary behaviours;
- Thirty three percent of all males spent 10 or more hours on sedentary behaviours on week days and on weekends; and
- Just under 50% of females spent 10 or more hours on all sedentary behaviours (slightly more than males).

4.4 Attitudes Towards Physical Activity

4.4.1 Motivators to participate in physical activity

- Very high percentage of male and female students agreed that physical activity *keeps me healthy* (over 94% of all students), *makes me feel good about myself*, (over 88% of all students) and *keeps me fit* (over 96% of male students and 95% of all female students);
- Current physical activity level was generally unrelated to strength of motivations but primary students were more likely to agree with *to make my parents/carers happy* (68% of primary students, 56.5% secondary males, 44.7% secondary females);
- Non-metropolitan and metropolitan primary school males had similar attitudes towards different aspects of physical activity;
- More metropolitan primary school females agreed physical activity helped them to *study and learn better* (60.5% of metropolitan compared with 44.4% non-metropolitan) *improved their appearance* (73.8% of



key findings (continued)

- metropolitan compared with 64.0% non-metropolitan) *made their parents/carers happy* (71.4% of metropolitan compared with 59.7% non-metropolitan) and *helped them make new friends* (70.2% of metropolitan compared with 59.2% non-metropolitan);
- Secondary students agree more strongly with *improving my appearance* (over 80.6% secondary students compared with 73.1% primary males and 70.9% primary females);
- More metropolitan female secondary students agreed that physical activity made them *feel good about themselves*, (89.7% of metropolitan females, compared with 82.7% non-metropolitan) *helped them spend time with their friends* (58.2% of metropolitan compared with 46.9% non-metropolitan) and *helped them to make new friends* (64.4% of metropolitan compared with 56.5% non-metropolitan);
- At secondary level three items showed some relationship with activity level – *make me feel good about myself*, *help me spend time with my friends* and *help me make new friends*;
- More males rated higher the role of physical activity in *providing fun* (92.6% primary males, 90.4% primary females, 88.6% secondary males, 80.2% secondary females);
- The link between physical activity and social benefits was rated higher by males (helping to spend time with friends 72.2% primary males, 66.9% primary females, 66.9% secondary males, 56.0% secondary females);
- The level of agreement among females about physical activity providing fun reduced with age

(90.4% primary, 80.2% secondary); and

- More secondary school females agreed with the importance of physical activity in weight loss or weight control (85.6% compared with 74.3% of secondary males).

4.4.2 Barriers to participation in physical activity

The main barriers for primary and secondary students include:

- Current physical activity perceived to be sufficient (78.1% primary males, 77.5% primary females, 79.3% secondary males, 61.0% secondary females);
- No one to be physically active with (19.0% primary males, 14.9% primary females, 17.2% secondary males, 23.1% secondary females);
- A preference for TV/electronic games (30.0% primary males, 15.8% primary females, 18.4% secondary males, 22.7% secondary females);
- Not being very good at physical activity (16.0% primary males, 17.7% primary females, 10.5% secondary males, 21.1% secondary females);
- No parks or sports grounds (16.4% primary males, 13.6% primary females, 11.2% secondary males, 15.7% secondary females);
- Not liking the way being physically active makes them feel (17.7% primary males, 19.5% primary females, 7.7% secondary males, 12.9% secondary females);
- A small percentage of children stated they don't like physical activity (7.0% primary males, 5.4% primary females, 4.0% secondary males, 9.9% secondary females);



key findings (continued)

- Access to sport facilities is relatively unimportant for non-metropolitan students (15.4% non-metropolitan primary males and 15.1% of non-metropolitan primary females compared with 17.1% of metropolitan primary males and 13.0% of metropolitan primary females); and
- The issue of not being very good at physical activity was rated more highly for secondary females (17.7% for primary females, 21.1% secondary females compared to 16.0% for primary males, 10.5% for secondary males).

- 30% of students ate snack foods like crisps;
- 20% of younger (8–11 year-old) and 30% of older (12–15 year-old) students drank soft drinks; and
- 33% of students ate foods from the school canteen.

4.5 Nutrition

4.5.1 Survey participation

A 24-hour food record was completed by 1878 students, 82.6% of the sample participating in the combined survey. The age range for this food record was 8 to 15 year olds. Data were adjusted to represent the age and gender distribution of the WA population in this age range.

4.5.2 Types of food eaten on the day of the survey

- At least 70% of students ate breads or rolls;
- At least half ate breakfast cereals, including muesli and porridge;
- About 90% consumed milk and milk products;
- 75% ate meat, poultry and game products and dishes;
- 70% ate vegetables;
- 55% of males and 60% of females ate fruit;
- 70% ate biscuits, cakes, pastries or pizza;
- 44% of younger (8–11 year-old) and 50% of older (12–15 year-old) students ate confectionery like lollies, chocolates and snack bars;

4.5.3 Food group intake compared to recommended intake

Figure 1: Proportion of recommended amounts of core food groups consumed by males.

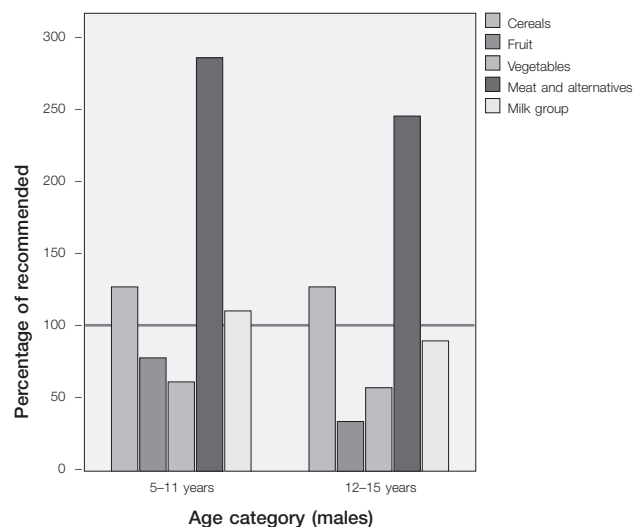
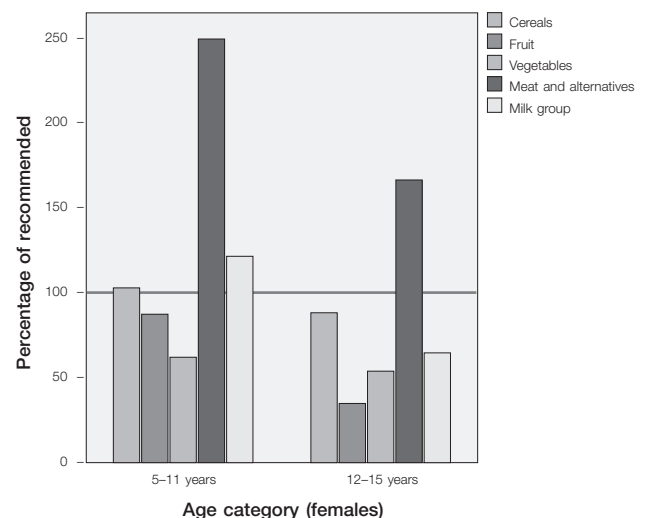


Figure 2: Proportion of recommended amounts of core food groups consumed by females.





key findings (continued)

- Average reported fruit intake fell well short of minimum recommended daily intakes, particularly for secondary school students;
- Average reported vegetable intake fell well short of minimum recommended daily intakes for primary and secondary students;
- Average reported milk and dairy food intake of secondary school females was only two thirds of the amount recommended; and
- Average intakes of meat and alternative foods were substantially greater than the minimum recommended, particularly for the younger age group.

4.5.4 Dietary differences between males and females

Compared to females, males:

- Ate larger quantities of food and beverages (particularly the 12–15 year-old age group);
- Were less likely to eat fruit and confectionery, but more likely to eat meat, poultry and cereal foods (particularly the 12–15 year-old age group);
- Were less likely to eat cakes, biscuits and snack foods (particularly the 8–11 year-old age group); and
- Consumed diets with a higher nutrient density for a number of vitamins and minerals (particularly the older age group).

4.5.5 Dietary difference between metropolitan and non-metropolitan students

Compared to students living in the metropolitan area, students living in non-metropolitan areas:

- Had higher total fat intakes;
- Were more likely to eat fruit, cereal foods and fats and oils; and
- Were less likely to eat meat and poultry, dairy milk, eggs and snack foods.

4.5.6 Changes in diet

Compared to similar dietary surveys in 1985¹ and 1995², the 2003 survey showed:

- Increases in the percentage consuming:
 - Confectionery;
 - Fish and fish products, but only for females; and
 - Snack foods, for males only.
- Decreases in the percentage consuming:
 - Meat and poultry but an increase in the average amount consumed;
 - Eggs;
 - Vegetables;
 - Fruit (particularly among males);
 - Milk and milk products;
 - Fats and oils; and
 - Sugar and sugar products.
- Increases in the amount consumed of:
 - Confectionery; and
 - Snack foods.
- Decreases in the amount consumed of:
 - Vegetables;
 - Eggs; and
 - Fats and oils.

1. Department of Community Services and Health (1988) *National Dietary Survey of Schoolchildren (10–15 years): 1985 no 1-Foods consumed*, AGPS, Canberra.

2. Australian Bureau of Statistics and Department of Health and Aged Care (1999) *National Nutrition Survey Foods Eaten Australia 1995*, ABS cat. no. 4804.0 Australian Bureau of Statistics, Canberra.



key findings (continued)

4.6 Anthropometric Measures

Height, weight and umbilicus waist girth measures were compared with the findings from the 1985 Australian Health and Fitness Survey³. In the 2003 survey:

- Males were taller by an average of 3.8 centimetres;
- Females were taller by 3.4 centimetres;
- Male mean weight increased by as much as 12kg;
- Female mean weight increased by up to 6.6kg;
- Mean increases were 5.1kgs for both males and females;
- Waist girths were larger at all ages;
- Males' girths increased by as much as 10.3 centimetres;

- Females' girths increased by up to 12.1 centimetres;
- Male mean waist girths increased by 5.6 cms; and
- Female mean waist girths increased by 7.4 cms.

Non-metropolitan primary school students on average were taller, weighed less, and had smaller waist girths compared with previous surveys. Differences in physical measurements between non-metropolitan and metropolitan students disappeared by secondary school.

Figure 3: Male and Female Median Waist Girth 1985 and 2003

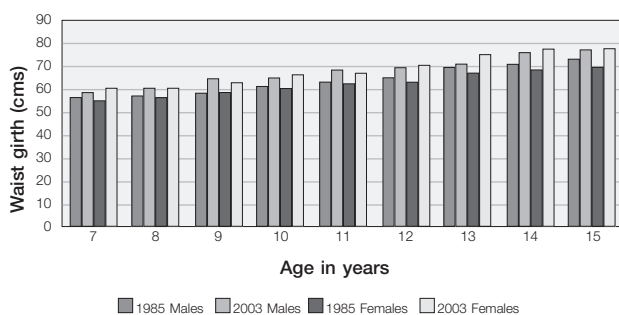
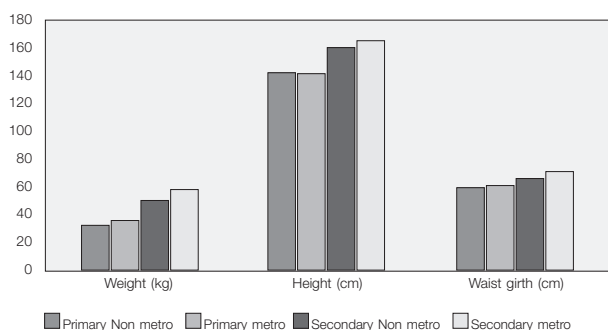


Figure 4: Height, weight, and waist girth for metropolitan and non-metropolitan students.



4.7 Body Mass Index

Body Mass Index (BMI) was derived for each student. This is a height to weight ratio (kg/m^2) widely used as a means of identifying overweight and obesity.

Aside from age, variables found as main predictors of BMI included:

- Lower levels of physical activity;
- Regularly skipping breakfast;
- Eating fast food more than once a week;
- The prevalence of overweight and obesity in 7–15 year-old students increased from 9.3% of males and 10.6% of females in 1985 to 23.1% of males and 30.5% of females in 2003;
- Metropolitan students had higher mean BMIs than non-metropolitan students; and
- Female students had slightly higher mean BMIs than males.

3. Pyke, J. E. (1987). *Australian Health and Fitness Survey 1985*. Parkside, SA: Australian Council for Health, Physical Education and Recreation.



5. recommendations

With consideration of the results of the CAPANS study and existing policies, programs and infrastructure in WA, the Premier's Physical Activity Taskforce recommends:

1. Enhancing the policy and curriculum emphasis on the physical activity and healthy lifestyles program that is delivered in schools with monitoring and evaluation of the educational outcomes in line with other literacy and numeracy outcomes.
2. Implementing a professional learning program and resources for teachers in the K-10 years of schooling, to support the delivery of quality physical activity and healthy eating programs. This will include expanded Fundamental Movement Skills training for K-3 teachers so that all schools have access to trained staff.
3. Initiating communication and mass media campaigns promoting the National Child and Youth Physical Activity Recommendations to parents and to children with an emphasis on decreasing sedentary behaviour.
4. Providing ongoing funding for the monitoring of child and adolescent physical activity levels, nutrition and growth status.
5. Focussing on nutrition at school and ensuring adequate accreditation in all school canteens, and sustained funding of the WA School Canteen Association to administer the accreditation and professional development of canteen staff.
6. Developing a set of resources and a professional development program for teachers around healthy eating habits for life and a corresponding mass media campaign linked to the above physical activity campaign.
7. Implementing professional development of the health work-force to promote physical activity and healthy eating.
8. Increasing the skills and capacity of community sport and recreation service providers to target children's participation needs.
9. Promoting physical activity opportunities both in and outside of school hours with an emphasis on programs which encourage the participation of female secondary students.



A copy of the full report will be available in December 2004. It will be available from the Premier's Physical Activity Taskforce website at <http://www.patf.dpc.wa.gov.au/>

If you require further information regarding this research, please contact:

Ms Jennifer Riatti
Manager, Secretariat
Premier's Physical Activity Taskforce
Tel. (08) 9382 5982

© Government of Western Australia 2004

There is no objection to this publication being copied in whole or in part, provided there is due acknowledgement of any material quoted from the publication.

Research conducted by the University of Notre Dame Australia.

Commissioned by the Premier's Physical Activity Taskforce, Department of the Premier and Cabinet.

This research was made possible by a grant from Healthway and funds from the Department of Health.







Department of Health
Government of Western Australia

premier's
**physical
activity**
taskforce



www.patf.dpc.wa.gov.au