

Nutrition, Physical Activity and Obesity



INTRODUCTION

Current Canadian trends show that a growing proportion of adults and children are becoming overweight and obese.⁶² Obesity is a risk factor for many health problems, including cardiovascular disease, hypertension, type II diabetes mellitus, dyslipidemia, gallbladder disease and cancer.⁶³

Although some people have a predisposition to obesity, other important risk factors, such as lack of physical activity and food consumption patterns, are modifiable.

This section of the report will describe obesity trends and risk factors for obesity, such as diet and physical activity. Data are not always available for Peel or for Ontario. In such instances, Canadian data will be described as the best estimate.

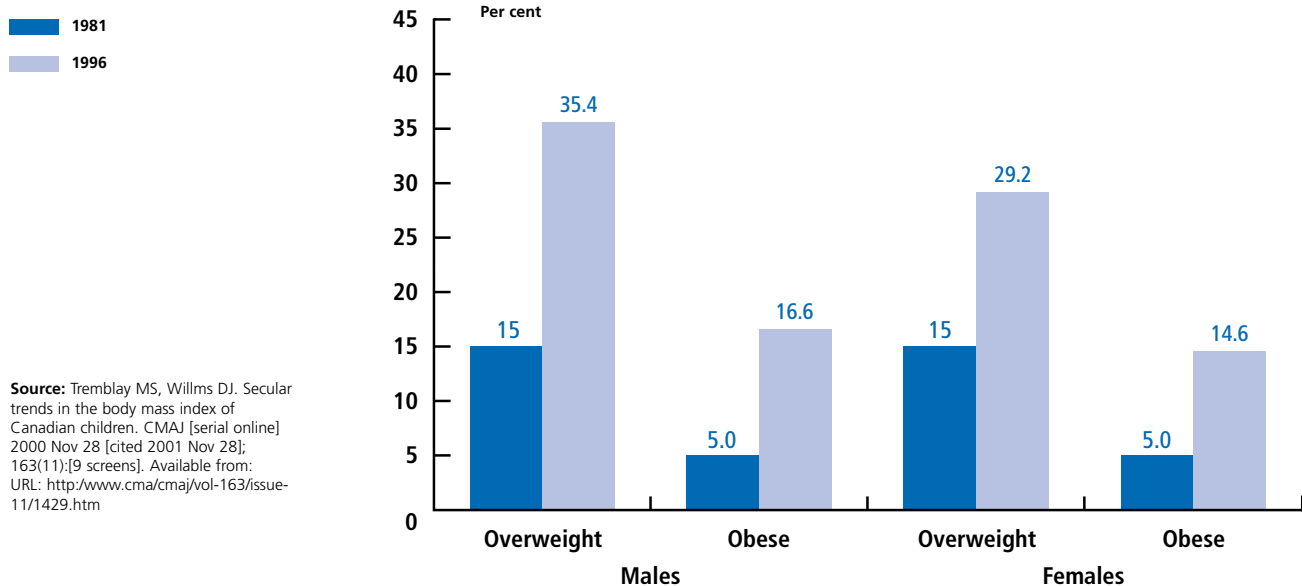
OBESITY

Body Mass Index (BMI) is one measure used to assess weight. The Body Mass Index is an internationally-recognized method used to determine if an individual's weight is within a healthy range. It is calculated by dividing weight in kilograms by height in metres squared (pregnant women are excluded).⁶⁴ In general, an increased BMI is associated with increased health risk.

Body Mass Index data for children are not available for Peel or for Ontario. Data from a national study showed that in Canada as a whole, the prevalence of overweight female children aged 7–13 years increased from 15% in 1981 to 29% in 1996 (overweight = BMI greater than 85th percentile). The prevalence of overweight male children of the same age increased from 15% in 1981 to 35% in 1996. In addition, the prevalence of obesity among children increased from 5% in 1981 to 17% for boys and 15% for girls in 1996 (obesity = BMI greater than 95th percentile) (*see Figure 9.1 on the following page*).⁶⁵

Children who are overweight have an increased risk of becoming an obese adult. They are also at higher risk of early adult mortality and development of early adult illnesses.^{66,67}

Figure 9.1—Prevalence of Overweight and Obese Children Aged 7–13 Years by Sex, Canada, 1981 and 1996

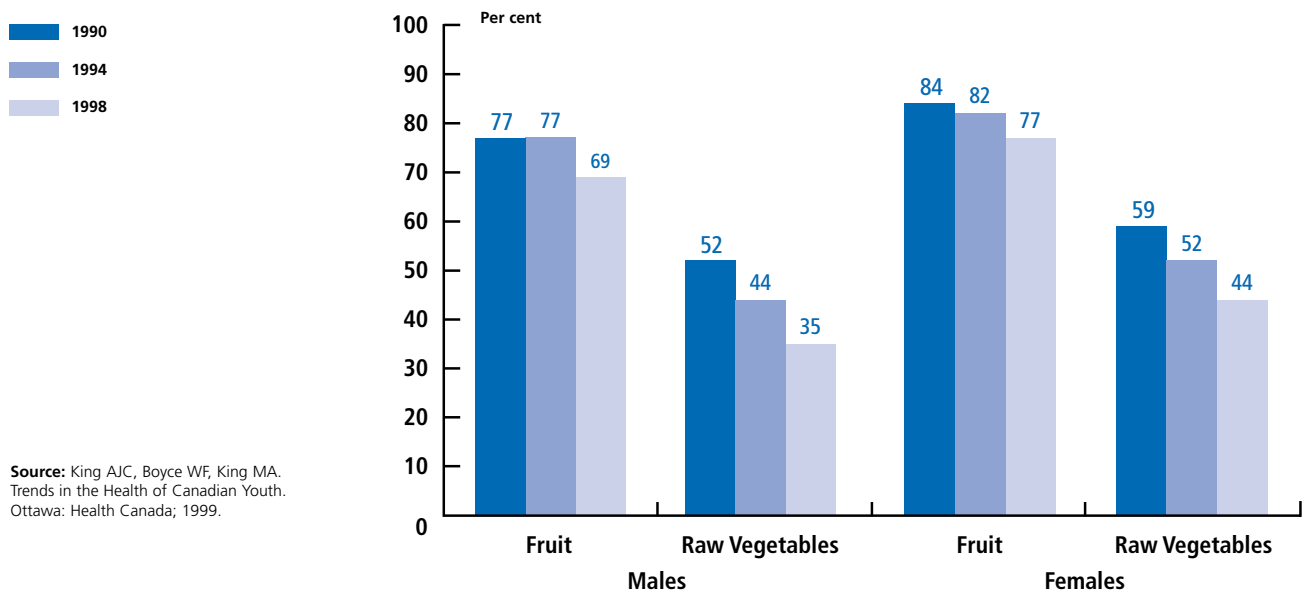


Source: Tremblay MS, Willms DJ. Secular trends in the body mass index of Canadian children. CMAJ [serial online] 2000 Nov 28 [cited 2001 Nov 28]; 163(11):[9 screens]. Available from: URL: <http://www.cma/cmaj/vol-163/issue-11/1429.htm>

NUTRITION

A World Health Organization (WHO) study⁶⁸ collected data on trends in the dietary behaviour of children in grades 6, 8 and 10. Figure 9.2 summarizes information on the proportion of Canadian children in Grade 6 who ate fruits and raw vegetables daily in three surveys conducted in 1990, 1994 and 1998. Although not shown in the graph, data for children in grades 8 and 10 showed similar decreasing trends.

Figure 9.2—Trends in Daily Fruit and Vegetable Consumption among Grade 6 Children by Sex, Canada, 1990–1998



Source: King AJC, Boyce WF, King MA. Trends in the Health of Canadian Youth. Ottawa: Health Canada; 1999.

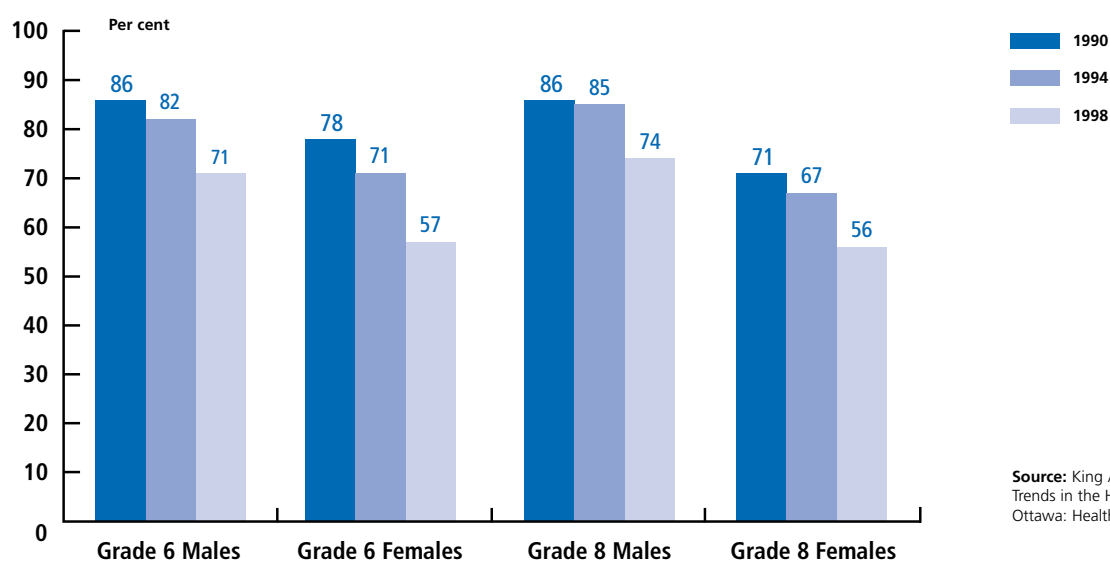
PHYSICAL ACTIVITY

Lack of physical activity has been found to lead to an increased risk of premature death, obesity, high blood pressure, stroke, colon cancer and depression.⁶⁹ Participation in regular physical activity offers many health benefits, including a reduction in the risk of cancer, diabetes, heart disease and osteoporosis, as well as an enhanced feeling of well-being.⁶² While it was once thought the level of activity had to be vigorous and the duration continuous, even moderate levels of physical activity appear to safely produce health benefits.⁷⁰

The information about physical activity in children in this report was drawn from two different surveys: the *World Health Organization (WHO) Cross-National Collaborative Study: Health Behaviours in School Children*⁶⁸, and the Ontario Health Survey (OHS) 1996/97. The WHO study examined trends in health behaviours for Canadian children aged 11, 13 and 15 years between 1990 and 1998. The OHS collected physical activity data for the Peel population aged 12 years and older in 1996/97.

In the WHO study, children were asked how often outside of school hours they exercised until they were out of breath or sweating. Figure 9.3 shows the proportion of children in grades 6 and 8 who exercised at this intensity two or more times per week outside of school hours. The decreasing trend in physical activity between 1990 and 1998 was also seen for children in Grade 10 (not shown).

Figure 9.3—Trends in Grades 6 and 8 Children who Exercise Two or More Times per Week Outside School Hours by Sex, Canada, 1990–1998



Source: King AJC, Boyce WF, King MA. Trends in the Health of Canadian Youth. Ottawa: Health Canada; 1999.

According to the Ontario Health Survey (OHS) 1996/97, 72% of Peel residents aged 12–19 years reported they participated in regular exercise. Regular exercise referred to physical activity lasting more than 15 minutes, at least 12 times in the past 12 months. The rates for males and females were similar. The proportion of residents who participated in regular exercise was highest for the 12–19 year age group and decreased with older age groups.

Tracking the frequency of physical activity does not fully measure the health benefits gained by being active. The Physical Activity Index (PAI) groups activities based on energy expenditure. Energy expenditure is calculated using the frequency and time per session of the activity, and also includes metabolic energy cost. In terms of the Physical Activity Index, nearly one-third (32%) of Peel's youth 12–19 years of age were considered inactive.

SUMMARY

There are no data available for Peel children regarding child obesity, diet or physical activity levels. National data shows an increasing trend in the proportion of overweight and obese children and adults. As of 1996, 29% of female children and 35% of male children aged 7–13 years were overweight. The prevalence of obesity was 17% for boys and 15% for girls in this same age group in 1996.

In 1990, 77% of Grade 6 males and 84% Grade 6 females in Canada reported eating fruit daily. By 1998, this proportion had declined to 69% in males and 77% in females. This finding was similar for children in grades 8 and 10. The decline was also mirrored for raw vegetable consumption.

In 1990, 86% of Grade 6 males and 78% of Grade 6 females in Canada reported exercising two or more times per week outside of school hours. By 1998, this proportion had declined to 71% for males and 57% for females. Similar trends were also seen for children in grades 8 and 10. One-third (32%) of adolescents aged 12–19 years in Peel were classified as inactive according to the Physical Activity Index.