

**HIGHLIGHTS OF THE
NEW BRUNSWICK
NUTRITION SURVEY REPORT
2005**

**Principal Investigator: Dr. B. Christofer Balram
Co-Investigators: Dr. Lita Villalon
Prof. Penny Ericson**

New Brunswick Department of Health and Wellness

Université de Moncton

University of New Brunswick

To obtain additional copies, contact:

Provincial Epidemiology Service
New Brunswick Department of Health and Wellness
P.O. Box 5100
520 King Street, Carleton Place (2nd Floor)
Fredericton, NB E3B 5G8
Phone: (506) 453-3092
Fax: (506) 453-2780

This report is also available online at: <http://www.gnb.ca>, keyword: Health.

INTRODUCTION

The New Brunswick (NB) Nutrition Survey conducted in 1996-97 was the first major nutrition survey in the province since 1972. Results are based on interviews with 1,816 adults aged 18-74 years. The NB Nutrition Survey Report discusses weight status, intake of nutrients and selected foods, contribution of food groups to nutrient intakes, health and nutrition related behaviour, and food security.

This report provides the highlights of findings from the full report, *New Brunswick Nutrition Survey 2005*.

ENERGY AND NUTRIENT INTAKE

- The percentage of energy consumed by all age-sex groups was within the Dietary Reference Intake (DRI) guidelines of 10-35% from protein (average 16.4%), 44-65% from carbohydrate (average 50.6%), and 20-35% from fat (average 31.9%).
- Most men met niacin, phosphorus, iron, and zinc requirements. At least 92% of males aged 19-34 years met the Estimated Average Requirement (EAR) for riboflavin, vitamin B₆, and vitamin B₁₂. Most women met the EAR for niacin, over 90% met the EAR for phosphorus, and over 85% met the EAR for riboflavin and iron.
- Vitamin A inadequacy was similar for both sexes (28% overall) and decreased with age.
- Of adults over 50 years of age, 22% of men and 42% of women did not meet the EAR for vitamin B₆. About one-quarter of women less than 50 years of age did not meet the EAR for vitamin B₆. Inadequate intakes of vitamin B₁₂ were observed for 31% of women and 14% of men over 50 years of age. More women than men failed to meet the EAR for thiamin (22% versus 8%).
- About 42% of women and 52% of men had inadequate intakes of vitamin C.
- A large percentage of adults did not meet the EAR for magnesium (70%).
- Folate intake had the most inadequate intake of all micronutrients, with 90% of men and 97% of women not meeting the EAR.
- Only 18% of adults had met the Adequate Intake (AI) for calcium, and the largest percentage of insufficiencies was among adults over 50 years of age. The mean calcium intakes of all age-sex groups failed to meet the AI.
- Only 1% of adults less than 50 years of age and 10% of those 50 years and over had mean intakes that met the AI for fibre.

- Contributions of protein, carbohydrate and fat to energy intake were similar to other provinces surveyed. Micronutrient intakes across age-sex groups were comparable between provinces.
- Comparisons were made between the NB Nutrition Survey and the Atlantic Canada Region of the 1972 Nutrition Canada Survey. Energy intakes of most age-sex groups decreased. Fat intake as a percentage of calories decreased. Calcium intake decreased for everyone except women aged 20-64 years. Iron intake was comparable, with only the 65-74 year old female age group consuming higher amounts compared to 1972. Vitamin C intake decreased for men 20-39 and 65-74 years of age, but increased for men aged 40-64 years and for women of all age groups. Thiamin intake increased for all age-sex groups.

WEIGHT STATUS AND ITS DETERMINANTS

- According to Canadian Body Mass Index (BMI) standards, 26% of males and 38% of females were at an acceptable weight. Almost half of the men were overweight and 28% were obese. At least one-third of women in most age groups were overweight and 25% were obese. Less than 1% of men and 2% of women were underweight (BMI \leq 18.5).
- Approximately 28% of men had a waist circumference (WC) indicating an intermediate level of health risk and an equal percentage had a WC that classified them at a high level of risk. The percentage of women with an intermediate risk WC was 24% and 34% of females had a high risk WC. WC and overweight increased with age for both genders.
- The percentage of inactive New Brunswickers increased as BMI rose from normal weight to obesity.
- NB adults had similar energy intakes to adults in other provinces surveyed. Energy and fat intakes were comparable across BMI classifications within NB. Socio-economic factors appeared to play a role in some age-sex groups, however the overall effect of these influences was not as definitive as it was for inactivity.

FREQUENCY OF CONSUMPTION OF SELECTED FOODS

- Baked and boiled potatoes were the most consumed vegetable, followed by carrots and green peas.
- Women aged 18-49 and men aged 18-64 years consumed more fried potatoes or chips than most healthy vegetable choices.
- Consumption of beef, pork, processed meat, poultry, and eggs declined with age for both genders. Men aged 18-34 years consumed the most luncheon meats.

- Women ate less fried chicken compared to chicken prepared by other cooking methods, while men ate similar amounts of fried chicken as they did chicken prepared by other cooking methods.
- Both genders ate greater amounts of fried fish than they did fish prepared without fat.
- An average of $\frac{3}{4}$ cup per day of fluid milk was consumed. Milk with 1% fat was used most, followed by skim milk. Men's Milk Product intake decreased with age. Women aged 50-64 years used the least amount of most Milk Products. Women in the oldest age group (65-74 years) consumed many Milk Products in amounts equal to/greater than younger females. All age-sex groups ate more regular versus lower-fat cheese. Women's intake of low-fat ice cream/frozen yogurt/sherbet and cheeses with less than 10% fat increased with age.
- More portions of white versus whole wheat bread were consumed.
- In NB, 73% of adults said they ate take-out food and 69% ate at restaurants at least once per month. One-third of adults ate take-out food at least once per week and 28% ate at restaurants at least once per week. Less than 20% of the population went to a cafeteria monthly.

FOOD GROUPS AND NUTRIENT INTAKE

- "Other Foods" (foods not in the four healthy food groups) provided over one-third of energy intake: added fats contributed 10.8% to total calories; high-fat products (e.g. bakery products, chocolate bars, chips) provided 6.2%; and added sugars/high sugar foods (e.g. candy, soft drinks) contributed 9.6%. Grain Products were the next major energy source (25.5%), followed by Meat and Alternatives (19.3%). Vegetables and Fruit and Milk Products each provided 10% of energy intake.
- Meat and Alternatives accounted for half of protein intake, mostly as red meat. Grain Products provided 20.5% of protein intake, followed by Milk Products (16.5%).
- Most carbohydrate came from Grain Products (40.1%). "Other Foods" accounted for 27.7% of carbohydrate intake, followed by Vegetables and Fruit (18.8%). The amount of carbohydrate from low-nutrient dense/high sugar items (e.g. added sugars, candy, soft drinks) equaled that from Vegetables and Fruit.
- "Other Foods" provided almost half of fat intake (47.9%). Meat & Alternatives were the source of 28.7% of fat, and Milk Products contributed 14.1%.
- Grain Products provided 41.1% of fibre intake, with almost equal amounts from white bread, pasta and rice, and whole grain breads. Vegetables and Fruit contributed a similar amount of fibre (40.1%).

- Milk Products provided over half the amount of calcium. Grain Products accounted for 13.4% of calcium intake, followed by “Other Foods” at 10.6%.
- The largest source of iron was Grain Products (43.7%); cereal was the item providing the most (6.2% from whole grain/high fibre cereals and 13.6% from other breakfast cereals); and pasta and rice were also key sources (7.9%). Meat and Alternatives provided one-third of iron consumption.
- Meat and Alternatives provided 45.8% of zinc intake (27.7% from red meat). Fluid cow’s milk provided almost 10% of zinc consumption.
- Vegetables and Fruit provided less than 40% of vitamin A intake. Milk Products provided 25.8% of vitamin A, mostly as fluid cow’s milk (16.7%). Added fats (including margarine, butter, sauces, etc.) accounted for over 20% of vitamin A consumption.
- Grain Products, Vegetables and Fruit, Meat and Alternatives provided almost equal amounts of magnesium, at about 20% each.
- Grain Products were the main source of thiamin (44.7%). Meat and Alternatives contributed 20%, and the Vegetables and Fruit group was the source of 16.3% of thiamin.
- The primary source of vitamin B₆ was Meat and Alternatives (61.9%). Milk Products provided about one-third of vitamin B₆ intake.
- Vegetables & Fruit and Grain Products each provided about one-quarter of folate intake. The amount contributed by Vegetables & Fruit was slightly higher, but this survey predated the increased amounts of folate present in flour and pasta after the newer fortification regulations.
- Vegetables and Fruit provided over half of vitamin C intake (57%). The “Other Foods” category followed the Vegetables and Fruit group in provision of vitamin C, mostly in the form of sweetened drinks/soft drinks, chips and other high fat/salty foods, and fried potatoes.

NUTRITION AND HEALTH ATTITUDES

- With the exceptions of smoking and alcohol/drinking too much, women were more likely to indicate that any of the risk factors listed caused heart disease. Both genders in the 65-74 year age group were least likely to indicate that any of the factors were major contributors to heart disease. Lack of exercise was named as a risk factor by 39% of men and 43% of women (this choice increased with age for both genders). Over one-third of adults (35%) believed stress/worry/tension could lead to heart disease. Approximately 38% of men and 48% of women felt that dietary fat was a major cause of

heart disease. Poor eating habits were considered a risk factor by 22% of men and 30% of women. Overweight/obesity was listed as a major cause of heart disease by 21% of men and 28% of women.

- Factors most likely to influence food choices included: maintaining or improving health (65%), weight gain (46%), and heart disease (40%). Women were more likely to report choosing or avoiding certain foods based on health concerns. Selection of foods according to health concerns increased with age for women. Men in the 18-34 year age group were least likely to be influenced by most health concerns when selecting foods.
- Only 7% of men and women reported that they were advised to lose weight by a health professional. Approximately 33% of men and 59% of women stated that concerns about weight influenced their food choices. Despite the percentage trying to avoid weight gain (72% of males; 61% of females), the numbers are less than those classified as overweight and obese. Although excess weight is a greater problem among men, fewer men claim to be influenced by this when selecting foods.
- When selecting foods, 40% of men and 59% of women considered nutrient content. Concern about nutrient content increased with age for both genders. For both sexes, fat content was of most interest (52% of men; 72% of women). The next most important item for women was unsaturated fat content (60%), followed by fibre (54%), and avoiding saturated fat (53%); for men it was avoiding cholesterol (41%), fibre content (39%), and unsaturated fat content (39%). Sugar content was least likely to be selected by both genders.
- Women were more likely than men to indicate that any of the proposed eating habits were ways to eat healthier. The most popular recommendation was decreasing saturated fat intake (48%), followed by choosing a diet with plenty of fruits and vegetables (35%).
- The greatest percentage of women said they got a lot of nutrition information from books (32%), food labels/packages (31%), and newspapers/magazines (29%). The largest percentage of men said dietitians provided a lot of nutrition information (16%), followed by food labels/packages (15%).
- Almost three-quarters of adults said they had heard of/seen Canada's Food Guide to Healthy Eating. Men were less likely to have heard of the food guide than women (61% versus 84%). Younger adults (aged 18-49 years) of both genders were more likely to have heard of Canada's Food Guide to Healthy Eating. Women's most common use for the food guide was planning/choosing meals, especially women aged 35-64 years (26%). Planning/choosing meals was men's most popular use of the food guide, although less than 8% used it for this.

FOOD SECURITY

- Approximately 2% of those who responded to this section of the survey stated that they had visited a food bank or soup kitchen within the past month.
- Approximately 97% of respondents reported that they always had enough food, 2% said sometimes there was not enough food, and 1% stated often there was not enough food.
- The greatest percentage of adults in the lowest income group were the youngest men and women (aged 18-34 years), while the overall low income group was predominated by the oldest adults (aged 65-74 years), in particular women.
- Adults in the lowest income category had the lowest mean intakes of all nutrients. The “lower” income category falls between the lowest and middle income earners; this group had lower intakes of calcium and magnesium than people with higher incomes, but their intakes of other nutrients were comparable or higher.

CONCLUSIONS

- A large quantity of carbohydrate intake was from sugars, high sugar/low nutrient dense foods, and refined grain products. Consuming a greater percentage of carbohydrate in the form of more nutritious whole grains, vegetables and fruit may improve the intake of nutrients New Brunswickers are not getting enough of.
- Inadequate intakes of vitamin A, vitamin C, magnesium, folic acid, calcium and fibre, suggest New Brunswickers do not eat adequate amounts of low-fat milk products, vegetables and fruit, and whole grain products.
- Many adults over 65 years of age, especially women, need to increase their intake of vitamins B₆ and B₁₂. Many women did not meet the EAR for zinc and thiamin, and women under 50 years of age were less likely to be meeting the EAR for iron. Thus, older adults and women in general may benefit from eating more whole grains, meat, shellfish, and meat alternatives such as legumes and nuts. Higher consumption of low-fat Milk Products, as previously recommended, could also improve vitamin B₁₂ intake.
- Adults in the lowest income households are at greatest risk of suffering the health-related consequences of being deficient in micronutrients.
- The results show that levels of activity need to improve for adults of all ages, across all socio-economic levels. It is recommended that future studies take a closer look at physical activity levels to investigate this concern more closely.
- To improve consumption of health promoting nutrients, New Brunswickers need to limit intake of “Other Foods”, while increasing Vegetables and Fruit, choosing more whole

grain foods from the Grain Products group, including a wider variety of healthy choices from the Meat and Alternatives group, and meeting the recommended number of servings of Milk Products.

- There appears to be a gap between knowledge and action for some key lifestyle and nutrition recommendations. Strategies must be designed not only to increase nutrition knowledge, but also to educate how to translate this into action. To have an impact, it is critical that the nutrition interventions created to support these recommendations be part of a coordinated multi-sectorial strategy to promote the implementation of positive lifestyle changes for disease prevention.