# Chronic Health Conditions among Canadian First Nations

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In spite of Canada's health status being among the top in the world, the First Nations health in communities across the country is comparable to those of a developing nation. Chronic conditions have caused a direct impact on First Nations morbidity and mortality rates and grown into a significant health problem in their communities; close to one-third of first nation's people over 15 years of age have been told they have a chronic health condition by a health practitioner (Reading, n.d., p. 79). Chronic conditions, which develop over a long period of time, are the result of modifiable and non-modifiable risk factors from individuals and the environment (Earle, 2011). Some of the leading chronic conditions are diabetes, cardiovascular disease, and obesity. Social, political, economic and environmental factors, also known as the determinants of health, are responsible for the increased risk factors in First Nations communities (Earle, 2011). These risk factors, which will be discussed later, all contribute to high blood glucose levels, abnormal body weight and blood lipids, and high blood pressure (Earle, 2011). Chronic conditions can be a heavy burden on individuals, families and communities and have an effect physically, emotionally and financially. Those with chronic conditions are more likely to miss work and wages from sick days for health-care appointments and incur other extra expenses such as medications, transportation, medical supplies and special foods (MacEwan, Clow, & Haworth-Brockman, 2011, p. 3). The purpose of this essay is to prove that through proper nutrition, lifestyle changes, education and community support, some chronic conditions affecting First Nations communities in Canada such as obesity, diabetes and cardiovascular disease can be controlled or prevented.

Obesity is a growing epidemic across Canada and a significant contributing factor to chronic disease. Obesity is measured through body weight and body mass index (BMI) which is

a ratio of height to weight. The BMI values are categorized by, underweight <18.5, normal weight 18.5-24.9, overweight 25-29.9 and obesity >30. Obesity is further divided by the World Health Organization into three classes based on the health risks associated with a BMI of over 30: "class I /BMI >30; class II BMI >35; class III BMI > 40" (MacEwan et al., 2011, p. 7). According to a report by CBC called "live right now" The Canadian government outlines obesity as a BMI over 30 which affects over 38% of First Nations in Canada living off a reserve, compared to 23% of the general population (Tremonti, 2012). Another report by the First Nations Regional Longitudinal Health Survey reveals that on-reserve First Nation's people also have increased obesity rates, 31.8% of adult men, 14% of youth, 41.1% of adult women and 36.2% of children are considered obese by BMI standards (MacEwan et al., 2011, p. 4).

Two important factors that contribute to obesity in Canadian First Nations are inactivity and poor diet. Reduced physical activity, according to Statistics Canada 2001, results from "the loss of First Nations traditional lands and practices, such as hunting, trapping and fishing, a higher proportion of Aboriginal people have begun to lead more sedentary lifestyle, an adoption of a non-traditional (or so called Western) diet by First Nations people after colonization. As a result of these and other socio-economic changes, such as extreme poverty, the percentage of inactive and obese individuals in First Nations communities has increased" (Reading, n.d., p. 71). Lifestyle changes, urban centers and loss of traditional physical activities leaves little to no place for physical work except for routine physical activities which can be restrictive and costly (Ghosh, 2012, p. 168). Educating First Nations people on the importance of exercise and active living by integrating healthy interventions in the community can help prevent obesity (Reading, n.d., p. 72).

Diet changes after colonization contribute significantly to the growing obesity epidemic. Traditional First Nations diets were full of protein and low in carbohydrates and fat (Earle, 2011). "Research in the Arctic among First Nations, Dene/Métis, and Inuit has shown that on days when more traditional food was consumed, intake of protein, riboflavin, iron, zinc, copper, magnesium, manganese, phosphorus, potassium, selenium and vitamins A, D, E, and B-6 was significantly higher than on days with greater market food consumption. In addition, individuals ate significantly less fat, carbohydrates and sugar" (Earle, 2011). First Nations options of healthy choices for physical activity and diet are affected by colonial stereotypes and the current socio-economic environment (Ghosh, 2012, p. 168). The cost increases and the access decreases to fresh nutritional food the further north you go, making healthy nutritional choices on a low income difficult. Difficulties implementing nutritional diets can be summed up by one First Nations community member stating "I cannot make ends meet till the end of the month to make sure I have foods…I am in a set income. So I have to manage everything out of that. I don't know whether it is on the diet or not on the diet. I just cut down, that is all I do" (Ghosh, 2012, p. 168).

Diabetes mellitus is an endocrine disorder that is the result of an absence or deficiency of insulin, characterized by increased blood glucose levels and long-term complications (Ghosh, 2012, p. 160). The three main forms of diabetes include Type 1, which results in the body not making enough or any insulin causing higher levels of glucose in the blood. Type 2 is caused by an insulin deficiency where the body produces insulin but is unable to use it effectively resulting in hyperglycemia, and the third type is gestational diabetes which occurs during pregnancy (Ghosh, 2012, p. 160). According to Health Canada the rate of diabetes among First Nations

communities in Canada has skyrocketed to three times that of the national average in all age categories (MacEwan et al., 2011, p. 4).

Type 2 diabetes is the most prevalent in First Nations communities where the epidemic of this type of diabetes can be prevented by controlling the modifiable risk factors. Modifiable risk factors are those that an individual can manage including obesity, smoking, poor nutrition, increased stress and lack of physical activity (Ghosh, 2012, p. 161). These factors tend to result from urbanization and structural inequalities between socio-economically marginalized First Nations people (Ghosh, 2012, p. 162). Other risk factors for diabetes that an individual cannot control or are non-modifiable are things such as age, ethnicity, genetic predisposition and family history (Ghosh, 2012, p. 161). Type 2 diabetes is classified as a chronic condition because the complications due to the body's insulin resistance are ongoing. The body needs insulin to facilitate glucose into the cells to be used for energy. When glucose cannot be transported into the cells and used for energy, it builds up in the blood and causes damage to the blood vessels and nerves leading to further complications (Reading, n.d., p. 80). Common complications and comorbidities of Type 2 diabetes are dyslipidemia, hypertension, and microvascular disease that results in end-organ injury to the eyes, kidneys, peripheral nerves and heart (Ghosh, 2012, p. 161).

Community based prevention strategies among the high risk first nations population are essential to reducing health discrepancies (Harris, Bhattacharyya, Dyck, Hayward, & Toth, 2013). Current diabetes management strategies that include support, treatment and education do not complete the needs of urban First Nation's people. Public health is limited in culturally specific care and support, leaving structural factors such as political and socio-economic conditions beyond the individual's control (Ghosh, 2012, p. 172). The most important

interventions for reducing diabetes incidence are to address the cause and improve social determinants such as access to education, health services, economic development, employment and housing; this can improve the outcome of equities in Frist Nation's health. (Ghosh, 2012, p. 172).

Cardiovascular disease (CVD) is an assortment of diseases that affect the circulatory system and/or heart. The most common type of CVD has three different names; coronary artery disease, ischemic heart disease, or coronary heart disease (Reading, n.d., p. 87). This condition is due to fatty deposits attaching to the cells that line the wall of the hearts coronary arteries. When these deposits build up the artery becomes narrow and hard from atherosclerosis. This causes ischemia or a decrease in the oxygen blood supply to the heart muscle ending in permanent damage. If atherosclerosis completely blocks the artery, it will lead to a myocardial infarction possibly resulting in death (Reading, n.d., p. 87). CVD has the largest economic burden and is the leading cause of death in western countries. First Nations people experience increased rates of CVD resulting from socio-economic and lifestyle changes (Reading, n.d., p. 87).

Compared to the general population, Canadian First Nations have higher incidence rates of heart disease and stroke in all major age-sex groups (Heart and Stroke Foundation [H&S], 2014). Over the last 40 years CVD rates in First Nations people has risen five times higher than that of the general Canadian population (Earle, 2011, p. 2)."Political, social, and economic changes experienced by Aboriginal people, including urbanization and "westernization" are thought to have resulted in more sedentary lifestyles and more calorie dense/nutrient poor diets, contributing to the increase in the prevalence of heart disease" (H&S, 2014). A large percentage of First Nations people fall into the low socio-economic status category, which reportedly

declares inadequate access to health care (H&S, 2014). “Lower socioeconomic status has been consistently associated with smoking, poor diet, significant differences in food expenditures, overweight, and physical inactivity” (H&S, 2014). These are all risk factors associated with cardiovascular disease. A lack of access to health care and nutritious food is due to increased food costs, low-income, and limited health care options Therefore, First Nations living on-reserve are less likely to receive early routine testing for heart disease, which results in delayed treatment and missed health benefits (H&S, 2014).

This essay outlined three of the chronic conditions causing an epidemic across First Nations communities in Canada. Changes reviewed such as increased physical activity, proper nutrition, lifestyle changes, education and community support, are all positive ways for chronic conditions to be controlled and prevented. Effort for prevention and treatment should focus on educating the community and individuals about risk factors, healthy options and importance of physical activity. An individual with a chronic condition should be able to control and self-manage their disease through proper treatment/care plan, education about the condition, monitoring and managing the signs and symptoms. Active participants in the decision making process with their health care team and an ability to manage the conditions impact on their emotional, physical and social life (Harris et al., 2013). Communities can help by offering early screening for diabetes and cholesterol at local health centers every 1-2 years, promoting physical activity, and providing accessible support systems for individuals or families (Harris et al., 2013). The goals for promoting lifestyle changes and preventative measures in First Nations communities should be based on improving quality of life, addressing health care delivery approaches, examining poverty and access to educational opportunities, and challenging the

growing number of obstacles that communities face to help promote healthy living in future generations (Reading, n.d., p. 3).

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