Background to this Project
In 1996, the prevalence of overweight in Canadian boys was 33% and in girls was 27% (Tremblay & Willms, 2000). The corresponding figures for obesity were 10% and 9%. Childhood obesity can carry with it negative effects on self-esteem and body image. In addition, obese children are prone to high blood pressure, high levels of fat in the blood, orthopaedic complications, gallstones, and breathing difficulties. Insulin resistance syndrome—a clustering of cardiovascular disease risk factors—has been identified in obese children as young as five years of age (Young-Hyman, Schlundt, Herman, De Luca, & Counts, 2001).

Obese children will likely become obese adults, with increased risk of early illness or death from heart disease, diabetes, and certain cancers (Freedman, Dietz, Srinivasan, & Berenson, 1999). The incidence of Type II diabetes, until recently almost exclusively an adult-onset disease, has dramatically increased among children as the prevalence of childhood obesity has risen (Fagot-Campagna et al., 2000).

High Weight among Aboriginal Children
There are pronounced differences in the rate of obesity among different racial-ethnic groups (De Garine & Pollock, 1995). The reasons for these differences are unclear, but are likely to be complex and to result from economic, social, and cultural factors that directly or indirectly relate to body weight.

In Canada, overweight is thought to be more prevalent in Aboriginal children than in the non-Native population (although we lack national surveys to corroborate community-level observations).

Despite the evidence for higher levels of obesity, we do not have good quality data on the dietary and physical activity patterns of Aboriginal children as related to body weight. We also have limited knowledge about the sociocultural factors that influence diet and physical activity in Aboriginal children.

In addition, we lack information about the ecological factors that contribute to high weight in Aboriginal communities. If Aboriginal children’s environments are "obesogenic," then understanding, measuring, and altering those environments are critical to reducing the prevalence of obesity. The environment encompasses not just the physical environment (such as the layout of communities), but also the economic and social organization and cultural values.

For these reasons, obesity research in Aboriginal communities must not only focus on energy intake and physical activity in children, but must also examine the economic, social, and cultural context of obesity.

The Cree in James Bay Quebec
The Cree live in nine communities that are either rural or remote. Historically, the Cree were hunters, fishers, and trappers. However, since the late 1970s, the lifestyle of the people has changed dramatically, with a marked decrease in physical activity and a change in diet—largely to market food.

The Cree consider traditional food health promoting, but the lack of access to it (for economic and environmental reasons) forces many people to consume less nutritious market food. Perhaps because of this dramatic change in lifestyle, Type II diabetes is prevalent in adults and is also seen in children.

Understanding the Reasons for High Weight in Cree Children
Using my training in anthropology and my experience as a community nutritionist at the University of Alberta, I am trying to develop a better understanding of the weight of Cree children. This understanding could lead to effective and culturally sensitive interventions to prevent and treat obesity.

Part of my project included developing a database to document the early childhood growth of more than 2,000 children in the region. This data will help us understand the biological reasons that children grow the way they do. For example, although our analysis is still at an early stage, we have found that bottle-feeding appears to contribute to heavy weight in babies.

Many Cree people have helped me understand their culture. One insight I have gained is that community members may not recognize heavy children as having a health problem. One reason is that the Cree word for health—miyupimaatissium—is not comparable with a strict biomedical model of health as the absence of disease.

Many Cree see fat in food as nourishing and consider carrying extra weight as a sign of robustness and strength. Elders, in particular, might prefer larger body sizes because they associate thinness with infectious diseases and tuberculosis.
If Cree people have a societal ideal of a larger body size, they might consider a heavy child sturdy rather than overweight. The result is that people in this culture might be less motivated to lose weight or to be thin for the sake of appearance.

Effective programs to prevent high weight in Cree children, therefore, must respect and be sensitive to these linguistic and cultural issues. For these reasons, I, along with Cree community researchers, are trying to identify the local belief systems and terminology by which Cree people label and interpret health problems and to find ways to discuss high weight in children using appropriate language.

Because of the strong desire of the Cree to improve the health of their people, I believe that our research will improve the understanding of the complex problem of childhood overweight. I hope to expand this work to examine the diet and activity levels of children and the existing barriers and incentives to healthy lifestyles. Only after we gather all this information, can interventions be designed, implemented, and evaluated.

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