**Employer’s Edge Nutrition Program**

**Week 1: A Lifetime of Nourishment**

Food and the human body are made of the same materials arranged in different ways. These materials or nutrients are: Water, Carbohydrate, Protein, Fat, Minerals and Vitamins. These nutrients are indispensible to the body’s functioning and are obtained from the foods we eat. These six nutrients perform three major functions: providing energy, building and repairing body tissue, and regulating body functions, among others. We will learn about these nutrients in detail throughout the program.

The amount and quality of the foods you eat are so important because these foods literally become a part of you. You are, essentially, what you eat.

The body uses the nutrients from food and rebuilds itself. Every cell in your body is being reconstructed with new materials every day!

* The cells in your digestive track are replaced every 3 to 4 days
* Red blood cells are replaced every 120 days
* All of the protein in muscle cells is replaced every 120 days
* All the protein in the brain is replaced twice a year
* Even the protein in bone structure is completely replaced every 3 to 4 years.

(Source: WellAssured guide to Better Nutrition)

So you can see how important it is to obtain enough nutrients to support energy as well as cell rejuvenation.

**The food energy link**

What we eat provides the source of **all** energy in our bodies. So what you choose to fuel yourself with is of utmost importance! Your body has a lot of work to do and food provides:

* Fuel to keep the brain functioning: Thinking, decision making, productivity and interacting with others will be enhanced when adequate energy is supplied.
* Energy to extract nutrients from food through digestion and distribute the nutrients throughout the body.
* Fuel to maintain your body temperature at a healthy level (98.6F).
* Energy to perform every day activities like walking, exercising and/or working
* Nutrients to replace and repair muscles, skin, bones, and organs.

Therefore, the quality of nutrients you provide your body with have a huge impact on your health today and in the future. You have more control over your health than you think.

Despite how lucky we are to have access to healthy foods that provide nourishment to our bodies, we are still an unhealthy nation. Why is this so? Well, it is likely due to the changes in our eating habits over the past century. We have substantially increased our portion sizes and in turn our intake of fat, increased our intake of sugar, salt, meats, and of course, packaged and highly processed foods. With our fast paced lifestyles it has become second nature to eat fast or convenience foods that may taste good but are not so good for us. At the same time we have decreased our intake of fresh fruits and vegetables, whole grains, and fibre which are major sources of vitamins and minerals that fight disease and give us energy. That is why with our modern diet we are seeing a large increase in nutrition-related diseases.

**What are nutrition-related diseases?**

Nutrition related disease can develop when our immune systems are not functioning at optimal levels and our body is experiencing inflammation as a result of poor diet. Some nutrition related diseases include:

Heart Disease

Cancer

Stroke

High Blood Pressure (Hypertension)

Diabetes

Obesity

These diseases are some of the major leading causes of death in Canada and the risks for developing these diseases can greatly be reduced by good nutrition and exercise.

**Our current situation in Canada:**

* According to Statistics Canada, a shocking **59%** of Canadians are currently ***overweight or obese*** – that’s almost 6 in 10 adults who carry around extra weight every day.
* Five million Canadian adults have ***high blood pressure***, representing 22% of the adult population.  (Heart and Stroke Foundation, 2008)
* It is estimated that as many as 10 million Canadian adults have a ***cholesterol*** level higher than the recommended target (that’s 40% of the population!) (Heart and Stroke Foundation, 2008)
* More than one-quarter of Canadians ages 31 to 50 get more than 35% of their total calories from ***fat***, the threshold beyond which health risks increase.
* Over 2 million Canadians have ***Diabetes***. (Canadian Diabetes Association, 2008)
* An estimated 166, 400 new cases of ***cancer*** and 73,800 deaths from cancer will occur in Canada in 2008 (Canadian Cancer Society, 2008)

**Nutrition Matters – to accompany the “fill in the blank TOP 10 FOODS”**

**Read the information sheets for the answers. Choose the most interesting facts and make it your own!**

**Obesity:** Excess body fat, combined with a high intake of highly refined foods and saturated fats, and lack of regular exercise, contributes to serious disease risks such as those listed above. Reducing your weight through good nutrition and exercise will greatly reduce your risks.

**High Blood Pressure:** High salt intake and excess calories increase your risk for high blood pressure. Exercising, eating more fruits and vegetables, achieving a healthy weight and, cutting down on salt will lead to lower blood pressure for most people.

**Stroke and High Cholesterol:** Blood clots are more likely to form in arteries damaged from a diet high in saturated fat and cholesterol. Good eating habits, including more fruits and vegetables, and whole grains will lower your risk of stroke.

**Heart Disease:** Heart disease is a leading cause of death in Canada. Increased physical activity, weight management, choosing healthy fats (unrefined vegetable oils, unsaturated omega 3 fats) in place of unhealthy fats (saturated fats and cholesterol), and a high-fibre diet including more fruits and vegetables, whole grains, nuts, and legumes will substantially reduce risks.

**Diabetes:** Excess body weight is a main factor in type 2 diabetes. A good diet, balanced blood sugar levels, regular exercise, choosing healthy fats, and avoiding a high intake of refined carbohydrates, are keys to preventing and managing diabetes.

**Cancer:** poor dietary habits are a major contributor to the development of many cancers. More than one third of all cancer is caused by poor nutrition. Eating a nutritionally sound diet, especially more fruits and vegetables will help protect you against cancer.

Throughout the program you will learn more in-depth about what foods to eat and lifestyle changes that will help reduce your chances of developing these chronic conditions throughout the program. The more you know about nutrition, the healthier choices you can make, and the better you can care for yourself and your family.

***Go over handout: “Assess your eating habits” to get participants thinking about where their nutritional habits are now.***

**Know your Numbers!**

Weight, BMI, Blood Pressure, Waist Girth, Body Fat, Blood Sugar

Being overweight or obese increases your risk for high blood pressure, high blood cholesterol, heart disease, stroke, diabetes and some types of cancer, arthritis, and breathing problems. A healthy weight is key to a long, healthy life.

**There are three methods that are commonly used to assess your risks of developing the above chronic diseases:**

1. **The Body Mass Index or BMI**. BMI is a mathematical formula that takes into account both a person’s height and weight. BMI equals a person’s weight in kilograms divided by height in meters squared. Luckily for you, the chart has already done the calculation. All you have to do is find your height and follow along the same line to your weight to find your BMI. Use the BMI handout provided to calculate your BMI.

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| --- | --- | --- |
| **Classification** | **BMI Category**  | **Risk of developing health problems** |
| Underweight | <18.5 | Increased |
| Normal Weight | 18.5-24.9 | Least |
| Overweight | 25.0-29.9 | Increased |
| **Obese class I** | 30.0-34.9 | High |
| **Obese class II** | 35.0-39.9 | Very High |
| **Obese class III** | >=40.0 | Extremely High |

*(Health Canada, 2009)*

2. **Waist Circumference (WC):** reflects the degree of visceral fatness in proportion to body fatness.

The WC measurement is an indicator of health risk associated with abdominal obesity. Excess fat around the waist and upper body (also described as an "apple" body shape) is associated with greater health risk than fat located more in the hip and thigh areas (described as a "pear" body shape).

A WC measurement of 102 cm (40 in.) or more for men, and 88 cm (35 in.) or more for women, is associated with an increased risk of developing health problems such as Type 2 diabetes, coronary heart disease and high blood pressure. As the cut-off points are approximate, a WC just below these measurements should also be taken seriously. In general, your risk of developing health problems increases as your WC measurement increases above the cut-off points.

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| --- | --- |
| **Waist Circumference** | **Risk** |
| **Men = or >102 cm (40 in)** | Increased risk of developing health problems |
| **Women = or > 88cm (35 in)** | Increased risk of developing health problems |

**3. Disease risk profile:** takes into account whether a person’s blood pressure, cholesterol levels, and blood sugar levels are at increased levels; whether the person smokes; and the amount of body fat they are carrying. The more risk factors and the greater the obesity, the greater the urgency to control what you are putting into your body.

Do what you can on your own and ask your doctor to take your body fat, blood glucose level, cholesterol (HDL and LDL) and blood pressure to get an idea of where you stand. If you have a gym membership, ask a personal trainer to do your measurements. Some will do it for free, or you can pay to have a body composition and lifestyle assessment test. The important thing is that you know your numbers and potential health risks so that you can begin to make changes and reduce your risks.

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| --- | --- |
| **Blood Pressure****Classification** | **Blood Pressure Value (mmHg)** |
| **Normal Blood Pressure** | 120/80 mmHg |
| **High Normal Blood Pressure** | 130-139/85-89 mmHg |
| **High Blood Pressure** | 140/90 mmHg |

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| --- | --- |
| **Cholesterol and Triglyceride Classification** | **Value** |
| Total Cholesterol (should be) | Less than 5.2 mmol/L |
| LDL Cholesterol (should be) | Less than 3.5mmol/L |
| HDL Cholesterol (should be) Men | Higher than 1.0 mmol/L |
|  Women | Higher than 1.3 mmol/L  |
| Total Cholesterol/HDL Cholesterol ratio | Less than 5.0 mmol/L  |
| Triglycerides | Less than 1.7 mmol/L |

**Blood Sugar and Diabetes**

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| --- | --- | --- |
| **Blood Sugar** | **Value** | **Diabetes Risk** |
| **Fasting Plasma Glucose**  | >= 7.0 mmol/L | Indicates Diabetes |
| **Causal Plasma Glucose**  | >=11.0mmol/L | Indicates Diabetes |

*(Source: Clinical Practice Guidelines 2008)*

***See Handout: Know your numbers. Inform them that there is a spot on the sheet to record their numbers. Encourage participants to find out their numbers at their Doctor`s office so they can be aware of their health risks.***

**Healthy Lifestyle Changes**

1. Have breakfast every day. It helps get your metabolism going early and prevents over eating later in the day.
2. Try eating fruits and vegetables at all meals and as snacks
3. Increase your physical activity to give you more energy and decrease your health risks for chronic diseases.
4. Make sure you are getting enough water! In short, water is an essential nutrient, it is a necessary component to the metabolic process, and it keeps your skin looking young and vibrant. So go after those 8 glasses of water a day!

These are just some examples of positive lifestyle changes. They are not extreme, like fad diets, cutting out entire food groups, or just eating one kind of food. You want to include a wide variety of foods in your diet to ensure you are getting all the nutrients you need for your body to be healthy. This program will educate you on what you can do nutritionally to be the healthiest person you can be.