**Week 2: Supercharge your Metabolism!**



**ASK participants to bring food label for next week!**

**The Body’s Energy Balance**

What happens in your body when you eat too much or too little food? When more food energy is consumed than is needed, excess fat accumulates in the fat cells in the body’s adipose tissue where it is stored. When energy supplies are low, stored fat is then withdrawn. The daily energy balance can therefore be stated as such: Change in energy stores equals food energy taken in minus energy spent on metabolism and muscle activities. More simply:

***Changes in energy stores (fat loss) = energy in – energy out.***

Too much or too little fat on the body today does not necessarily reflect today’s energy budget. Small imbalances in the energy budget compound over time.

**ENERGY OUT**

* Basal metabolic Rate: the energy your body burns for breathing, circulating blood, adjusting hormone levels, and growing and repairing cells. Accounts for 60% of your total caloric expenditure.
* Food Processing:Digesting, absorbing, transporting and storing food consumed also burns calories. This accounts for about 10 percent of the calories used each day
* Physical Activity: You can control the number of calories burned depending on the frequency, duration and intensity of your activities

**ENERGY IN**

* Food
* Beverages
* ***When Energy in is less than energy out you can expect weight loss.***

**Basal Metabolic Rate (BMR)**: Since it accounts for 60% of your total caloric expenditure, let’s take a closer look at factors that affect your BMR.

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| --- | --- |
| **Factor** | **Effect on BMR** |
| Age | BMR is higher in youth; as lean body mass declines with age, the BMR slows. Continued physical exercise may prevent some of this decline |
| Height | Tall people have a larger surface area which allows more energy to escape as heat so their BMR is higher |
| Growth | Children and pregnant women have higher BMRs |
| Body Composition | The more lean tissue, the higher the BMR. A typical man has greater lean body mass than a typical woman, making men’s BRMs higher |
| Fever | Fever raises BMR |
| Stress | Stress hormones sometimes raise BMR |
| Environmental Temperature | Adjusting to either heat or cold raises BMR |
| Fasting/starvation | Fasting/starvation hormones lowers the BMR |
| Thyroxine | The thyroid hormone thyroxine is a key BMR regulator; the more thyroxin produced, the higher the BMR |

**Food and Metabolism**

WHEN you eat and WHAT you eat can also have an effect on your metabolism. What are the best ways to get your body burning at an optimal rate?

1. WHEN you eat: Eating 5-6 small meals per day. Your metabolic rate is the pace at which your body burns fat and food for energy. The more frequently you eat, the more your body is at work burning energy hence keeping your metabolism going. Therefore eating more frequently allows you to burn fat more efficiently.

Breakfast is the most important meal of the day. Breakfast gets your metabolism started right away, and this is needed because your body has likely been without food energy for at least 8 hours. At breakfast it is important that it is a balanced meal with foods from at least three food groups. Just having a coffee and muffin from Tim Horton’s will not make the cut. Here are some examples of nutritious meals to start your day with.

Balanced Breakfasts

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| --- | --- | --- | --- | --- |
| **Balanced Breakfast** | **Vegetables & Fruit** | **Grain Products** | **Milk and Alternatives** | **Meat and Alternatives** |
| 1. **Yogurt Parfait**   1 cup of vanilla yogurt  1 cup of fresh berries  ¾ cup of cereal  \*(layer in bowl) |  |  |  |  |
| 1. **Breakfast of champions**   1 over easy egg  1 slice of whole grain toast  1 banana |  |  |  |  |
| 1. **Oatmeal Deluxe**   ¾ cup of oatmeal  1 cup of fresh blueberries  ¼ cup of shaved almonds |  |  |  |  |
| 1. **Balanced Bagel**   ½ whole wheat bagel  2 Tbsp of peanut butter  1 apple (cut into slices) |  |  |  |  |

**What happens when you skip meals?**

Does this sound familiar? You wake early, get the kids off to school, get yourself ready for work and rush out the door. You skip breakfast, have a small lunch and then over-eat in the evening. If this is not the case, that is great! If it somewhat relates to your current eating habits you should pay attention!

🡪When you regularly skip meals the body begins to feel deprived during the day and will hold onto the food consumed later in the day as a safety mechanism. It will begin to store calories in the adipose (fat) tissue for storage because the body “thinks” it won’t be fed for another 6-7 hours, and will start ‘holding’ onto the ingested food.

🡪This process originated from our ancestors when they used to go for long periods without food, because their food source relied on their luck with hunting. They would eat large amounts and then go without food for long periods so the body stored most of the energy they consumed as fat to ensure survival. But now that we have access to food, we do not need this to happen. Therefore, by eating six small meals each day, your body will begin to let go of its fat stores and burn the calories you are taking in for energy right away. If the body “knows” it will be fed again in a couple of hours, storage won’t happen. This, in turn, burns fat and calories more efficiently!

**A quick note about dieting**

This program is going to teach you the basics about nutrition and how to make positive lifestyle changes that will last you a ***lifetime***. Many people, when trying to lose weight, will look for a quick fix and try anything to get the pounds and inches off right away. This is not the way to go about decreasing your health risks and getting you to your goal weight and keeping you there. It is about making changes that you can stick with forever so you won’t end up back where you started a year from now.

**Beware of Fad Diets.**

**Fad diets:**

* Promise quick weight loss that is contrary to common sense and health
* Are usually extremely unbalanced
* Impose unnecessary dietary restrictions with little or no scientific evidence or logic (cutting out entire food groups or eating too much of one thing)
* Create major loss of water due to metabolic changes that sends the wrong message of weight loss
* Seem too good to be true

Fad dieting leads to a number of feelings and behaviours that don’t encourage lifelong changes. These are some of the negative consequences of dieting:

* Feeling deprived
* Resentment
* Ignores body signals
* Compulsive behaviour
* Makes you feel dependent
* Leads to overeating
* Rigid and unnatural eating behaviours

Handout - Healthy Snacks for a Healthy Body

How often should you eat? One should consume small portions of food every 2-3 hours (5-6 small meals) during the day. Studies show that people who add snacks to their diet (eat six times a day), have a *faster resting metabolic rate* than those who just eat three meals a day.

1. **WHAT you eat: Quality is Key**

***Carbohydrates***: Low glycemic carbohydrates are best (whole grains, oats, vegetables, fruits) and try to stay away from high sugar processed foods (candies, pastries, muffins, white pastas). When the body has an excess amount of glucose (from high sugar foods) it can be converted into triglycerides which is the most common fat found in the body, leading to weight gain. (will go over in detail in week 5)

***Protein:*** Getting enough protein is essential for building and maintaining muscle mass. The best sources are lean meats, fish, and legumes. (will go over in detail in week 7)

***Fat:*** Try including fat from flaxseed, olive oils, salmon and nuts. These fats allow the body to release stored fats, increase cellular energy, help stabilize sugars in the body, and protect lean muscle tissue. Including these fats in your diet is essential for achieving successful weight loss. (will go over in detail in week 6)

***Handout: “Guide to Healthy and Balanced Eating”***