

## Metabolic Rate

**BMR = Basal Metabolic Rate:** the amount of calories your body burns just for functioning organs for 1 day.

Calculation Done at Visit #1:

MAN:  $BMR = 10 * \text{weight (kg)} + 6.25 * \text{height (cm)} - 5 * \text{age (y)} + 5$

WOMAN:  $BMR = 10 * \text{weight (kg)} + 6.25 * \text{height (cm)} - 5 * \text{age (y)} - 161$

**RMR = Resting Metabolic Rate:** the amount of calories your body burns just to rest for 1 day.

Measurement: Calorimeter

Instructions:

- No caffeine or exercise for 24hrs
- No food for 4hrs, 2hrs if diabetic

### Why is it important to follow the test instructions?

Caffeine, Food & Exercise all increase your metabolism

Test interpretation becomes useless because it is not a true measurement

With a falsely elevated test result, we predict your meal plan calories to be higher and weight loss will be more difficult!

Then we add in a Physical Activity Level to determine your Daily Calorie Needs (DCN) to MAINTAIN your weight. ( $BMR \text{ or } RMR \times 1.2 = DCN$ )

The Meal Plan is designed with a calorie deficit to ensure weight loss based on your DCN.

### How the Test Works:

About 16% of the oxygen you breathe in gets used by your muscles to burn energy in our bodies. The test is measuring the difference in oxygen going in and carbon dioxide going out and the computer calculates how much energy our body is using through this difference = METABOLISM

Compare this number to weight in kilograms = RMR Ratio

### Why it is Important to Monitor your Metabolism during Weight Loss:

Initial RMR is a comparison to your BMR – were we right in our calculation?

We use your RMR Ratio and follow-up tests are compared to previous measurements to assess if your Metabolism is increasing, remaining the same, or decreasing.

We want you to burn the same or more calories even though you weigh less.

### BECAUSE...

When we lose weight we burn BOTH fat and muscle, we want to preserve muscle as this is what burns calories in our bodies. Without muscle, weight loss becomes very difficult & difficult to maintain the hard work you've put in to achieve weight loss.

### How to Increase Your Metabolic Rate:

- Aim to meet your caloric goal each day
- Eat 6-8 times a day outlined by your meal plan to maintain your metabolic rate throughout the day and prevent hunger, this however does not *increase* your metabolism
- Meet or exceed the protein target on your meal plan (30% or more of total calories) \_\_\_ g or more per day
  - Why Protein? Protein is more thermogenic, meaning it burns more calories to digest compared to carbohydrates with the same caloric density (carbohydrates/protein 4 kcal/g, fat 9 kcal/g, alcohol 7 kcal/g)
  - And having protein available in our bodies prevents the muscle breakdown that occurs with weight loss.
- Incorporate Resistance/Strength Training into your exercise routine
  - 3-4 times per week for 15-30 minutes or more