

Technician's Measurement Script

Conducting a Resting Metabolic Rate Assessment

Hello, my name is _____. I will be conducting your metabolic assessment. The assessment will take approximately 5-8 minutes. I would like to take a few minutes to explain:

- What metabolism is
- How & why we assess your metabolism

Metabolism

Metabolism is the number of calories your body burns per day. We are assessing your resting metabolic rate (RMR) which accounts for about 75% of your total daily metabolism.

Total metabolism is: RMR + lifestyle/occupational activities + exercise.

The two factors that have the largest influence on your Resting Metabolism are:

1. Total body weight: if you weigh more, your body requires more calories to maintain your normal body functions.
2. Total muscle weight: if you have more muscle, your body burns more calories at rest.

MedGem® and Your Metabolic Assessment

Your body combines food (carbohydrates, fats and proteins) with oxygen to produce energy. The MedGem measures the amount of oxygen your body uses and determines your metabolism in calories/day.* The MedGem will measure your oxygen consumption until it detects a consistent value. Your result will appear on the screen at the conclusion of the test.

Why Measure Metabolism?

Measuring metabolism is the **most accurate method** for determining your own bodies' unique needs. Knowing your metabolism will allow us to determine a nutritional and exercise program that's just right for you.

Pre Measurement:

To obtain an accurate metabolism measurement, we need to ensure that you are being measured under "resting conditions". Have you eaten, consumed caffeine, or exercised in the past 4 hours? (If the client answered yes, **DO NOT PROCEED** and re-schedule the measurement for a later date.) If you have not followed the proper resting conditions the results of the measurement will be inaccurate.

Measurement Protocol:

Place the noseclip over your nose; it is important that it closes off your nose completely. Hold the device with your hand(s) and use your arm(s) for support and comfort. Movement should be limited. It is extremely important to maintain a tight seal around the mouthpiece while the measurement is in progress. Failure to maintain a tight seal will result in an inaccurate reading. Breathe normally, if your mouth becomes dry, touch your tongue to the roof of your mouth. You can swallow during the measurement (you may feel your ears plug when you swallow because your nose is plugged). The MedGem will make a humming sound during the measurement and will beep once when the measurement is complete. At the conclusion of the measurement, we will provide your metabolic result. Do you have any questions?

* RMR is calculated using the Weir equation and a constant RQ value of 0.85 ($RMR = 6.931 \times VO_2$), Weir, J.B., New Methods for Calculating Metabolic Rate with Special Reference to Protein Metabolism. J. Physiol, 1949. 109: pages 1-9.