



Resting Metabolic Rate (RMR)

Resting Metabolic Rate (RMR) is the amount of energy expended by the body while at rest in a neutrally temperate environment, in the post-absorptive state (meaning the individual has not eaten for at least 12 hours). Knowing your RMR can be valuable for various reasons, such as designing personalized nutrition and exercise plans, weight management, and understanding overall metabolic health.

Indirect Calorimetry is the most accurate method, involving the measurement of oxygen consumption and carbon dioxide production. Calibre has been validated through third-party, peer-reviewed testing as one of the most accurate devices for conducting this type of testing (refer to the study: <https://onlinelibrary.wiley.com/doi/10.1111/sms.14490>).

**Remember that on any given day, your RMR may differ. Therefore, it is meaningful and interesting to measure your RMR on a regular basis while tracking other habits to see if or how it is affected.*

Benefits of Knowing RMR

1. Personalized Nutrition Plans:

Knowing RMR helps tailor nutrition plans to individual energy needs, preventing overeating or under-eating.

2. Weight Management:

Understanding RMR aids in setting realistic weight loss or weight gain goals, as it provides a baseline for caloric needs.

3. Optimizing Exercise Programs:

RMR data can guide the development of effective exercise programs, ensuring that calorie expenditure aligns with fitness goals.

4. Metabolic Health Assessment:

RMR can provide insights into overall metabolic health. A lower-than-expected RMR may indicate a slower metabolism, which could be associated with certain health conditions.

5. Monitoring Changes Over Time:

Periodic RMR assessments allow individuals to track changes in metabolic rate, helping to adjust lifestyle and fitness strategies accordingly.

6. Individualized Weight Loss Strategies:

Knowing RMR can guide the development of personalized weight loss strategies, such as creating a calorie deficit through a combination of diet and exercise.

7. Preventing Metabolic Adaptation:

Understanding RMR can help prevent metabolic adaptation, where the body adjusts to lower calorie intake by slowing down the metabolism. This knowledge allows for more strategic adjustments to dietary and exercise interventions.

In summary, testing Resting Metabolic Rate provides valuable information for tailoring nutrition and exercise plans to individual needs, contributing to more effective and sustainable health and fitness outcomes.

Resting Metabolic Rate (RMR) Pretest Guidelines

- **IMPORTANT:** Prior to the test, refrain from consuming any food or beverages, with the exception of water, for a minimum of 4 hours, preferably 12 hours. On the day of the test, avoid engaging in physical activity, and abstain from consuming caffeine or any stimulants. Your compliance with these guidelines is crucial for accurate test results.
- **Charging**
 - Using the Calibre provided charging cable, charge the device for 2-3 hours to ensure the device is fully charged.
- **Calibration**
 - Calibrate the device each time before your use it, ideally in the same environment you will be testing.
 - Do not breath into the device for at least 30 minutes prior to calibration.
 - During calibration, keep it on a stable surface and away from any wind/fans or exhaled breath.
- **Silicone Plug**
 - To reduce the risk of moisture reaching the internal electronics, always ensure to insert one of the protective silicone plugs into the charging port prior to each use.
- **Fit & Comfort**
 - The face piece should be covering your mouth while cradling the bottom of your nose. Adjust the strap length for fit and comfort.
 - You should avoid over-compressing the face piece, as the design requires a sufficient volume within the face piece to exchange and measure your breath.
- **ONLY** begin protocol after device is charged and calibrated.

RMR Protocol

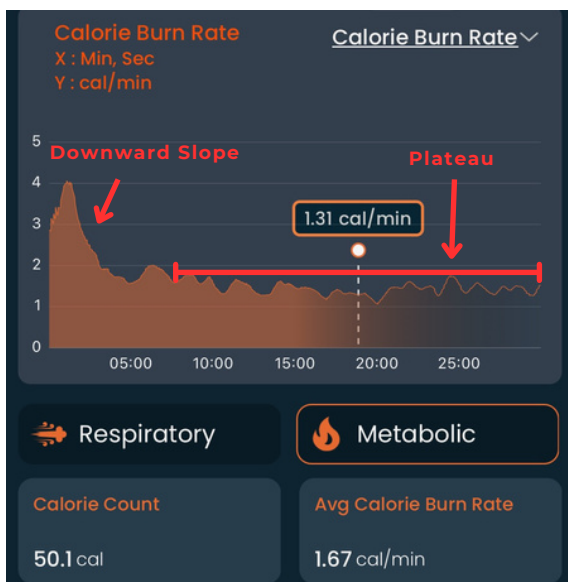
Prep.	Fully charge the Calibre and insert silicone plug.
Prep.	Relax in a comfortable reclining chair or lie down. Minimize external stimuli such as music or conversation. Keep Calibre nearby, but refrain from wearing it.
1	Connect the device to the app and calibrate following the guidelines provided.
2	Put on your Calibre and confirm it is collecting and displaying breath data.
3	Sit or lie back, aiming to relax as much as possible. Breathe steadily and calmly.
4	Set a timer for 30 minutes.
5	Start a recorded session while maintaining a state of relaxation and steady breathing, preferably through the nose if possible. Refrain from checking the data during the RMR test.
6	When the timer goes off, stop the recorded session. You should have recorded approximately 30 minutes of data.
Results	Looking at the session data, locate the graph of your Calorie Burn Rate, then proceed to the next page for guidance on determining your results.

RMR Results

To determine your RMR results, please follow these instructions:

- Examine the graph illustrating your Calorie Burn Rate. Your graph may resemble either example 1 or example 2 provided below.
 - Example 1: If your graph has a downward slope followed by a plateau or flat segment, disregard the downward slope and determine the average value of the plateau. You can touch the screen and navigate the cursor to view the corresponding numbers when calculating your average.
 - Example 2: If your graph displays valleys and peaks, navigate the cursor to identify the values of the highest and lowest points, and then average these two values.
- If your graph doesn't resemble either of the two examples but instead displays evenly distributed data, such as a steady plateau without a downward slope or evenly distributed valleys and peaks, you may use the "Average Calorie Burn Rate" value listed on the top right side of the metabolic page.
- Record the calculated average value and proceed to multiply it by 1,440 (minutes in a day). This calculation will provide you with your Resting Metabolic Rate (RMR).

Example 1



Example 2

