Understanding Metabolism

Daily energy expenditure consists of three components: resting metabolic rate (RMR), thermic effect of food (TEF) and energy cost of physical activity.

<table>
<thead>
<tr>
<th>Percentage</th>
<th>Component</th>
</tr>
</thead>
<tbody>
<tr>
<td>10%</td>
<td>Thermic Effect of Food</td>
</tr>
<tr>
<td>0-20%</td>
<td>Physical Activity</td>
</tr>
<tr>
<td>70-80%</td>
<td>Resting Metabolic Rate</td>
</tr>
</tbody>
</table>

**Resting Metabolic Rate (RMR)**
- Energy expended to maintain the body during resting conditions
  - Proportional to lean body mass
  - Muscle is more metabolically active than fat

**Thermic Effect of Food (TEF)**
The thermic effect of food (TEF) is the energy required to digest, absorb, transport and store food. It is different for each type of macronutrient. On average TEF represents ~10% of total energy expenditure.
- Fat 0-3%
- Carbohydrate 5-10%
- Protein 20-30%

**Physical Activity**
- Daily activity
- Exercise
  - Aerobic exercise expends calories during exercise
  - In addition to calories burned during exercise, anaerobic exercise (interval and/or strength training) can increase your resting metabolism for 24-48 hours depending on muscles worked and intensity. Anaerobic exercise can also have an impact on your RMR.