

Understanding Your Metabolism

1. What Is Metabolism?

Metabolism is the set of chemical reactions in your body that convert the food you eat into energy. This energy powers every essential function — from breathing and digestion to cell repair and hormone balance. Even while you rest or sleep, your metabolism continues to function. It consists of two main processes:

- Catabolism – Breaking down food molecules to release energy.
- Anabolism – Using energy to build and repair body tissues.

The speed at which your body performs these functions is called your metabolic rate. It varies from person to person and can change with age, diet, and lifestyle.

2. Factors That Affect Metabolism

Several elements influence how fast or slow your metabolism works:

Muscle mass – More muscle means higher calorie burning, even at rest.

Age – Metabolism tends to slow down as we grow older.

Gender – Men usually have a higher metabolic rate due to greater muscle mass.

Genetics – Some people naturally have a faster or slower metabolism.

Hormones – Thyroid, insulin, and cortisol hormones play major roles.

Physical activity – The more you move, the more energy your body burns.

Diet composition – Protein-rich foods increase metabolism due to higher thermic effect.

Sleep and stress – Poor sleep and chronic stress can suppress metabolic function.

3. Reasons for Slow and Fast Metabolism

Slow Metabolism May Be Caused By:

- Underactive thyroid (hypothyroidism)
- Sedentary lifestyle
- Extreme calorie restriction
- Low muscle mass
- Chronic stress or poor sleep
- Certain medications (e.g., beta-blockers)

Fast Metabolism May Be Caused By:

- Overactive thyroid (hyperthyroidism)
- Fever or infections

- Stress hormones (e.g., adrenaline)
- Increased physical activity
- Higher muscle-to-fat ratio

4. How to Maintain a Healthy Metabolism

- Eat regular, balanced meals rich in protein and fiber
- Get at least 7–8 hours of quality sleep
- Stay active throughout the day (walk, stretch, lift)
- Avoid skipping meals or crash diets
- Manage stress through mindfulness, yoga, or hobbies
- Stay well-hydrated

5. Foods That Affect Metabolism

Foods That Boost Metabolism:

- **Protein-rich foods:** Moong dal, eggs, paneer, fish, chicken
- **Whole grains:** Jowar, bajra, brown rice, oats
- **Healthy fats:** Nuts, seeds, desi ghee (in moderation)
- **Spices:** Jeera (cumin), haldi (turmeric), chili, saunf (fennel)
- **Probiotics:** Homemade dahi, buttermilk, fermented dosa/idli

Foods That Slow Down Metabolism:

- Refined flour (maida)
- Sugary drinks
- Ultra-processed snacks
- Fried foods and excess trans fats

6. How to Increase Your Metabolism Naturally

- Engage in **strength training** to build muscle mass
- Do cardio **exercises** like walking, cycling, or swimming
- Include **protein** in every meal to support muscle and digestion
- **Stay hydrated** – water is essential for metabolic reactions
- Use thermogenic spices like chili and ginger
- Avoid prolonged sitting; include NEAT (non-exercise activity thermogenesis) like walking after meals or using stairs

7. Common Metabolic Issues

Metabolic Syndrome:

A cluster of conditions that occur together and raise your risk for heart disease, diabetes, and stroke. These include:

- High blood pressure
- High blood sugar
- Abdominal obesity
- Low HDL (good) cholesterol
- High triglycerides

Other Metabolic Disorders:

- Hypothyroidism – Causes fatigue, weight gain, dry skin
- Hyperthyroidism – Causes weight loss, anxiety, heat intolerance
- PCOS – Associated with insulin resistance and irregular periods
- Diabetes (Type 2) – Due to long-term insulin resistance

8. Metabolic Tests

Your doctor may recommend the following tests:

- Thyroid function tests (TSH, T3, T4)
- Fasting blood sugar & HbA1c for diabetes
- Lipid profile for cholesterol and triglycerides
- Liver and kidney function tests
- Body composition analysis (muscle vs fat ratio)
- Vitamin D and B12 levels

9. Warning Signs of Metabolic Imbalance

- Persistent tiredness or low energy
- Unexplained weight gain or loss
- Feeling unusually cold or hot
- Irregular menstrual cycles
- Mood swings or depression
- Belly fat that doesn't reduce despite efforts
- Dry skin or thinning hair
- Increased cravings for sugar or salt

10. When Should You Consult a Doctor?

Consult your Internal Medicine doctor if you experience:

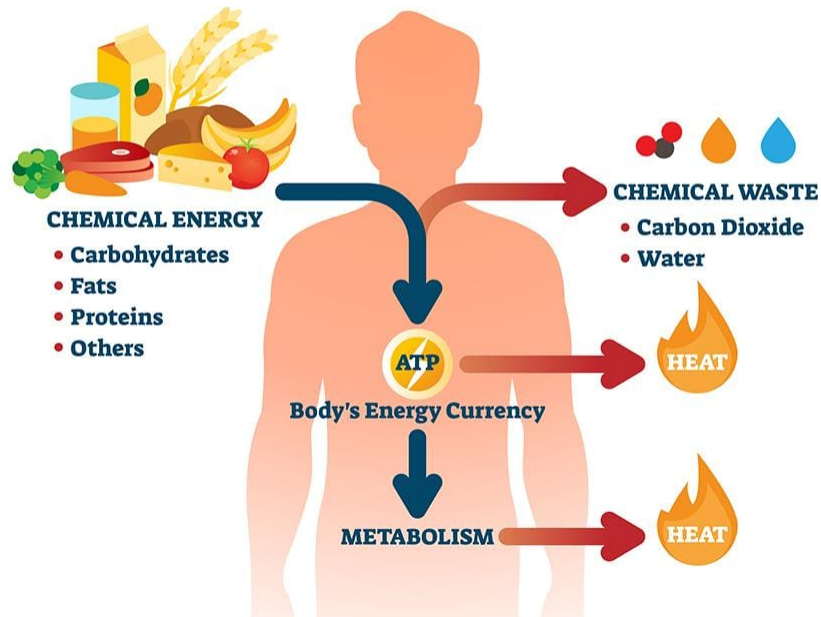
- Any of the above warning signs
- Family history of thyroid disease, diabetes, or obesity
- Difficulty losing weight despite lifestyle efforts
- Frequent fatigue, bloating, or constipation
- Irregular menstrual cycles or fertility concerns

Early screening and diagnosis can prevent complications. Your doctor can tailor a plan involving labs, lifestyle guidance, or medications if needed.

Final Takeaway

Your metabolism is central to your health, not just your weight. The good news? You can influence it. With mindful eating, regular movement, and early attention to warning signs, you can keep your metabolism functioning optimally for life.

Metabolism



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References

1. Mayo Clinic. Metabolism and weight loss: How you burn calories. Mayo Clinic. 2023. Available from: <https://www.mayoclinic.org/healthy-lifestyle/weight-loss/in-depth/metabolism/art-20046508>
2. Better Health Channel. Metabolism. Department of Health, State Government of Victoria, Australia. 2022. Available from: <https://www.betterhealth.vic.gov.au/health/healthyliving/metabolism>
3. StatPearls Publishing. Burns T, Matarese L. Physiology, Metabolism. In: StatPearls [Internet]. Treasure Island (FL): StatPearls Publishing; 2023. Available from: <https://www.ncbi.nlm.nih.gov/books/NBK535419/>
4. Cleveland Clinic. Metabolism: What It Is, How It Works & Disorders. Cleveland Clinic. 2023. Available from: <https://my.clevelandclinic.org/health/articles/22978-metabolism>

5. Mayo Clinic. Metabolic syndrome: Symptoms & causes. Mayo Clinic. 2023.
Available from: <https://www.mayoclinic.org/diseases-conditions/metabolic-syndrome/symptoms-causes/syc-20351916>
6. NIH MedlinePlus. Metabolism Disorders. U.S. National Library of Medicine. 2023.
Available from: <https://medlineplus.gov/metabolicdisorders.html>