

Calories

What are Calories?

Calories are a unit of measurement used to quantify the amount of energy provided by food and beverages.

Types are Calories?

Calories can be categorized based on their sources and how they affect the body.

Macronutrient Calories

Carbohydrates: Provide 4 calories per gram. Found in foods like grains, fruits, vegetables, and legumes. They are a primary energy,

Proteins: Provide 4 calories per gram. Found in meat, fish, eggs, dairy products, and plant-based sources like beans and lentils. Proteins are crucial for building and repairing tissues.

Fats: Provide 9 calories per gram. Found in oils, butter, avocados, nuts, and fatty fish. Fats are essential for hormone production, cell structure, and energy storage.

Empty Calories

These come from foods and drinks that provide energy but lack essential nutrients. Include in sugary beverages, candy, and pastries. They can contribute to weight gain and poor nutritional health.

Nutrient-Dense Calories

Found in foods that provide both energy and a high concentration of essential nutrients included in fruits, vegetables, whole grains, lean proteins, and nuts. These calories support overall health and well-being.



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Thermic Effect of Food (TEF)

This refers to the energy used to digest, absorb, and process food. Different macronutrients have varying thermic effects:

Proteins: Have the highest TEF, requiring more energy to metabolize.

Carbohydrates: Have a moderate TEF.

Fats: Have the lowest TEF.

Metabolically Active Calories

These are calories burned through basic metabolic processes like breathing, circulation, and cell production. This is known as your Basal Metabolic Rate (BMR).

Activity Calories

Calories burned through physical activity, including exercise and daily movements. This contributes to your Total Daily Energy Expenditure (TDEE).

Importance of Calories

Calories are crucial for maintaining overall health and well-being because they provide the energy needed for every bodily function and activity

Energy Production

Daily Functioning: Calories fuel essential functions such as breathing, digestion, and circulation.

Physical Activity: They provide energy for physical activities ranging from everyday tasks to intense exercise.

Metabolism Regulation

Basal Metabolic Rate (BMR): Calories help sustain your BMR, which is the number of calories your body needs at rest to maintain vital functions.

Thermic Effect of Food (TEF): Calories are used to process and digest the food you eat, impacting your overall energy expenditure.



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Weight Management

Balance: Maintaining a balance between calorie intake and expenditure helps regulate body weight.

Weight Loss/Gain: Consuming more calories than you burn leads to weight gain, while consuming fewer calories results in weight loss.

Nutrient Utilization

Absorption: Calories from macronutrients (carbohydrates, proteins, fats) provide the energy necessary for the absorption and utilization of nutrients.

Growth and Repair: Calories support growth, tissue repair, and the maintenance of body functions.

Mental and Physical Health

Brain Function: Adequate calorie intake is essential for cognitive functions and mental health.

Physical Performance: Sufficient calories support stamina, strength, and overall physical performance.

Hormonal Balance

Regulation: Calories influence hormone production and balance, including hormones related to hunger, metabolism, and stress.

Overall Well-Being

Immune Function: Adequate calorie intake supports a healthy immune system, helping the body fight off infections.

Energy Levels: Proper calorie intake ensures consistent energy levels throughout the day, preventing fatigue and promoting vitality.



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Source

Calories come from three primary macronutrients: carbohydrates, proteins, and fats. Each macronutrient provides a specific amount of energy per gram and contributes to your overall caloric intake.

Carbohydrates

Sources:

- **Grains:** Rice, oats, wheat, barley.
- **Fruits:** Apples, bananas, berries, oranges.
- **Vegetables:** Potatoes, corn, peas.
- **Legumes:** Beans, lentils, chickpeas.
- **Dairy:** Milk, yogurt.

Calories per Gram: 4 calories.

Role: Provide a quick and primary source of energy for the body and brain.

Proteins

Sources:

- **Animal-Based:** Meat (chicken, beef, pork), fish, eggs, dairy (cheese, milk).
- **Plant-Based:** Legumes (beans, lentils), tofu, tempeh, nuts, seeds.

Calories per Gram: 4 calories.

Role: Essential for growth, repair, and maintenance of tissues, and support for immune function.

Fats

Sources:

- **Healthy Fats:** Avocados, nuts, seeds, olive oil, fatty fish (salmon, mackerel).
- **Saturated Fats:** Animal fats, butter, coconut oil.
- **Trans Fats:** Found in some processed and fried foods.

Calories per Gram: 9 calories.

Role: Provide long-lasting energy, support cell structure, and help absorb fat-soluble vitamins (A, D, E, K).

Alcohol

Sources:

- **Beverages:** Beer, wine, spirits.

Calories per Gram: 7 calories.

Role: Provides energy but lacks essential nutrients and can contribute to weight gain if consumed in excess.



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Miscellaneous

Added Sugars: Found in candies, pastries, sugary drinks, and syrups.

Processed Foods: Often high in empty calories from sugars and unhealthy fats.

Each source contributes differently to your diet and overall health. Balancing these sources according to your dietary needs and lifestyle helps maintain energy levels, support bodily functions, and achieve health goals.



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