

Calculate Calories Burned

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Total Daily Energy Expenditure (TDEE)

The total daily energy expenditure (DTEE) is an important calculation in the determination of:

- The overall dietary and exercise practices of any person.
- The amount of energy needed by anyone to meet the daily physical demands will have two components:
 - The amount of energy needed to maintain the body's needs at rest, (BMR),
 - The needs generated by the daily activity levels, which include employment, sport, and any other activities.



Harris-Benedict equation

- The **Harris-Benedict equation** (also called the **Harris-Benedict principle**) is a general method used to estimate the daily calorie requirements of an individual using their basal metabolic rate or BMR.
- The estimated value is then multiplied by a number that corresponds to the person's activity level.
- The resulting number is the recommended daily calorie intake to *maintain* your current weight.

Harris-Benedict equation

- The equation does not take into account calories burned by existing large amounts of muscle mass, nor does it account for the additional calories provided by excess body fat—so the equation is more effective for individuals at an ideal body weight or close to it



- Individuals who have excess body fat should underestimate the results, and individuals who have excess muscle mass should over estimate them.

Harris Benedict Equation

- The **Harris Benedict Equation** uses BMR and then applies an activity factor to determine **Total Daily Energy Expenditure** (calories).
- The only factor omitted by the Harris Benedict Equation is lean body mass.
- Leaner bodies need more calories than less leaner ones.

Harris Benedict Equation

- The Harris Benedict equation use the factors of

1) Height



2) Weight



3) Age



4) Sex



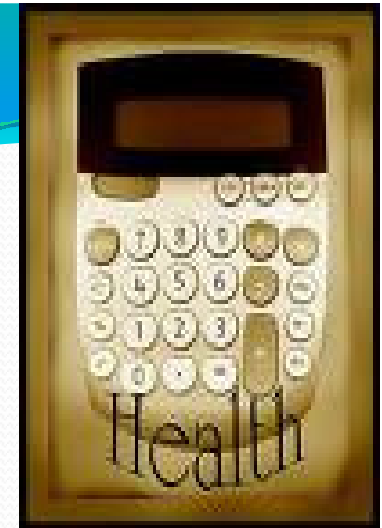
To determine Basal Metabolic Rate (BMR)



Harris-Benedict equation

- The Harris Benedict equation may be used to assist weight loss—by reducing your calorie intake to a number below the outcome of the equation

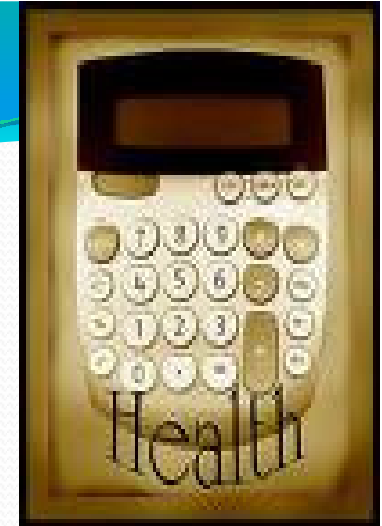
Determine Total Daily Energy Expenditure (TDEE)



STEP 1-Calculating the BMR

BMR Calculation for men	$\text{BMR} = 66 + (13.7 \times \text{weight in kg}) + (5 \times \text{height in cm}) - (6.8 \times \text{age in years})$
BMR Calculation for men	$\text{BMR} = 66 + (6.23 \times \text{weight in pounds}) + (12.7 \times \text{height in inches}) - (6.8 \times \text{age in years})$
BMR Calculation for women	$\text{BMR} = 655 + (9.6 \times \text{weight in kg}) + (1.8 \times \text{height in cm}) - (4.7 \times \text{age in years})$
BMR Calculation for women	$\text{BMR} = 655 + (4.35 \times \text{weight in pounds}) + (4.7 \times \text{height in inches}) - (4.7 \times \text{age in years})$

Determine Total Daily Energy Expenditure (TDEE)



STEP 2- Applying the Harris-Benedict Principle

If you get little to no exercise	Daily calories needed= BMR x 1.2
If you exercise lightly(1-3 days per week)	Daily calories needed= BMR x 1.375
If you exercise moderately (3-5 days per week)	Daily calories needed= BMR x 1.55
If you exercise heavily (6-7 days per week)	Daily calories needed= BMR x 1.725
If you exercise very heavily (i.e. 2x per day, extra heavy workouts)	Daily calories needed= BMR x 1.9

Body Mass Index (BMI)

Body Mass Index (BMI)

- Defined as weight in kilograms, divided by the square of the height in meters

What the Numbers Mean	
BMI	Condition
Below 18.5	Underweight
18.5-24.9	Normal Weight
25-29.9	Overweight
Above 30	Obese



BMI Condition

- If your BMI is less than **18.5**, you're underweight for your height.
- If your BMI is between **18.5 and 24.9**, you're an ideal weight for your height.
- If your BMI is between **25 and 29.9**, you're over the ideal weight for your height.
- If your BMI is between **30 and 39.9**, you're obese.
- If your BMI is over **40**, you're very obese.



Aim for a Healthy Weight

- Determine your Body Mass Index (BMI)
- If you have a BMI of over 25, you need to think about losing weight because you have an increased risk of developing serious health problems, such as heart disease, diabetes, and several forms of cancer.
- If your BMI is over 30, you need to make some immediate changes to your lifestyle in order to lose weight



Aim for a Healthy Weight

- If you are overweight or obese, losing just 10% of your body weight can improve your health
- If you need to lose weight, do so gradually-1/2 to 2 pounds per week



THANK YOU