Common Nutrition Calculations

Hamwi Formula to Calculate Ideal Body Weight (IBW)

Women
IBW = 100 lbs. for first 5 feet in height + 5 lbs. for each inch over 5 feet.

Men
IBW = 106 lbs. for first 5 feet + 6 lbs. for each inch over 5 feet.

Frame Adjustments (Men and Women)
For a small frame, subtract 10 percent of the total
For a large frame, add 10 percent to the total
For heights less than 60”, subtract 5 lbs. for each inch below 60

How to Calculate Percent of IBW
Percent of IBW = (Actual Weight ÷ IBW) x 100

How to Calculate Percent of Weight Change
Percent weight change = [(Usual weight - Actual weight) ÷ usual weight] x 100

BMI Classifications for both Men and Women
Underweight       BMI<18.5
Healthy Weight    BMI 18.5-24.9
Overweight        BMI 25-29.9
Obese            BMI 30 or greater
Formulas for Calculating BEE for Clients Over 18 Years

Men
Harris-Benedict Equation:
BEE = 66 + (13.7 x weight in kg) + (5 x height in cm) - (6.8 x age in years)
Alternate Formula: BEE = 1.0 x (weight in kg) x 24

Mifflin-St. Jeor Equation:
BEE = (10 x weight) + (6.25 x height) - (5 x Age) + 5

Women
Harris-Benedict Equation:
BEE = 655 + (9.6 x weight in kg) + (1.8 x height in cm) - (4.7 x age in years)
Alternate Formula: BEE = 0.9 x (weight in kg) x 24

Mifflin-St. Jeor Equation:
BEE = (10 x weight) + (6.25 x height) - (5 x Age) - 161

*Note:
To convert pounds to kilograms, divide by 2.2 (2.2 lb. = 1 kg). To convert inches to centimeters, multiply by 2.54 (1 in = 2.54 cm) There are height-weight percentile tables for clients under age 18.

Activity Factors (Add These To The BEE)
•0.2 x BEE for a patient who is in bed most of the time
•0.3 x BEE for an individual who is ambulatory and/or moderately active
•0.5 x BEE for an individual who is very active

Injury Factors (Add these to the BEE)
•0.2 x BEE following surgery
•0.35 x BEE following skeletal trauma (bone fractures)
•0.1 - 0.4 x BEE following other trauma
•0.1 x BEE for each degree (F) of fever
•2.1 x BEE for severe burn

For protein-calorie malnutrition:
Add an amount for weight gain/growth. This might be 500-1,000 calories per day.

To achieve weight loss (for an overweight individual):
Subtract 500-1,000 calories per day to promote a loss of 1-2 lbs./week.

Estimating Daily Protein Needs
•For a healthy adult: 0.8 grams x body weight in kg
•For a malnourished client: 1.2-1.5 grams x body weight in kg
•Following surgery: 1.0-2.0 grams x body weight in kg
•Following trauma, severe burn, or multiple fractures: 2.0 grams x body weight in kg

Estimating Daily Fluid Needs
For Average Adults: 30 mL/kg
For Adults with Infection or Draining Wounds: 35 mL/kg
For Adults with CHF or Renal Disease: 25 mL/kg