

Energy Deficit Calculation

To calculate a 500-kilocalorie energy deficit, which results in weight loss of approximately one pound per week, follow these three steps:

Step 1: Estimate the recommended individual caloric requirement (kcal/day) by calculating the resting energy expenditure (REE)¹¹⁴.

For ADULT MALES:

$$\text{REE} = 10 \times \text{weight (in kg)} + 6.25 \times \text{height (in cm)} - 5 \times \text{age (in years)} + 5$$

For ADULT FEMALES:

$$\text{REE} = 10 \times \text{weight (in kg)} + 6.25 \times \text{height (in cm)} - 5 \times \text{age (in years)} - 161$$

Step 2: Multiply REE by an activity factor (AF) of 1.5 for women and 1.6 for men for light activity⁹⁷ to estimate daily caloric need.

$\text{REE} \times \text{AF} = \text{Estimated total caloric need (kcal/day)}$ to maintain weight.

Step 3: From this number, subtract 500 kcal/day to obtain *adjusted caloric intake* required to achieve weight loss of approximately one pound per week¹¹⁵.

The adjusted caloric intake is an estimate that will indicate the type of diet recommended for an adult who is healthy and whose lifestyle involves light activity. Individual factors and clinical judgment may influence the calorie level you select for your patient. For example, your patient may have a more active lifestyle or a job involving physical labor that may necessitate using a higher activity factor (AF = 1.6 for women, and 1.7 for men, has been used for moderately active healthy adults⁹⁷).

It is recommended that a dietitian or other qualified health care professional be consulted to assist the patient in constructing appropriate menu plans and to explain the principles of healthful eating and portion control. It is also recommended that increased physical activity be used to contribute to the daily energy deficit and to establish a more active lifestyle that is known to be associated with successful maintenance of reduced weight^{77,92}.