



# Get Fit – Stay Fit

## *Weight Loss 101: The Fitness Equation*



**Thinking about losing weight this year? Knowing the basic equations and calculations can help you shed safely (and permanently).**

Calorie  
Balance

***Total Calories per day = Calories In – Calories Out***

If positive, weight gain. If negative, weight loss. If zero, body weight stable.

***Calories In = Protein(g) \* 4 + Carb(g) \* 4 + Fat(g) \* 9 + Alcohol% \* #oz \* 196***

Total daily food calories depend on the amount of food components consumed (protein, fats, carbohydrates, and alcohols) summed up by multiplying number of grams (g) (or ounces, oz.) of each by their calorie per gram (or ounce) conversion

***Calories Out = Metabolic Equivalent (METs) \* Weight (kg) \* Time (hr)***

Calories burned from activity depend on the exertion level of that activity measured in metabolic equivalents or METs, your weight (kg), and the length of time the activity is performed (hr). This includes sleeping (0.9 METs) and sitting at rest (1.0 METs). Adding all of your activities for 24 hours gives you an estimate of caloric burn for an average person (actual individual energy consumption for each activity may vary)

**One Pound Weight Loss = Total daily calories needed to maintain your current weight - 500 calories (eating less or burning more) every day for one week (3500 calories less per week than what you would need to maintain your current weight)**

- References:
- 1) The Centers for Disease Control and Prevention. October 31, 2011. Healthy Weight – it's not a diet, it's a lifestyle! Retrieved January 29, 2013 from <http://www.cdc.gov/healthyweight/calories/index.html>
  - 2) The Centers for Disease Control and Prevention. November 30, 2012. The National Diabetes Prevention Program Training Curriculum, Core Sessions Handout, Chapter 7. Retrieved January 29, 2013 from [http://www.cdc.gov/diabetes/prevention/pdf/Handout\\_Session7.pdf](http://www.cdc.gov/diabetes/prevention/pdf/Handout_Session7.pdf)
  - 3) Ainsworth BE et. al. Compendium of physical activities: Classification of energy costs of human physical activities. *Medicine and Science in Sports and Exercise*, 1993;25:71-80. Retrieved January 29, 2013 from <https://sites.google.com/site/compendiumofphysicalactivities>