Calorie Counting Worksheet

"Society measures our value as a person largely by our ability to control our natural and instinctive behaviour."
- DrP

Calorie counting is important. Weight loss is simply a matter of arithmetic: weight loss happens when energy-in is consistently less than energy-out. And the excess does not have to be large to have a large impact. Consider a person who eats one slice of bread more per day than they need to meet their daily energy requirement. One slice of bread contains approximately 100cal (~400kj). Over the course of one year that is an extra 36500 calories (146,000kj), which equals approximately 5kgs. Carrying that out 2, 3, 5 years, it is easy to see how the weight will creep up until it is out of hand.

Research shows that people who pay attention to the calorie content of their food lose weight, and that those who don't, don't lose weight. By the time you finish this worksheet you will know your resting metabolic rate (aka, BMR or RMR), your daily energy requirement (DER), and the energy values of the basic nutrients (carbohydrates, proteins, and fats).

Determining Daily Energy Requirement

Your daily energy requirement is an estimate of the amount of energy you need to perform your daily activities without gaining or losing weight. We estimate this value by summing BMR and LEE (Energy Expenditure associated with Lifestyle). Energy is measured in calories and in kilojoules.

Your BMR is the amount of energy per day needed to sustain your essential functions. Imagine that you laid in bed all day, relatively motionless. The amount of energy you burn is roughly equivalent to your BMR. The energy is used to maintain your heart rate, respiration, brain functioning, digestion, etc. Get your BMR from your doctor or get an estimate from drpendleton.com
BMR = _____ calories

Next, from Table_1 select the lifestyle that is most similar to yours. Identify the multiplier associated with that lifestyle and put it in the following equation to determine the calories you expend as part of your lifestyle:

BMR _____ X Multiplier _____ = LEE _____ calories

Table 1. Activity Levels and Associated Multipliers

Activity Level	Multiplier
Sedentary - inactive	.265
Light – teachers, housewives	.43
Moderate – farmers, light industry	.54
Very Active – full-time athlete	.65

Finally, sum your basal metabolic rate and your leisure-time energy expenditure to determine your daily energy requirement

BMR _____ + LEE _____ = daily energy requirement (DER) _____ calories

The DER is the number of calories you need each day to maintain your current body weight.

Table 2. Energy Content of Basic Nutrients

Nutrient	**Energy calories/gram**	**% from this nutrient**
Carbohydrates	4	60
Proteins	4	15
Fats	9	25
Alcohol	7	---

1calorie = 4.184kilojoules
7700cal = 32,217kilojoules = 1kg

Table 3 contains some examples of daily energy requirements (DER) computed for women of various sizes. Note how the DER goes down as weight goes down. The final entry is for a man of similar size. The value for the man is higher because men have more muscle mass. The resting metabolic rate (RMR) can be obtained from your doctor or can be obtained using the calculator at the website. The multiplier is taken from Table 1 and represents a 'lightly active' lifestyle. Lifestyle energy expenditure (LEE) represents the number of calories burned per day in support of the lifestyle. DER represents the amout of calories you need to eat in order to maintain your current body weight: not gain nor lose weight.

Table 3. Examples of Daily Energy Requirements (DER)

REE	Height	Weight (kg)	Sex	Age	BMI	Multiplier	LEE	DER
1569	5'6"	89	F	50	31.6	.43	674	2243
1665	5'6"	99	F	50	35.2	.43	716	2381
1761	5'6"	109	F	50	38.7	.43	757	2518
2057.5	5'6"	109	M	50	38.7	.43	885	2941