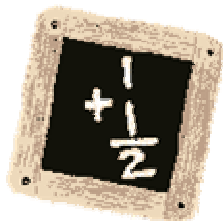


# SLIMMING MATH

## U.K. Version

Excerpt from TOTAL FITNESS – U.K. Edition by Vince Antonetti, PhD  
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Weight control researchers have established that to lose one pound of body weight requires that we eat 3500 kcalories less than we burn, creating what's called a kcalorie deficit. So if you know your total kcalorie deficit over some time period, you can calculate your weight loss.

**Example 1:** Assume a relatively inactive, 30 year-old woman weighing about 13 stone eats about 2500 kcalories a day and neither gains nor loses weight. Now suppose she goes on a 1500 kcalorie per day slimming diet.

Her daily deficit would be  $2500 - 1500 = 1000$  kcalories. In one week her deficit would be 1000 kcalories per day x 7 days = 7000 kcalories, and she should lose  $7000 / 3500$ , or two pounds.

This computation technique, however useful, is somewhat crude. Primarily because it does not account for a very important scientific fact: **As we lose weight we actually need fewer calories to maintain our lower weight.** As a result, if a dieter's calorie intake remains constant over some period of time, their calorie deficit will decrease during their diet and the rate at which they lose weight will also decrease with time. This effect becomes increasingly important with longer duration diets and as more weight is lost.

Only the Weight Loss Prediction tables found in TOTAL FITNESS – U.K. Edition (published by NoPaperPress.com) account for this phenomenon. But before we go further we need to discuss Activity Levels.

## Activity Levels

As soon as we move about, the activity causes our energy output to increase significantly above our basal level. Many experiments have determined the energy used during all kinds of activities. Scientists express the results in terms of kcalories used per pound of body weight per unit of time. To compute our total daily energy expended due to physical activity, therefore, would require that a diary be kept of the amount of time spent at each activity for an entire day. This is fine in a science lab, but in the real world it's impractical.

To overcome this problem, a number of years ago this writer devised a simpler measure of daily physical activity called the Activity-Level method. Essentially, to use this method, you make a judgment as to how active you are. Only two Activity Levels are covered in this article:

**Activity Level 1 - Relatively Inactive During and after Work:** This is self-explanatory. It applies to individuals who sit at a desk most of the day and engage in no after hours exercise.

**Activity Level 2 - Moderately Active During or After Work:** To qualify for this category, you would have to either have a physically strenuous job (such as a construction worker, postal worker delivering mail on foot, etcetera), or engage in some form of regular exercise everyday after work (e.g., taking a brisk three-mile walk, working out in a gym, and so forth).

Admittedly, this method has drawbacks but it's the most workable in practical, daily living situations.

## Weight Loss Prediction Tables

Scientists have long known that weight loss is a function of age, gender, weight, activity level, caloric intake and the duration of the diet. This writer related all these variables in a complex, scientifically based, energy-weight-control equation. The research was summarized in the paper, "The Equations Governing Weight Change in Human Beings" and published in the *American Journal of Clinical Nutrition*. TOTAL FITNESS – U.K. Edition contains a set of 12 Weight Loss Prediction Tables based on the afore-mentioned energy-weight-control-equation.

## Using the Weight Loss Prediction Tables

First determine your Activity Level using the guide on the previous page. Then find the Weight Loss Prediction Table that applies to you (from among the 12 tables located in TOTAL FITNESS – U.K. Edition. The use of a Weight Loss Prediction Table to determine your specific diet calorie options is best illustrated by an example.

**Example 2:** Charlotte is 42 years old, 5' 4" and weighs 12 stone. She has a sedentary job as a software engineer and spends most of her free time reading and relaxing in front of the telly. How long will it take her to lose one stone?

Considering her job and leisure-time pursuits, she decides on Activity Level 1 (Relatively Inactive). Next she selects the following Weight Loss Prediction table that applies to her.

### WEIGHT LOSS PREDICTION FOR WOMEN Ages: 36 - 55 yrs

(Relatively Inactive During and After Working Hours)

Present Weight	Diet Calories	Weight Loss Desired (Stone)										
		0.5	1.0	1.5	2.0	2.5	3.0	3.5	4.0			
9.0 st	900	24	50	78		Numbers in table indicate time in days to obtain desired weight loss.						
	1200	33	69	109								
	1500	52	111	182								
10.0 st	900	22	44	69	94							
	1200	28	59	92	128							
	1500	41	87	139	198							
11.0 st	900	20	40	62	84	109	134					
	1200	25	51	80	110	143	179					
	1500	34	72	113	159	211	270					
12.0 st	900	18	37	56	77	98	121	145	171			
	1200	22	46	71	97	126	156	189	225			
	1500	30	61	96	133	174	220	272	332			
13.0 st	900	17	34	52	70	90	110	132	155			
	1200	20	41	64	87	112	139	167	197			
	1500	28	54	83	113	147	187	227	274			

Then she scans the far left of the table and locates her present weight of 12 stone; from this number she moves a finger horizontally (to the right) until it intersects the vertical column headed by her 1.0 stone weight loss goal.

The three numbers at the intersection are the time in days for her to lose one stone, depending on the diet kcalories consumed. Specifically, to lose 1.0 stone our fictional female's calorie intake options are:

- 900 kcalories per day for 37 days.
- 1200 kcalories per day for 46 days.
- 1500 kcalories per day for 61 days.

Which alternative should she choose? Health professionals recommend a gradual weight loss of one to two pounds per week. The reason for the relatively slow weight loss is that you want to be on the diet long enough to understand and learn how much to eat, and how to eat properly.

To comply with accepted weight loss guidelines, therefore, she should choose a diet calorie level that will result in her losing the 1.0 stone over a 7 to 14 week period (49 to 98 days) pointing to the 1200 or 1500-kcalorie options. In the end, it comes down to deciding between the shorter term 1200-kcalorie diet or a longer duration somewhat higher 1500-kcalorie option.

## **Exercise and Lose Weight Faster**

Better still would be for this woman to increase her activity level by taking a brisk three-mile (5 km) walk everyday, and qualifying for Activity Level 2, the moderately active category. The weight loss prediction table for this case is not shown here but would result in the following shorter-duration diet options:

- 900 kcalories per day for 31 days.
- 1200 kcalories per day for 38 days.
- 1500 kcalories per day for 48 days.

Hence, by increasing her activity level, she could eat more, 1500 kcalories rather than 1200 kcalories and still lose one stone in about 48 days!

**The preceding excerpt is from:**

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