

A blue measuring tape is coiled in a loose spiral on top of a white digital scale. The scale has a black display screen and a black sensor pad. The background is a plain, light-colored surface.

What Is Weight Control and How Do We Obtain it

Mark Boyle

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People ask me, and others, what is weight control and how do we obtain it? so much so that I thought I would write an Article about this very question. Bodyweight control follows Newtonian Laws of Thermodynamics which were formulated several hundred years ago, yet we are still unsure about the whole Weight Loss issue. Our bodies have a very sophisticated system for converting one form of energy to another and Nature provides that energy for human beings in various forms.

Scientists have uncovered the processes by which the body converts chemical fuels into work, and govern biological energy conversions. Their studies have demonstrated the fascinating mechanisms by which organisms convert food to fuel, without an understanding of these guiding principles, we are prey to the hucksters with all their pills and snake oils and weight loss schemes.

Although the Laws of Thermodynamics for animal metabolism is totally accepted among scientists, there is a disconnect among the purveyors of weight loss pills and regimens who argue against the existence of these guiding principles. Obesity is so prevalent, it can be directly attributed to the many “scientists” and dietary liars who have failed to help people understand these guiding principles. Instead they have continued to profit through the sales of their miraculous, no-effort, free-lunch weight loss plans.

You Are Not Above The Law!

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In the World of weight control, you are the Judge, jury, and executioner. As the Judge, you are in control of how you eat, what is allowed in your diet and how it is chosen. Being the Jury, you must weigh the evidence provided by your bathroom scale, the tell of the tape, and if you are losing body fat, or lean muscle tissue. Then you must execute the plan and stick with it until the goals are met.

Weight control or maintenance is governed by the Laws, the calorie value of the food we eat, and used by the body, must be equal to the body's energy expenditure for body weight to remain constant. Therefore, the calorie value of food must be equal to the calories the body uses to perform work and to create heat that's lost to the environment for body weight to remain constant. Calories-in, Calories-out is the Law ,

Thermodynamics. When you fail to lose weight after cutting calories there is only one of two explanations, your math skills suck, and you are miscalculating calories consumed, or Metabolic Adaptations have occurred and you have miscalculated the proper amount of calories needed. Here is the rule of weight control, Body weight will remain unchanged if the calories you eat match the calories you burn. end of story.

Ignorance Of The Law Is No Excuse

Eat more than you burn and you gain weight; eat less and you lose weight. Whatever calories you eat in excess of what you need whether fat, carbohydrate, or protein are stored as fat. Let's do some math, 3,500 extra calories will make a pound of fat, it may varies with body fat percent, but this is the norm.

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So, only 10 extra calories daily are stored as fat, leading to a fat increase of 1 pound each year. But what if we eat 100 calories more each day? well, that's approximately 1 pound per month, wow 12 pounds a year, every year. If this continues for 20 years, you can expect to become very fat, on the upside, this math works in reverse as will. But wait, you say, "I want to lose 10 lbs per week like when I started my New Fad Diet, I have a New outfit for the summer, and I have to lose weight faster". Sucks to be you, but, the Law does not care if you are late to work, Right? you still get a Speeding Ticket.

The Law of thermodynamics will always be followed within the bodies physiology, the same as your bodies temperature will be 98.6 degrees. When your body temperature rises, your nervous system gives your sweat glands the Okay, and moisture appears on your skin, where it will eventually evaporates, cooling you down in the process. This is something you Cannot Control, even if you hate sweating and have a New Outfit on.

When we start on a New Diet, any Diet, the first weight loss is water, not fat, so we end up thinking that we will consistently lose 10 or more pounds per week. This misunderstanding will lead to frustration and confusion, while acceptance of the Laws that govern weight control, will lead to real weight loss.

Here Comes The Judge!

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Just like a Judge presiding over a Court of Law, you must preside over your dietary Proceedings as well. To do this, you will need an understanding of the Law, and how it is applied within the Courtroom, your body. With that said, Do You Know How Many Calories You Need Per Day? This is critical evidence needed, so let's figure it out, shall we? The Total Daily Energy Expenditure (TDEE) of an individual comprises three parts 1. Resting Metabolic Rate (RMR) 2. Thermic Effect of Food (TEF) 3. Voluntary Physical Activity (PAL)

1. RMR, Resting Metabolic Rate, remember when teachers would say math may save your life someday, well we have calculators now. So grab your calculator and let's save our lives, and remember, Judges Don't Cheat. You'll need to make an accurate measure of your weight and height. Let's assume that figuring out your sex and age is easy, well maybe not these days. Once you have these four pieces of information, we will figure out your RMR.

- 1. Convert your weight in pounds to kilograms (kg) by dividing your weight in pounds by 2.2.
- 2. Convert your height in inches to centimeters (cm) by multiplying your height in inches by 2.54.
- 3. Pick the appropriate formula for your sex (M = males, F = female).

M	RMR=	$(9.99 \times \text{weight (kg)}) + (6.25 \times \text{height (cm)}) - (4.92 \times \text{age}) + 5$
F	RMR=	$(9.99 \times \text{weight (kg)}) + (6.25 \times \text{height (cm)}) - (4.92 \times \text{age}) - 161$

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First do the 3 multiplications, the ones in (brackets), Follow the multiplication steps by the additions and subtractions. Once completed, you'll have an estimate of your RMR in calories a day. These formulas are very accurate. For most people, they predict RMR within 5% of that measured in a laboratory. Example Dude: 6'2" 45 year old 200 Lbs Male

200 pounds divided by 2.2 = 90.91 kilograms times 9.99 = (908.18)

6 feet times 12 inches in a foot = 72 + 2 = 74 times 2.54 = 187.96 times 6.25 = (1174.75)

45 years old times 4.92 = (221.4)

So, $908.18 + 1174.75 - 221.4 = 1861.53$ RMR this is what it takes for our Example Dude to live

There are plenty of these calculators online, but doing this is quite easy, and private, this is the most critical part of your metabolism. the RMR, this is the first step in gaining control over your body weight.

2. TEF The digestion of food consumes calories, "Back in the Day" the calories burned during food digestion was called Specific Dynamic Action. The modern terminology is the Thermic Effect of Food or TEF. It is well known that TEF accounts for about 6-10% of the Total Daily Energy Expenditure. TEF is relatively constant and not easily changed. Therefore there's no need to spend our time exploring TEF, Yea, no Math.

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2. PAL Physical Activity Level, is the most variable. And it's under your control, unlike RMR. You can choose to move or not to move. Let's take a look at just how much you move, and how more math can help. There are a few ways to determine how many calories you burn each day doing stuff. One is getting hooked up to the machine and breathing into a hose for 30 minutes, Boreing!!! Or you can measure TDEE by the doubly-labeled water technique. These techniques require a Laboratory and, oh yeah, money. So we are stuck with math...again.

The purpose behind these calculations is to help you understand that there are Laws in operation Your Honor, yes you are still in your Judges Robe. These Laws as mentioned determine your bodyweight. When you thoroughly understand the Laws, you'll be free of the bondage that has been created by the confusion and misinformation sold to us by a multi-billion dollar weight loss industry. These Laws are as Rock Solid as the fact that water freezes at 32 degrees.

TDEE Total Daily Energy Expenditure is the final results that we seek for True and Accurate Weight Control. World Health Organization in 1985 expressed the calorie needs of adults as multiples of RMR (Resting Metabolic Rate). The expert committee on energy requirements came up with the formulas, and has been shown to be spot on, and it saves us from building a Laboratory in our garages, so let's take a look. These are for light, moderate, or heavy occupational work, respectively, meaning both male and female because if you remember the RMR formula was different for M or F.

For Men are 1.55 Light, 1.78 Moderate, and 2.10 Heavy, times RMR.

For Women 1.56 Light, 1.64 Moderate, and 1.82 Heavy, times RMR.

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Example Dude above has an RMR of 1861.53, so let's do this, 1861.53 times 1.55 = 2885 for Light Work and is His TDEE

As a result of the studies completed over the last 20 years, we can accurately predict RMR, Resting Metabolic Rate, and with that we know our Total Daily Energy Expenditure by using the mathematical formulas. See, math is cool...sometimes.

The Jury Is Out!

As the jury, you need to pass the verdict, but only after great deliberation. To decide, here are the facts on TDEE:

- Bicyclist in the Tour de France, had a TDEE (Total Daily Energy Expenditure) of 4.7 X RMR during the 21 days of the bicycle race.
- Athletes involved in sled hauling across the Arctic, achieved a TDEE of 4.5 X RMR during a 20-day event.
- In a study of male Nordic skiers, a TDEE value of 3.5 X RMR was the calorie burn of cross-country skiing.
- Soldiers, indicate an energy output of 4,300 calories a day. This is a TDEE of 2.4 X RMR.
- Calorie burning for lumberjacks, is 4,665 calories a day TDEE = 2.6 X RMR This level of calorie burning is sustainable because these workers do it year after year as part of their employment.

So my question to the jury is this, do any of those activities sound like your average day? Most Folks will answer, NO, so what should you use as a multiplier? I would recommend 1.55 for men, and 1.56 for the ladies, as a Starting point unless you really do work that hard, it's up to you, the jury.

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Google this shit, or Buy a book listing the calorie content of all the foods you eat, you are not trying to become a Chef, so this should be a short list. Use your RMR and do the math to get your TDEE, or Total Daily Energy Expenditure as a starting point. Eat that number of calories each day, weighing yourself every day, and record these values on a spreadsheet, or just write it down. You want to do this for at least one week, or two weeks, if the calories that you eat matches the number you're burning, your weight will remain stable.

For Example Dude, we calculated his Total Daily Energy Expenditure (TDEE) is 2885 calories a day for light work. With his Google List of calories in foods, he starts to consume 2885 calories a day. At the end of one week, his scale shows that he gained 1/2 pound. This is equivalent to an extra 1,750 calories based on 3500 calories = 1 Pound, intake above his calorie needs for the seven-day period.

So Example Dude Divides 1750 by 7. This equals 250 calories a day. For the next week, Example Dude makes adjustments by subtracting 250 calories from the 2885 calories that he was eating. For the second week of his experiment, he eats 2635 calories a day. At the end of the week, he evaluates whether his weight has increased, decreased, or remained stable.

If after 2 week, your weight is stable, you're Golden, but if it went up, remember that 3500 calories equals 1 pound, so let me do the math differently than Example Dude, I have my calculator out. If you gained 1 pound in 2 weeks, you ate an extra 3500 calories, or 250 per day or 83 per meal, based on 3 meals per day. Now get your list and find that 83 calories you ate at every meal, and remove it, this can be done easily by eating smaller portions or dropping that medium Soda at every meal, done and done.

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It really is this simple once you get your number in order, but whatever you do, DO NOT use calories based on net carbs, it is a Horse Shit Scam, and will take you longer to dial in your number. Why? because you are magically removing carbs from the mix and maybe the calories as well, because it's magic, we don't know. Whether you believe in Net-Carbs or Not, you can not get accurate TDEE using flawed calorie numbers, stick with the facts, and what is known at first.

The Executioner Has Arrived!

I love the low-carbohydrate diet. If you follow the LCHF as I do, one of its features is that it causes diuresis (loss of water). This early water loss can be significant. And, water loss is one of the key features used by promoters of the low-carbohydrate diet to sell their program.

Do not get confused, it's not fat loss; it's water loss. Therefore, if there's a significant loss of water weight, it'll be difficult, during the first few weeks, to use the technique we discussed for your calorie needs. After several weeks of low-carbohydrate eating (or any diet), water balance returns to normal. If you are new to weight control and a LCHF Diet, find out where you are today, first, so you'll know where you are as time continues with this whole weight control thing.

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All of the evidence has been presented, the math has worked out and you have found your true Total Daily Energy Expenditure, it's time to Execute your Plan for Weight Control.

If you stay on track, and use the math to keep your calories Balanced, you can lose, or gain weight at will. I hope this helps solve the mysteries shrouding diet, and weight control, I know for those that continue, and remain steadfast with this, it will. I know because this works for me, and I live the LCHF way of life. If you avoid all the BS, stop looking for all your favorite foods you miss, and just look at it like buying gas at the fuel pump, get the fuel you need and move on, you will remain in Control.

Much of the data in my Article is from Dr. Ellis's Ultimate Diet Secrets, and based on his research, he is a Doctor, I am Not. I wrote this Article to force myself to gain a better understanding of weight control and why it has worked for me for the last 3 years. Simplifying the concept helps me get my head around the information, and it is my hope this short overview helps you as well. Get Dr. Ellis's book [here](#) for a true immersion into this Study.

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