

# LIFT

By Leanne

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HOW TO CALCULATE YOUR CALORIES TO ACHIEVE YOUR GOALS

**Flexible Dieting & Calories - A How to Guide - By Claire Byrnes**

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## WHAT ARE CALORIES?

Calories are a unit of energy used by the body to complete everything from moving, sleeping, regulation of hormones, pump blood. Absolutely everything your body does internally and what you can see externally is done by the body using energy

Calories can be used (burned) to produce movement and a host of other body functions and they are consumed from food and drinks.

We all need this energy to live and stay healthy. Everything we do relies on the energy that comes in the form of calories.

## ENERGY BALANCE-CALORIES IN VS CALORIES OUT

### What is Energy Balance?

Energy is another word for "calories." Your energy balance is the balance of calories consumed through eating and drinking compared to calories burned through physical activity.

What you eat and drink is ENERGY IN. What you burn through physical activity is ENERGY OUT. (CICO - Calories in, Calories out)

Changes in Weight comes down to one key equation and it looks like this:

$$[\text{Energy in}] - [\text{Energy out}] = \text{Changes in body stores}$$

In other words:

When you take in more energy (or calories) than you burn, you gain weight

When you take in less energy than you burn, you lose weight.

When you take in the same energy as you burn, you maintain.

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## STATES OF CALORIE BALANCE

Calorie balance is by far the most important principal of any diet and has the biggest effect on the outcome of your diet whether that is to lose, gain or maintain weight.

It has the greatest impact on how much muscle you can gain and how much fat you can lose over a period of time.

There are three states of Calorie balance:

1. Deficit/Hypocaloric - This is where you use/burn more calories that you consume which will result in weight lose. Because the calories being used to produce energy for everyday functions are not sufficiently supplied for by food intake, stored calories from various tissues e.g fat and muscle must be burned to make up the difference. A negative calorie balance will always result in weight loss.
2. Surplus/ Hypercaloric - This is when there is more energy being consumed through food and drinks than is been used by the body to complete and processes or movement. In this situation the extra consumed calories are stored, in order of prevalence, as fat, muscle and glycogen. The result would be muscle or fat gain
3. Eucaloric/Maintenance - This is when a person's intake of calories through food or drink is the same as the level of expenditure in relation to everyday activities and bodily processes, and therefore they maintain their weight

## THE MACRONUTRIENTS

**PROTEIN** - For every 1g of protein you ingest there is 4 calories.

Protein is widely known as the most important of the macronutrients when it comes to body composition. Protein also has 20 EAA and 9 of these can not be produced by the body so we need to get it through our food.

If you are in a surplus, you want enough protein to make sure you are building & repairing muscles gained from training and not gaining too much fat. When you are in a deficit you want to make sure you are ingesting enough protein to make sure you are maintaining as much muscle as possible while losing fat. In essence, protein both builds new muscle and saves existing muscle from being lost.

Not only is protein important for overall body composition but it's also leaves you feeling fuller for longer, (which you want to maximise on especially if you are in a deficit), it can improve recovery from training session, it increases lean body mass and actually has a thermic effect which means your body uses more energy to break protein down (over the carbs and fats) for its intended uses and therefore more energy burned means more calories burned.

From years of research, it has being noted time and time again that the optimal daily intake of protein is between 0.8 - 1g per lb of body weight. E.g if you weigh 120 lbs then 120g of protein a day is a area to start. If you stray too far from this, your success in building muscle in a surplus and sparing muscle in a deficit is reduced.

Also protein is very important as we age, as not incorporating enough into our diets can contribute to Sarcopenia. Sarcopenia is the progressive loss of skeletal muscle mass and strength which you usually see in older generations, and can lead to physical disabilities and poor quality of life, this is why i will be eating all the protein and lifting weights until im 90 or physically just can't do it anymore :D

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## Carbohydrates

For every 1g of Carbohydrate you ingest there is 4 calories. The primary role of carbohydrates is to provide energy and if you are training this is very important. When completing high intensity workouts, the primary fuel used is a stored carbohydrate called Glycogen. If your glycogen levels are low, hard workouts can become increasingly difficult to complete and or impossible to complete with intensity as fatigue may set in quicker.

The benefits of carbohydrates don't end there.

1. It supplies the nervous system with its preferred source of fuel, which allows for optimal nervous system functions, meaning better muscle recruitment & less fatigue during training session.
2. Refuels glycogen stores and contributes to muscle protein synthesis (growth or tone). Low glycogen levels can hinder muscle gain and increase muscle loss.

From the perspective of body composition, chronically dipping too low in carbohydrate intake can lead to poor acute workout performance, poor direct and indirect muscle growth, and uncontrolled expansion of accumulated fatigue.



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## Fats

For every 1g of fat you ingest there is 9 cal attached to it.

Other than being tasty and delicious, dietary fats have several important roles in the body. Fats serve as the basis of many hormones and if you are lacking in adequate fat for too long you may have some adverse effects to hormones e.g decrease in testosterone, effects to menstrual cycle.

Fats have a few combinations of properties that make easier to reach calories targets such as the following:

1. They are highly palatable
2. They are easy to consume
3. They are good for health & hormone regulation. Monounsaturated fats have being shown to be exceptional for general health
4. They are calories dense e.g 9 cal per gram. A tablespoon of olive oil has more calories than a banana so if you are too full to eat and need to hit those calories, what's easier? Putting 2-3 tbsp of oil on your next meal or eating a 3 bananas

Fat is an essential nutrient that must be consumed in at least the minimal quantities for health and body composition. However, once those requirements have been met, fat becomes the least important nutrient of the 3 macros. It does not provide the predominance of energy for hard workouts, it doesn't directly support recovery or repair, and it does not form the building blocks of muscle tissue as do carbs and protein.

For this reason, fat intake is the most widely manipulated macronutrient in a diet, However for the proper functioning of hormones i would recommend never allowing your grams of fat per day to go below 20% of your TDEE ( Total daily Energy expenditure).

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## HOW TO CALCULATE CALORIES & MACRONUTRIENTS

Before we get into on how to calculate your calories to reach your goal, i want to make it clear that whatever calculation you use, the results are estimates with varying degrees of precision. Some peoples weight will start to change immediately and for others it takes a bit of trial and error to find the most suitable calories for them. Be prepared to make adjustments, stick with it & be consistent.

In relation to weight loss & gain, i would recommend losing/gaining an average 0.5 - 1 kg or between 1-2lbs a week. This is more sustainable in the long run, it means you won't have to be too aggressive with your deficit or surplus. If you go too aggressive you will lose more muscle mass than you want in a deficit and if in a surplus you will gain more fat that you want. Also not to mention if you go too aggressive this can lead to too much restriction resulting in bingeing and it can have adverse effects on your metabolism. This will result in metabolic adaptation where your body will make you (unknowingly) slow down to stop you exerting energy and burning more as a sort of defence system to stop you losing more weight, and if that happens on an aggressive diet of 1200 calories, are you really gonna drop to 1100 and then maybe 1000 and less!! Doesn't sound like much fun, does it. Not only will this affect health but can you imagine how much crack you'd be at social events, family dinners, wedding! - TAXI FOR 1 PLEASE!!

There are a few calculators online that are easy to find, but i am going to give you a easy calculation to use as a starting point but also one that's a little more detailed called the Harris Benedict formula.

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## HOW TO CALCULATE CALORIES & MACRONUTRIENTS

### For weight loss

Your weight in LBS x a range of 10-12

E.g if you are 120lbs

- $120 \times 12 = 1,440$  calories - a good starting point & not too restrictive
- $120 \times 11 = 1,320$  calories - a little bit more aggressive
- $120 \times 10 = 1,200$  calories - quiet aggressive and wouldn't recommend as first option

Harris Benedict Formula - a little more detailed but potentially more accurate

The first part of this equation is to calculate your BMR. BMR stands for Basal Metabolic rate and this is the amount of energy your body needs just to run basic process and to "keep the lights on" daily.

For Men:

$10 \times \text{weight (KG)} + 6.25 \times \text{height (CM)} - 5 \times \text{age (y)} + 5 = \text{BMR}$

For Women:

$10 \times \text{weight (KG)} + 6.25 \times \text{height (CM)} - 5 \times \text{age (y)} - 161 = \text{BMR}$

Once you find your BMR its time to find your TDEE - Total daily energy expenditure. This will then calculate what you energy you expended for the whole day when you add exercise/extra activity to the mix.

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To find your TDEE you must select the appropriate activity level and multiply your BMR by the same. The activity level multipliers are broken down as follows:

Sedentary (little or no exercise) : BMR x 1.2

Lightly active (light exercise/sports 1-3 days/week) : BMR x 1.375

Moderately active (moderate exercise/sports 3-5 days/week) : BMR x 1.55

Very active (hard exercise/sports 6-7 days a week) : BMR x 1.725

If you are extra active (very hard exercise/sports & a physical job) :BMR x 1.9

E.g 26 year old woman, weighs 79kg, height 165cm, lightly active

$$10 \times \text{weight (KG)} + 6.25 \times \text{height (CM)} - 5 \times \text{age (y)} - 161 = \text{BMR}$$

$$10 \times 79 = 790$$

$$6.25 \times 165 = \underline{1031}$$

$$1821$$

$$5 \times 26 = \underline{(130)}$$

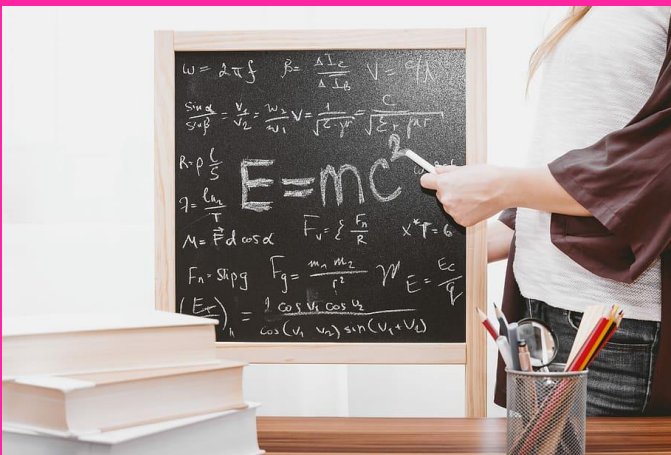
$$\underline{1691}$$

$$\underline{(161)}$$

$$\underline{1530} - \text{BMR}$$

$$\times \underline{1.375} - \text{activity level}$$

$$\underline{2104} - \text{TDEE.....but wait, we ain't done yet!}$$



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Now that you have calculated your TDEE, you now need to either add or subtract an amount to/from the TDEE to get your calorie surplus or deficit

As mentioned previously the optimal rate of weight loss is 0.5-1kg a week or 1-2 lbs a week. In a deficit i would recommend starting on the smaller and then increasing after 2-3 weeks only if you have being consistency & accurate with your tracking for the whole 2-3 weeks, there has not been change to either or the scales, measurements and pictures and that you there are no other lifestyle factors potentially affecting your progress e.g menstrual cycle, stress & sleep - all the above will essentially have an effect on your progress.

For a deficit i would recommend starting off on 300 calories.

So using the example above of a TDEE of 2104.

$$2104 - 300 = 1804 - \text{deficit calories}$$

From here you need to calculate the breakdown of Macronutrients into Protein, Fats and Carbohydrates.

You may remember previously i mentioned that the optimal daily intake of protein is between 0.8 - 1g per lb of body weight. I generally use the lower end because depending on the person's weight, 1g can be a lot of protein and is very hard for a lot of people to hit. So continuing with the above example:

79kg is approx 174lbs - Protein would be 143g of protein a day (174 x 0.8)

Multiple x 4 to get the calories of total protein, because as previously mentioned for every 1g of protein you ingest there is 4 cals

$$143 \times 4 = 574 \text{ calories:}$$

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Fats can be calculated with a range of 25% -30% of your TDEE. so with our female above here fat calculation would go as follows:

$$\text{TDEE} - 2104 \times 25\% = 526 \text{ calories}$$

To get the grams from this, you simply divide the 526 by 9 - Why 9?  
Because 9 is the total amount of calories per 1g of fat ingested.

$$526/9 = 58\text{g of fat a day}$$

\* also a reminder don't go lower than 20% of your TDEE for fats for hormone health

Carbohydrates - To find the grams of carbs for the day, you need to get the balance that is left over after you add the calories from fat and protein together and minus them from the total deficit calorie amount. From here you then divide that amount by 4 (again 4 cals per 1g of carb ingested) to get the grams of your daily carb amount. I know that sounds a bit confusing so let me break it down here still using the previous calculations above.

Calories from Protein:	574
Calories from Fat:	<u>526</u>
	<u>1100</u>
Total calorie Deficit	1804
Minus cals from F & P	<u>1100</u>
	704



Total calories allocated to Carbs - 704  
Total Grams allocated to carbs - 170 (704/9)

To make sure this is correct, all the grams should add up to the calorie deficit amount of 1804.

$$574 + 526 + 704 = 1804$$

Protein = 143g , Fats - 58g, Carbs = 170g.

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## WHAT'S MORE IMPORTANT? - CALORIES OR MACROS

Technically you can hit your goal by just focusing on the calories and not worrying about the individual macronutrients, after all you are in a calorie deficit or surplus, not a macronutrient deficit or surplus.

However, I would recommend at least trying to make an effort at hitting your protein target on a daily basis for all the reasons mentioned in the protein section above. Getting adequate protein will spare more lean muscle tissue which results in more fat loss & has been associated with decreased incidence of weight regain as well as better maintenance of metabolic rate.

You can then chop and change between your fats and carbs. If you go over on your carbs one day, by default you are usually under on your fats and vice versa e.g. cheese is all fat, no carbs & bread is mostly carbs and no fat. Protein is your best friend when it comes to feeling full, maintaining and repairing muscles and having the biggest effect on overall body composition.

How your energy is distributed into your macronutrient breakdown can affect how much weight loss occurs from body fat versus lean body mass.



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## EATING OUT AND GUESSTIMATING

### MY TOP TIPS FOR EATING OUT/TAKEAWAYS

1. Have a look at the menu, a few days prior if possible
2. Overestimate by at least 30% to account for oils, butters, sauces or other items you maybe be unaware of been used in the cooking/prep process
3. Enter the items/ingredients individually if possible and don't use generic MFP inputs.
4. Search products from online shopping e.g Tesco's, Dunnes etc and enter them into MFP
5. Hold back a few calories for a few days leading up to it and "bank" calories for the weekend
6. Enter what you are having into MFP first and work the rest of your day around the balance of the calories left over.
7. Don't stress it too much if you underestimated a bit, enjoy the food and know your did your best.



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## OTHER FORMS OF MEASURING PROGRESS

If you are tracking calories along with a resistance training program, I cannot stress enough how important it is to take photos on a bi weekly basis and measurements. If you are new to resistance training and/or proper programming with progressive overload been implemented, you may benefit from Newbie gains.

Newbie gains is when a person with little to no previous weightlifting experience starts training intensively and this can result in the rapid increase in muscle and strength. These people can also gain very little fat or even lose fat while gaining muscle. In this situation, you may not see the scales move downwards, and sometimes it may even go up, but your whole body composition might change. Fat and muscle weigh the same but muscle takes up less space than fat.

Below is a client of mine who did a 6 week program, with proper programming, was eating approx 2000 calories a day and the scales didn't change but as you can see her whole body composition changed.



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## WHAT HAPPENS NEXT?

You have reached your goal weight or desired body composition woووоо hoooo! Well done! So now you just stop everything you've been doing and go back to what you were doing previously right! I mean that's it, you have reached your end date. Ah no.

Unfortunately this is not the case but for so many it is and once you go back to old behaviours, the weight is regained and the hard work you have put in is gone down the drain. When we regain weight and especially if it's regained quickly, we not only refill the fat stores that were shrunk in the deficit but you can potentially create new fat stores, and if this happens several times (yo yo dieting), not only will this make weight loss in the future harder, resulting in more extreme dieting measures but it can also have adverse effects on your metabolism and your relationship with food.

If your goal was to lose a certain amount of weight by using a deficit, then at some stage you need to come out of that deficit and get back to maintenance calories. Being in a deficit long term is not good for your overall health, metabolism, hormones and can contribute to "diet fatigue", and this can result in bingeing, leading to a binge restrict mentality with food.

To find your maintenance calories, go back to the Harris Benedict formula above and complete it with your new weight and stop once you get to the TDEE. This is going to give you a good estimate of your maintenance calories.

To avoid gaining weight rapidly I would recommend slowly increasing your calories on a bi-weekly basis by approx 50 cals a day/ 350 cals a week in the form of carbohydrates. Keep tracking weight and calories and if your weight is pretty similar within 2 weeks, then increase by another 50 cals a day until you get to a point where your weight actually starts to increase. You will then have reached maintenance calories



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## ITS A LIFESTYLE NOT A DIET

It has been shown that successful dieters have a certain amount of the same characteristics

**Extrinsic motivation:** They want to look and feel good about themselves. They want to feel good in their clothes and body confident. Some call it cocky, i call it having confidence in yourself.

**Intrinsic motivation:** Not only do they want to look good on the outside but they want to feel good on the inside, have a healthy heart & other organs. Have good cardiovascular endurance, low BP, low cholesterol etc.

They **accommodate for special/social events** - wedding, birthdays, nights out. Xmas etc - in general you know there are some events that are coming up and/or happen every year, so we are all well able to plan ahead for these events by making adjustments to our calories the week/s before hand, resulting in enjoying said events without feeling guilty

**Meal Prep** - I am not talking about having your fridge full of plastic containers of food either, although this is also an option and i do it from time to time, but i am referring to knowing what you are buying in the groceries for the week and what you are having on a daily basis.

Take 5-10 mins before you go grocery shopping and make a plan. If you think this is boring, think of it like creating a menu for the week and have something different everyday and of course i am a big advocate of having some "fun stuff" every day. A big cup of Barrys tea and chocolate or some sort of sweetness is a must in my house after dinner everyday

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Don't label foods as good or bad - There are no foods that are inherently bad for you. Would i recommend eating 5 bags of taytos and a cake everyday? Absolutely not and this is just common sense but allowing yourself the flexibility in your diet to have the "fun stuff" when you want it and keeping it in your calories, means you can still reach your goals while enjoying the things you like to eat.

Practice willpower and a certain level of restriction - Now if you know me or follow me on social media, you know i don't restrict foods. I have takeaways and pizza and sweets, ice cream all the time but i do also have to practise willpower at times.

If i were to give into every craving i had every time i looked at that jar of nutella in my press, id never be able to maintain or lose weight. I have to remind myself "no claire, you have your fun stuff later this evening, now walk away from the nutella" and while we all fall off the wagon from time to time, if we do not practise some level of willpower we will never reach our goals. It can be a hard one to achieve for some people but the more you practise it the easier it gets. It's a habit that's worth practicing in the long run

DON'T HAVE AN END DATE - this is a major issue which leads to yo yo dieting. You say to yourself, right i am going on a holiday in 3 months and go on a drastic diet to lose weight and when you get there that's it, you start eating like you did before and the weight piles back on.

That's why it's important that this is your lifestyle. There is no end date, set yourself a goal and when you get there set yourself another one, even if that goal is just to maintain what you have achieved.

Engage in the above behaviours, learning new good habits and continuing to use them throughout your life is what will make you reach your goals and maintain them.

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