

# MACRO COUNTING 101

Macronutrients, or "macros" for short, are the things that food is made up of: protein, carbohydrates, and fats. They are the only things that provide our bodies with calories (a.k.a. energy) and each macronutrient will affect how you feel, how food tastes, and so much more. Alcohol is technically another macronutrient that provides 7 calories per gram but we will not focus on that one.

Here's a simple breakdown of each macronutrient:

**PROTEIN:** each gram of protein you eat provides 4 calories of energy. Protein is the building block of muscle, keeps you satiated, and helps maintain good body composition. If you want to gain some sweet muscle, you'll likely need to increase your protein intake. Aim for 1.6-2.4 g/kg (0.73-1.10 g/lb) of body weight. And despite popular bro science, you won't pee out any extra protein you eat and a high protein diet is safe for your kidneys.

**CARBOHYDRATES:** each gram of carbohydrates also provides 4 calories of energy. Carbohydrates are the fuel for your workouts, help you recover, keep digestion moving, and are freaking delicious. Carbohydrates are definitely NOT the enemy, especially if you like to do high-intensity workouts like HIIT classes, strength training, or Crossfit.

# MACRO COUNTING 101

**FAT:** each gram of fat you eat provides 9 calories of energy. Fat is essential for a happy thyroid and hormone profile, a regular menstrual cycle, good digestion, and makes food very tasty.

Micronutrients are vitamins, minerals, fiber, sodium, and everything else that we need in smaller amounts to keep our body running smoothly, literally and figuratively.

## SETTING UP YOUR MACROS

If you are a nutrition coaching client, you will have your calories and macronutrients set up for you in the Cronometer app. You will receive an email inviting you to sign up for Cronometer from me. You will get access to the Gold version with all the features unlocked and no ads at no extra cost to you.

If you have any questions about why you have your specific calories and macronutrient goals, please ask me. I would love to help you understand the "why" behind your specific calorie and macronutrient targets.

If you want to set up your own calorie and macronutrient goals, the following pages show you every step so you can figure everything out for yourself and update your targets as you progress.



# HOW DO WE BURN CALORIES EACH DAY?

## BASAL METABOLIC RATE

Basal metabolic rate (BMR) is where we expend most of our energy, a.k.a. calories. About 50-70% of the calories we burn each day comes from our BMR so we can breath, carry out necessary body functions, and maintain our current weight without sacrificing precious muscle mass. Basically, your BMR calories would be equivalent to a day where you were awake and but didn't move at all.

Remember that your basal metabolic rate is the **necessary** amount of calories needed for your body to function properly. I never recommend that anyone eat just the amount of calories equal to their basal metabolic rate. You should always eat several hundred calories above your basal metabolic rate so your body can function properly.

The following equations will give you an idea of what your basal metabolic rate is. If you don't have access to expensive body scanners or laboratory equipment, then these are pretty good estimates of your basic calorie needs.

# HOW DO WE BURN CALORIES EACH DAY?

## THERMIC EFFECT OF FOOD

Your body also uses a relatively small amount of calories to process, digest, and transport the food in your body. This is called the thermic effect of food or dietary thermogenesis.

Every food has a different thermic effect because each food has a unique combination of fats, carbohydrates, and protein.

But we do know that protein has the highest thermic effect of all the macronutrients with carbohydrates coming in second and fat with the lowest thermic effect.

This is why high protein diets result in greater fat loss and better improvements in body composition, even if calories are equal.

The Cronometer app has a function where you can add the thermic effect of food to your daily caloric balance based on the foods you log throughout the day. If you are interested in looking at the thermic effect of your food, go ahead and turn it on but I would not use this as a way to achieve a caloric deficit.

Find this in the "Energy Settings" →

Thermic Effect of Food (TEF) ⓘ

TEF is an estimate of the energy needed to digest your food. Select this option to dynamically update your calories burned based on the food logged to your diary.

# DETERMINING YOUR BASAL METABOLIC RATE

We will use the average of two calorie equations to determine your basal metabolic rate then add calories for your general activity level and exercise.

If you have access to a body fat scale, enter the value here. If not, go to the next page and use the tape measure method for determining your body fat percent.

## INFO NEEDED FOR CALORIE EQUATIONS

<b>WEIGHT</b>	
<b>HEIGHT</b>	
<b>AGE</b> (years)	
<b>BODY FAT %</b>	

# DETERMINING YOUR BODY FAT

## FINDING YOUR BODY FAT USING A TAPE MEASURE

If you don't have access to a device that can accurately measure your body fat for you, you can use a flexible measuring tape to estimate your body fat percent. This is the same method the Navy Seals use to determine body fat percent. [This study](#) has shown that the Navy Seal method is similar to other methods of measuring body fat.

Please use the appropriate equation if you were assigned female at birth or assigned male at birth

Note: the Navy Seal method will slightly overestimate your body fat percent and muscle mass. The difference isn't significant but you might get different values if you use another method for measuring body fat percent.

If you want the most accurate measurement, take the measurements 2-3 times and take the average.



# DETERMINING BODY FAT FOR WOMEN

## INFO NEEDED FOR BODY FAT FOR WOMEN

<b>NECK CIRCUMFERENCE</b> (inches, at narrowest point)	
<b>WAIST CIRCUMFERENCE</b> (inches, at narrowest point)	
<b>HIP CIRCUMFERENCE</b> (inches, widest part of glutes)	
<b>HEIGHT</b> (inches)	

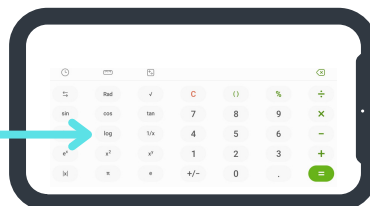
### WOMEN

#### NAVY SEAL EQUATION FOR BODY FAT PERCENT

Enter the equation just like this into your phone/calculator with the parenthesis

$$163.205 \times \log(10 \times (\mathbf{WAIST} + \mathbf{HIP} - \mathbf{NECK})) - 97.684 \times \log(10 \times \mathbf{HEIGHT}) - 78.387 = \mathbf{BODY FAT \%}$$

LOG



Quick tip: turn your phone horizontally to access the "log" function for the equation.

# DETERMINING BODY FAT FOR MEN

## INFO NEEDED FOR BODY FAT FOR MEN

<b>NECK CIRCUMFERENCE</b> (inches, at narrowest point)	
<b>ABDOMEN CIRCUMFERENCE</b> (inches, around naval)	
<b>HEIGHT</b> (inches)	

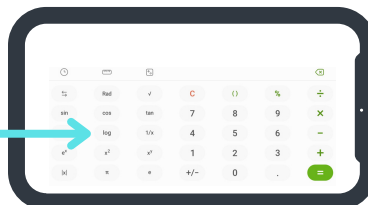
### MEN

#### NAVY SEAL EQUATION FOR BODY FAT PERCENT

Enter the equation just like this into your phone/calculator with the parenthesis

$$86.010 \times \log(10 \times (\mathbf{ABDOMEN} - \mathbf{NECK})) - 70.041 \times \log(10 \times \mathbf{HEIGHT}) + 36.76 = \mathbf{BODY FAT \%}$$

**LOG** →



Quick tip: turn your phone horizontally to access the "log" function for the equation.



# MIFFLIN ST JEOR BMR EQUATION FOR WOMEN

## INFO NEEDED FOR MIFFLIN ST JEOR

**WEIGHT** (kilograms)

**HEIGHT** (centimeters)

**AGE** (years)

## CONVERSIONS FOR THE AMERICANS

Here are some quick conversions from imperial to metric

**WEIGHT IN LBS x 2.2 = WEIGHT IN KG**

**HEIGHT IN INCHES x 2.54 = HEIGHT IN CM**

## WOMEN

### MIFFLIN ST JEOR FORM FOR BASAL METABOLIC RATE

Enter the equation just like this into your phone/calculator with the parenthesis

$$(10 \times \text{WEIGHT}) + (6.25 \times \text{HEIGHT}) - (5 \times \text{AGE}) - 161 =$$

**MIFFLIN ST JEOR BASAL METABOLIC RATE**

# MIFFLIN ST JEOR BMR EQUATION FOR MEN

## INFO NEEDED FOR MIFFLIN ST JEOR BMR

<b>WEIGHT</b> (kilograms)	
<b>HEIGHT</b> (centimeters)	
<b>AGE</b> (years)	

### CONVERSIONS FOR THE AMERICANS

Here are some quick conversions from imperial to metric

**WEIGHT IN LBS x 2.2 = WEIGHT IN KG**  
**HEIGHT IN INCHES x 2.54 = HEIGHT IN CM**

### MEN

#### MIFFLIN ST JEOR FORM FOR BASAL METABOLIC RATE

Enter the equation just like this into your phone/calculator with the parenthesis

$$(10 \times \text{WEIGHT}) + (6.25 \times \text{HEIGHT}) - (5 \times \text{AGE}) + 5 =$$

**MIFFLIN ST JEOR BASAL METABOLIC RATE**

# KAHN BMR

## EQUATION FOR BMR

### INFO NEEDED FOR KAHN BMR

<b>LEAN BODY MASS</b> (pounds)	
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### CONVERSIONS FROM KILOGRAMS TO POUNDS

Here are some quick conversions from metric to imperial

$$\text{WEIGHT IN KG} / 2.2 = \text{WEIGHT IN LBS}$$

### HOW TO DETERMINE LEAN BODY MASS FROM BODY FAT %

1. Change body fat to a decimal by multiplying by 0.01
2. Determine lean body mass by using the following equation:

$$(1 - \text{BODY FAT AS DECIMAL}) \times \text{WEIGHT IN POUNDS} = \text{LEAN BODY MASS}$$

### WOMEN AND MEN

### KAHN FORMULA FOR BASAL METABOLIC RATE

Enter the equation just like this into your phone/calculator with the parenthesis

$$370 + (9.82 \times \text{LEAN BODY MASS}) =$$

**KAHN BASAL METABOLIC RATE**

# AVERAGE BASAL METABOLIC RATE

## INFO NEEDED FOR BMR CALORIES

<b>INFO NEEDED FOR BMR CALORIES</b>	
<b>MIFFLIN ST JEOR BMR</b>	
<b>KAHN BMR</b>	

## DETERMINING AVERAGE BASAL METABOLIC RATE

Enter the equation just like this into your phone/calculator with the parenthesis

$$\text{(MIFFLIN ST JEOR BMR + KAHN BMR)} / 2 = \text{AVERAGE BASAL METABOLIC RATE}$$

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## ADDING ACTIVITY LEVEL TO YOUR BASAL METABOLIC RATE

Now that we have a good idea of your basal metabolic rate, we are going to determine how many calories to add to your daily goal to account for general activity, exercise, and any additional considerations.

# ADDING ACTIVITY LEVEL

The calories burned for daily activity can account for 20-35% of your total calorie expenditure. Activity can be broken down into two categories: N.E.A.T. and structured exercise.

N.E.A.T. stands for Non-Exercise Activity Thermogenesis which is the energy we need for walking around, performing chores, fidgeting, and any unstructured movement that isn't a structured workout.

N.E.A.T. can greatly vary from person to person. N.E.A.T. is also constantly changing. If you are in a calorie deficit for an extended period of time, your body will down regulate your N.E.A.T. levels to accommodate your calorie deficit. This could mean fidgeting less or taking fewer steps throughout the day.

Structured exercise also impacts our daily caloric expenditure. However, we typically overestimate the amount of calories we burned during an exercise session. If you have a fitness tracker, it may estimate your calories burned during an exercise session but I wouldn't take the estimate at face value. In my experience, the fitness trackers tend to overestimate calories burned so don't eat back your exercise calories at a 1:1 ratio.

# ADDING ACTIVITY LEVEL

The chart on the following page gives you an idea of how to factor in your activity level to your Basal Metabolic Rate.

If you have a fitness tracker, the chart gives you an idea of how your **daily average** steps per day correlates to your activity levels. Just go into your fitness tracker app and find what your current daily average is to get an idea of where you are.

You'll notice the activity multiplier has a range. If you are at the lower end of the steps or days of exercise in that category, use the lower number for your activity multiplier and vice versa.

Here are a few examples:

## Kelley

- She is a 4th grade teacher. She is on her feet for about half the work day and does desk work the other half.
- She goes on walks with her dog and does yoga 3 times per week.
- She averages about 6,000 steps per day, with higher step counts during the work week and fewer steps on the weekends.
- I would use **1.5** as her activity multiplier.

# ADDING ACTIVITY LEVEL

## Jocelyn

- She works part time as a nurse in the labor and delivery ward, on her feet for the entire shift.
- She averages about 9,000 steps per day fairly consistently throughout the week.
- She lifts weights 4 days per week for about 45 minutes each workout.
- I would use **1.6** as her activity multiplier.

## Anabelle

- She is the primary caregiver to her 3 kids and does data entry at home on a per diem basis.
- She is training for a half marathon and does a bootcamp style workout 2 days per week.
- She averages about 13,000 steps per day.
- I would use **1.9** as her activity multiplier.

# ADDING ACTIVITY LEVEL

The activity multipliers aren't etched in stone but it should give you a general idea of how many calories you are burning with your activities.

Remember to listen to your body *first*, then analyze your calorie needs. If you are hungry, have low energy, or are struggling with your workouts then you probably need to increase your calorie intake.

Conversely, if you feel overstuffed and are having a hard time eating your prescribed calories then you probably need to decrease your calorie intake.

## **ADDITIONAL CALORIE SITUATIONS FOR WOMEN**

If you are a women who is pregnant, you will need additional calories for your baby (or babies if you're carrying multiples). Breastfeeding also requires additional calories to support milk production.

Some women also need additional calories during the luteal phase (typically weeks 3-4 of your cycle). If you really struggle with low energy levels and cravings the two weeks leading up to your period, then you might consider adding some additional calories during those weeks.



# ADDING ACTIVITY LEVEL TO YOUR BMR

## ACTIVITY LEVEL DETERMINATIONS

AVG. STEPS/DAY	ACTIVITY	MULTIPLIER
Less than 3,000	Sitting almost the entire day; no structured exercise	<b>1.1 - 1.3</b>
3,000-6,000	Mostly sitting but some walking around the house/workplace or doing errands; light exercise 1- 3 days/week	<b>1.3 - 1.5</b>
6,000-9,000	On my feet or walking for about half the day, sitting the other half of the day; moderate exercise 3-5 days/week	<b>1.5 - 1.7</b>
9,000-12,000	On my feet or walking almost the entire day; moderate to hard exercise 5-6 days/week	<b>1.7 - 1.9</b>
12,000+	On your feet all day plus heavy labor; 7+ moderate to hard exercise sessions per week	<b>1.9 - 2.1</b>

# ADDITIONAL CALORIES

## SITUATIONS REQUIRING MORE CALORIES

SITUATION	CALORIES
Pregnant with one baby during the second trimester	<b>+300 to 350 calories/day</b>
Pregnant with one baby during the third trimester	<b>+450 to 500 calories/day</b>
Pregnant with multiple babies	<b>+300 calories per baby/day</b>
Breastfeeding	<b>+500 calories/day</b>
Female and not pregnant; during the first half of the luteal phase of your cycle (typically the third week of your cycle)	<b>May need +100 calories/day</b>
Female and not pregnant; during the second half of the luteal phase of your cycle (typically the fourth week of your cycle)	<b>May need +250 calories/day</b>

# TOTAL CALORIE NEEDS

## INFO NEEDED FOR TOTAL CALORIE NEEDS

<b>AVERAGE BMR</b>	
<b>ACTIVITY LEVEL MULTIPLIER</b>	
<b>ADDITIONAL CALORIES</b>	

### DETERMINING TOTAL CALORIE NEEDS

Enter the equation just like this into your phone/calculator with the parenthesis

$$\begin{aligned} & \text{(AVERAGE BMR} \times \text{ACTIVITY MULTIPLIER)} \\ & + \text{ADDITIONAL CALORIES} = \\ & \text{TOTAL CALORIE NEEDS} \end{aligned}$$

**CONGRATS! YOU'VE FOUND YOUR MAINTENANCE CALORIES!**

This is a great starting point for anyone who wants to start tracking their caloric intake. I always have my clients start tracking their food at their maintenance levels and see how they're feeling, then we adjust their calories as needed.