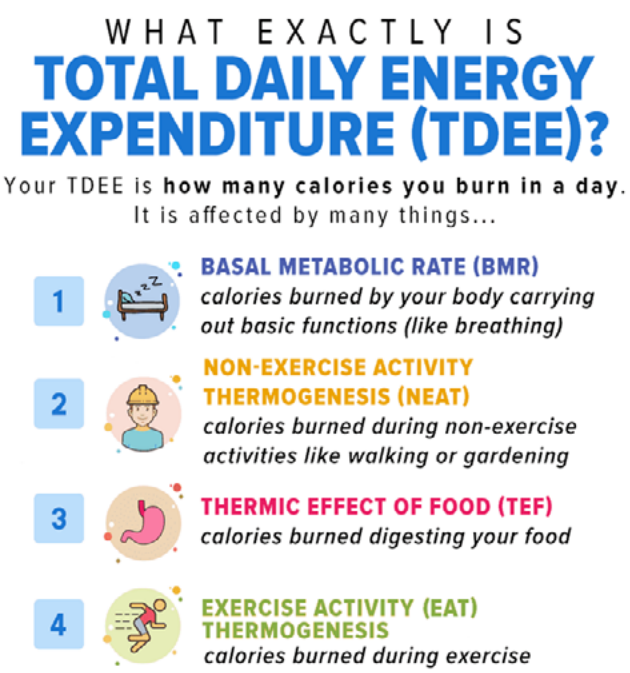
TDEE – TOTAL DAILY ENERGY EXPENDITURE

leisure



If you feel like you are sitting more and moving less, you may be looking for simple ways to burn more energy. Fortunately, there are a few ways to boost your Total Daily Energy Expenditure (TDEE) and not all of them require a workout. Simply moving around more, taking the dog on an extra walk, or even scrubbing the bathroom can help boost your TDEE.

TDEE is an estimate of how many calories you burn through your bodily functions and physical activity. Calculating your TDEE not only gives you an idea of if you are moving around enough, but it also could impact your weight management plans, too, because it creates an estimate of your current calorie burn.

Below we take a closer look at what TDEE is, and what factors affect it and offer some tips on how to boost your TDEE by simply rethinking your day and adding more movement all can be easily incorporated into your day without adding something else to your to-do list.

WHAT IS TOTAL DAILY ENERGY EXPENDITURE (TDEE)?

Your total daily energy expenditure (TDEE) is the number of calories you burn throughout a 24-hour period. These calories come from the work your body does to keep you alive, including your brain functions, breathing, digestion, and so on as well as all your physical activities. Overall, TDEE includes everything from fidgeting to your exercise routine.

All the work your body does at rest is called your resting energy expenditure (REE) or basal metabolic rate (BMR). The BMR component of your TDEE makes up approximately 60% to 70% of the average person's total expenditure.

Your non-resting energy expenditure (NREE) is a mix of three components which include non-exercise thermogenesis (NEAT), thermic effect of food (TEF), and exercise activity thermogenesis (EAT).

METABOLIC PROCESSES (BMR)

Your basal metabolic rate (BMR) is the amount of energy in the form of calories necessary for your vital functions at complete mental, physical, and digestive rest. These are processes that happen automatically.

Your resting metabolic rate (RMR) is the number of calories required for these same processes while at rest, including breathing, brain processes, digestion, and blood circulation. Your BMR makes up most of your daily calorie burn (TDEE) at approximately 60% to 70% of total calories for the average person.

THERMIC EFFECT OF FOOD (TEF)

The thermic effect of food (TEF) measures how many calories it takes for your digestive system to process foods.

The three macronutrients—carbs, proteins, and fats—require a different amount of energy to breakdown and assimilate into your digestive system. TEF accounts for approximately 10% of your total daily energy expenditure (TDEE).

- Protein requires the most energy to digest, with 20% to 30% of the calories in protein being used to digest it
- Carbohydrates require 5% to 10%
- Fat takes 0% to 3% at best
- However, how the thermic effect of food works in everyone's body is unique and depends on several factors, including age, physical activity level, insulin sensitivity, and the composition of your meal.

PHYSICAL ACTIVITY

Your activity is the movement your body makes throughout the day. This can be everything from intentional exercise and general movement, to cleaning the house and even fidgeting.

- Energy used to exercise is called exercise activity thermogenesis (EAT)
- while unintentional movements are called non-exercise activity thermogenesis (NEAT)

EAT accounts for approximately 5% of TDEE on average, while NEAT makes up 15% or more of TDEE on average.

USING NEAT TO IMPROVE YOUR HEALTH

NEAT is thought to be one of the ways our bodies manage our weight. If we gain weight, NEAT tends to rise; whereas when we lose weight, NEAT often plummets, and people end up sitting more without moving as much.

We may come to appreciate that spontaneous physical activity is not spontaneous at all but carefully programmed.

One review noted that the benefits of NEAT go well beyond extra calories expended. Doing more NEAT also means less risk of metabolic syndrome, cardiovascular events, and death from all causes. Plus, research shows that inactivity can negate the hard work you put into intentional exercise. Fighting sedentary behaviour with NEAT helps you reap the benefits of your workouts.

FACTORS AFFECTING ENERGY EXPENDITURE

How many calories you burn each day is as unique as you are. Every person will burn a different number of calories each day. Using calculators and formulas, best guesses can be made, and from these guesses, you can form a plan for reaching your goal, whether that's maintaining your weight, gaining, or losing weight.

Factors that affect energy expenditure include your age, activity level, body composition, size, weight, whether you have any diseases or illnesses, hormones, and genetics.

Your TDEE may decrease due to advanced age, more significant body fat percentage than muscle mass, low body weight, hormonal influences such as menopause, sedentary lifestyle, slower metabolism, and genetics.

Meanwhile, your TDEE may be higher if you have a higher percentage of muscle mass than body fat, hormones, genetics, active lifestyle, faster metabolism, and higher body weight.

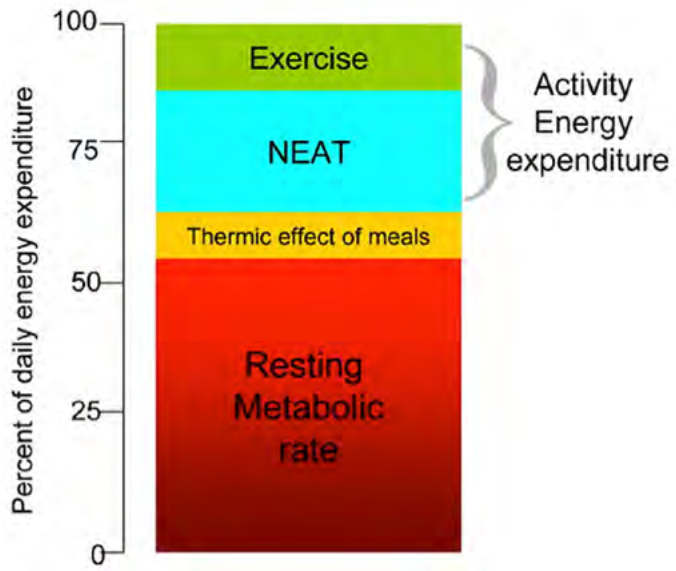
Muscle is metabolically active tissue, whereas fat is not. This means muscle burns more calories even while at rest. As well, the hormonal changes that occur when you have greater muscle mass or are in the process of building new muscle can increase your energy expenditure.

HOW TO INCREASE DAILY ENERGY EXPENDITURE

To increase your daily energy expenditure, it is wise to include more physical activity in your day. Physical activity is the easiest way to change your TDEE, considering the most significant factors of TDEE are not in your control, such as your BMR.

Short-term strategies for increasing your TDEE include purposefully planned exercise and adding more movement to your day by walking / moving more and sitting less. Long-term strategies include building more muscle mass, reducing your time spent dieting which can slow your metabolism, and eating a nutritious diet higher in protein.

You also can increase your daily energy expenditure by making a conscious effort to add more movement into your day. This might include something as simple as taking the stairs, getting off the bus one stop before you need to so that you walk further or carrying your groceries for a further distance.



WAYS TO INCREASE YOUR DAILY ENERGY EXPENDITURE

- Cleaning your home or a particular room.
- Taking a walk around the block or walking a pet.
- Setting a timer (or watch) for movement breaks throughout the day.
- Taking the stairs (instead of an elevator or escalator).
- Choosing a parking spot further away from your destination.
- Scheduling a walking meeting.
- Using a standing desk.

THE BOTTOM LINE

How many calories you burn in a day depends on several factors that are out of your control. The best way to increase your TDEE is to add exercise to your day and decrease your time spent being sedentary. These small changes will provide a host of benefits such as reduced risks of diseases, longer lifespan, better mental health, and more.

Knowing your TDEE also can help you create a plan for weight maintenance, gain, or loss. To lose weight, a combination of nutrition and exercise is best. Be sure to consult a fitness professional or a registered nutritionist, though, before you make changes to your diet and exercise plans, they can help you set goals that are right for you and your situation.