

Stafford County Sheriff's Office



New Recruit Nutrition Guide

Taking The Right Steps

You may have scheduled or already taken a physical abilities test (PAT) for one of the Stafford County Sheriff's Office law enforcement positions. The PAT is designed to measure your strength, agility, and endurance. It is not an indicator of your overall health or your potential success in the police academy.

If you haven't already, you should begin taking the right steps to adjust your diet and exercise program in preparation for a career in public safety. The goal is not to lose enough weight to meet the minimum requirements, but instead to begin living a healthy lifestyle now that will make your transition into the academy smoother, prevent potential injuries due to the physical nature of your work in the academy, and put you on the path to overall good health.

Exercise and nutrition are a large part of preparing yourself for the academy.

Use this guide to assist in making better choices and to help prepare you for this exciting new career!



A Guide to Eating Healthy

A healthy diet is an essential component of preparation for, and success in the police academy. Proper nutrition helps you to be both physically and mentally prepared. It can decrease the chances of injury and illness during training, and help you achieve or maintain a healthy body weight. Establishing a foundation of healthy eating will significantly reduce your risk of chronic illnesses such as diabetes, cancer and cardiovascular disease.

It can be challenging to sort out reliable information about healthy eating. This manual will provide some basic guidelines to help you get started. You may also refer to the resource list at the end of this guide, or start navigating at: www.myplate.gov.

WHAT IS A “HEALTHY DIET”?

The Dietary Guidelines for Americans describe a healthy diet as one that:



- Emphasizes fruits, vegetables, fiber rich whole grains, and fat-free or low-fat milk and milk products;
- Prioritizes high-quality, nutrient-dense proteins such as lean meats, poultry, fish, beans, eggs, and nuts;
- Is low in saturated fats, trans fats, cholesterol, salt (sodium), and added sugars. To help identify sources of added sugars, look for ingredients that include the word “sugar” or “syrup” or end in “-ose”;
- Hydration is a **KEY** factor in overall health. Choose water (still or sparkling) and electrolytes.

How do you translate these guidelines into actions? Here are a few simple suggestions:

- Include a fruit or vegetable with every meal or snack
- Incorporate a lean protein at every meal
- Avoid sugar-sweetened beverages, such as sodas, fruit drinks, and energy drinks
- Limit fast food or when dining out, choose nutrient-dense options
- Have a small handful of nuts or seeds in place of chips
- Eat plant-sourced protein foods, including beans, peas, lentils, legumes, nuts, seeds, and soy
- Choose 100% whole grain or whole wheat bread for sandwiches
- Limit alcohol consumption
- Swap fried cooking methods with baked, broiled, roasted, air-fried, or grilled
- Pay attention to portion sizes, particularly for foods and beverages higher in calories
- Reading the Nutrition Facts on food labels may also help when deciding if a food fits into a healthy diet (more information on how to read nutrition labels later in this guide)

What Are Macronutrients?

At the foundation of every meal you eat are macronutrients. The caloric value of the food we eat comes from 3 macronutrients: protein, fat, and carbohydrates.

Protein

Proteins are chains of amino acids that serve as the foundation for muscle tissue, enzymes, and hormones. Adequate protein intake is crucial for repairing cells, building muscle, and keeping you feeling full longer (satiety).

Protein Sources: meat, fish, egg whites, greek yogurt, cottage cheese, protein supplements



Fat

Fats are the most calorie-dense macronutrient and offer the body an efficient, slow-burning energy source. Beyond energy, fats play a critical role in hormone production, nutrient absorption, and maintaining body temperature.

Fat Sources: nuts, olive oil, avocados



Carbohydrates

Carbs are the body's preferred source of quick energy. They are classified into simple (fast-digesting) and complex (slow-digesting) forms. Simple carbs, like sugar, provide rapid energy, while complex carbs, like oats, offer sustained fuel over time.

Carb Sources: bread, fruits, rice, beans, oats, pasta, potatoes



MACRO TO CALORIE CONVERSIONS:

1 gram of protein = 4 calories

1 gram of fat = 9 calories

1 gram of carbohydrates = 4 calories

Beyond changing what you eat, other habits are also important, such as WHEN YOU EAT:

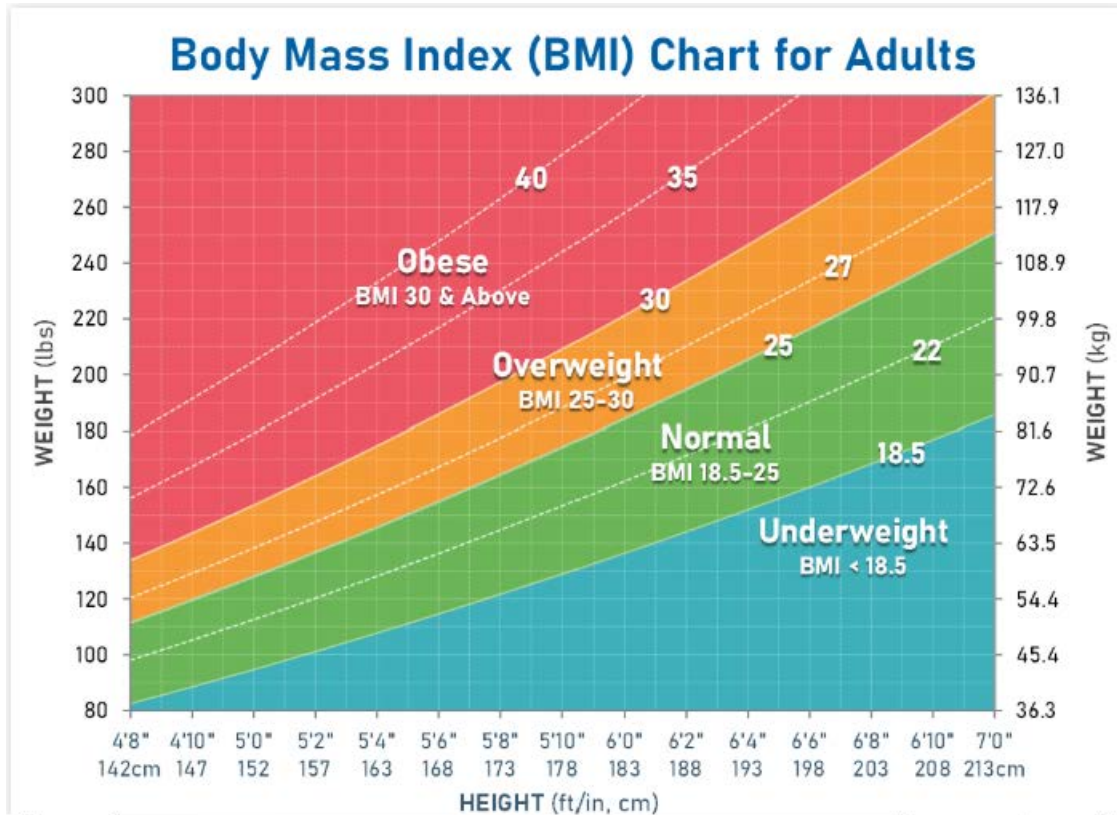
- Eat breakfast everyday - that means eating something within 1-2 hours of waking. People who eat breakfast typically weigh less, have less food cravings, and tend to eat healthier foods throughout the day.
- Eat on a regular schedule - have a meal or snack about every two to four hours (depending on activity and goals). This will reduce overeating later and help keep blood sugar levels even for better physical and mental performance.
- Have the last meal of the day at least 1-2 hours before bed.

Overweight and Obesity

Body Mass Index (BMI) is one measure of how much body fat a person has. Ideally your BMI will fall somewhere between 19 and 24. Approximately 40% of adults have a BMI of 30 or greater, which typically indicates excessive body fat. Excess body fat can increase the risk of:

- Coronary Heart Disease and Stroke
- Type 2 Diabetes
- Certain cancers
- High blood pressure
- High cholesterol
- Liver and Gallbladder disease
- Sleep apnea and respiratory problems
- Osteoarthritis
- Gynecological problems



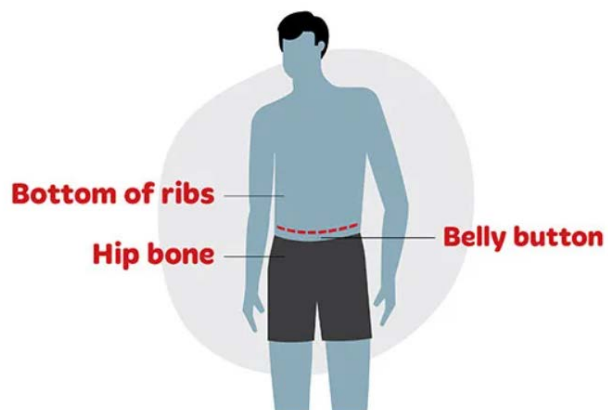


Body fat percentage, waist size, and certain health risk factors should also be considered when assessing health risk and whether or not you need to lose weight. Talk with your health care provider if you have questions or concerns.

Waist size is another way to measure healthy weight. If your waist circumference is high (for men - greater than 40 inches, for women - greater than 35 inches), your risk of weight-related illnesses are increased. Measure at the narrowest point of the waist, below the rib cage and just above the top of the hipbones. If there is no apparent narrowing of the waist, measure at the navel. Be sure that the tape is snug, but does not compress your skin, and is parallel to the floor. Relax, exhale, and measure your waist.

Risk Factors:

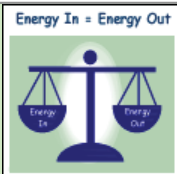
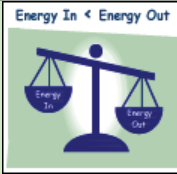
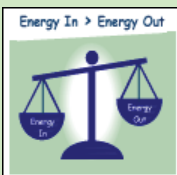
- High blood pressure (hypertension)
- High LDL ("bad") cholesterol
- Low HDL ("good") cholesterol
- High triglycerides
- High blood glucose (sugar)
- Family history of premature heart disease
- Physical inactivity
- Cigarette smoking



Body fat estimates, BMI, waist size and risk factors together give a picture of your health risk related to being overweight and obese. Taking steps to achieve and maintain a healthy weight and reduce risk factors can enhance your police academy performance and lead to a longer, healthier life.

How Can I Move Toward a Healthier Weight?

Reaching a healthy weight is a balancing act between the amount of calories (energy) consumed and the calories burned through physical activity and normal body functions.

Maintaining weight		Your weight will stay the same when the calories you eat and drink equal the calories you burn.
Losing weight		You will lose weight when the calories you eat and drink are less than the calories you burn.
Gaining weight		You will gain weight when the calories you eat and drink are greater than the calories you burn.

Some new recruits may need to reach a healthier weight prior to academy attendance. The best way to succeed at weight loss is to slowly reduce calorie intake while increasing physical activity. A reasonable goal for weight loss is 1-2 pounds per week. This rate of weight loss can be achieved by reducing daily calorie intake by 500-1000 calories or by combining reduced calorie intake with increased physical activity. Weight loss cannot be achieved overnight; it takes time to lose body fat. Taking extreme measures such as fasting, skipping meals, using weight-loss supplements or following very low-calorie diets to lose weight more quickly can decrease strength and fitness. It may also increase the chances of injury. All of these could hurt your performance in academy.

What Are My Numbers?

- ❖ Basal Metabolic Rate (BMR): the minimum number of calories your body requires to perform essential life-sustaining functions—such as breathing, circulation, and cell production—while at complete rest.
- ❖ Resting metabolic rate (RMR): the number of calories your body burns while at rest to maintain basic functions like breathing and circulation, plus light daily activity. It is proportional to lean body mass and decreases approximately 0.01 kcal/min for each 1% increase in body fatness.
- ❖ Total Daily Energy Expenditure (TDEE): The total number of calories your body burns in a 24-hour period, accounting for resting metabolism, daily activity, and exercise. Knowing this number helps you adjust intake for weight loss, maintenance, or gain.

The Mifflin-St Jeor equation is a widely used formula to estimate Resting Metabolic Rate (RMR) or Basal Metabolic Rate (BMR), providing calories burned at rest. It is generally considered highly accurate for calculating daily energy expenditure. The formula uses weight (kg), height (cm), and age (years).

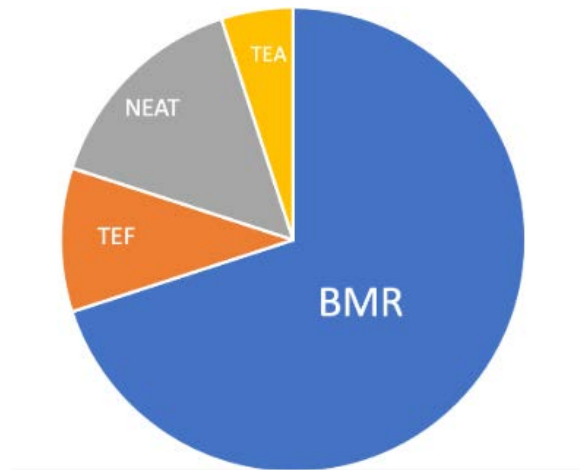
NOTE: These values can also be calculated for you on the Internet or a food tracking app.

How to Manually Calculate your BMR:

- $BMR \text{ (men)} = 10 \times \text{weight (in kg)} + 6.25 \times \text{height (in cm)} - 5 \times \text{age (in years)} + 5$
- $BMR \text{ (women)} = 10 \times \text{weight (in kg)} + 6.25 \times \text{height (in cm)} - 5 \times \text{age (in years)} - 161$

Scientific references to metabolism refer to the bodily processes needed to maintain life. But for most of us, it refers to total daily energy expenditure (TDEE) and how it influences our energy in versus energy out equation.

Our TDEE is essentially comprised of three components:



The thermic effect of food (TEF): the energy cost of chewing, swallowing, digesting, absorbing and storing food
The thermic effect of physical activity (TEA): the energy of activity (e.g., exercise, physical activity) and non-exercise activity thermogenesis (NEAT).*

How to Manually Calculate your TDEE: Multiply your BMR by an activity factor to account for daily movement.

- Sedentary: $BMR \times 1.2$ (<5,000 steps/day): Primarily desk jobs, little to no exercise, and daily living activities.
- Lightly Active: $BMR \times 1.375$ (5,000–7,500 steps/day): Light daily movement, 1-3 days of light exercise, or a job that requires some walking.
- Moderately Active: $BMR \times 1.55$ (7,500–10,000 steps/day): 3-5 days/week of moderate exercise, or 30-60 minutes of brisk walking (3-4 mph) daily.
- Very Active: $BMR \times 1.725$ (hard exercise 6–7 days/week)



A 30-minute standard exercise session typically burns between 100 and 300+ calories, heavily influenced by intensity and body weight. Moderate activities like brisk walking or light yoga burn around 100-150 calories, while vigorous activities like running or high-intensity interval training (HIIT) can exceed 300-400 calories.

Calories Burned in 30 Minutes (Estimated for 155 lb person):

- Walking (3.5 mph): ~133–178 calories
- Light Yoga/Stretching: ~120–144 calories
- Moderate Calisthenics: ~160–200 calories
- Weight Training (Moderate): ~160–215 calories
- Cycling (Moderate): ~200–300 calories
- Running (10 min/mile): ~300–400+ calories

Low Intensity (100–180 kcal)

- Stretching / Hatha Yoga: 120–144 kcal
- Brisk Walking (3.5 mph): 133–175 kcal
- Weight Lifting (General): 108 kcal

Moderate Intensity (200–350 kcal)

- Low-Impact Aerobics: 198–231 kcal
- Stationary Cycling (Moderate): 252–294 kcal
- Swimming Laps (Moderate): 216–300 kcal
- Jogging (5 mph): 288–336 kcal

High Intensity (350–500+ kcal)

- Running (7.5 mph / 8-min mile): 450–560 kcal
- Jumping Rope (Fast): 421–503 kcal
- HIIT (High-Intensity Interval Training): 300–450 kcal (can vary based on effort)
- Vigorous Stationary Rowing: 369–440 kcal



Key Factors Influencing Burn:

Weight: Heavier individuals burn more calories for the same activity.

Intensity: Higher heart rates and faster paces lead to higher caloric expenditure.

Muscle Mass: Higher muscle-to-fat ratios increase metabolic rate and calorie burn.

Ways to speed up metabolism are best understood with the acronym SPEED:

S- Get 7-9 hours of quality sleep.

P- Practice stress reduction techniques like meditation.

E- Limit your exposure to EDCs (endocrine-disrupting chemicals).

E- Focus your exercise on increasing lean body mass, such as resistance training and HIIT.

D- Eat a diet consisting of colorful, local, seasonal, varied, unprocessed, and organic foods whenever possible

❖ Sleep

Sleep is intricately connected to numerous hormonal and metabolic processes and is a key to maintaining metabolic homeostasis. Poor sleep hygiene has profound metabolic and cardiovascular implications and is believed to cause metabolic dysregulation through sympathetic overstimulation, hormonal imbalance, and low-grade inflammation.

Sleep deprivation can alter the glucose metabolism and hormones involved in regulating metabolism, such as decreased leptin levels and increased ghrelin levels. Chronic sleep deprivation is also associated with an increased risk of obesity and diabetes.

Sleep hygiene tips:

- Start a bedtime routine.
- Have a wind-down period and regular bedtime.
- Turn off your electronics and keep them away from where you sleep.
- Maintain a cool, dark, and quiet sleep environment.
- Avoid caffeine late in the day and alcohol in the evening.
- Avoid processed foods and sugar.
- Get some outside time during the day.
- Consider a sleep study to evaluate for apnea if you have chronic insomnia.

❖ Psychological Stress

The body reacts to acute stress via a "fight or flight" response, which activates the hypothalamic-pituitary-adrenal axis to release the corticotropin-releasing hormone. This, in turn, stimulates the sympathetic nervous system.

Acute stress is commonly associated with a reduction in appetite and reduced body weight. However, chronic stress can lead to overconsumption of hyper-palatable foods, resulting in increased visceral adiposity and weight gain.

Stress management tips:

- Meditation can lower cortisol levels in the blood and the subsequent adverse physiological effects of stress. Start with fifteen minutes daily.
- Exercise affects neurotransmitters in the brain, such as dopamine and serotonin, which affect mood and behavior and improve the way the body handles stress. Aim for some form of exercise daily.

❖ Environmental Factors

Synthetic chemicals ubiquitous in our society are leading to widespread contamination of the environment. These include (but are not limited to) pesticides, plasticizers, parabens, VOCs, antimicrobials, and flame retardants. These endocrine-disrupting chemicals (EDCs) can disrupt hormonal balance and result in developmental and reproductive abnormalities, obesity, metabolic syndrome, and type 2 diabetes.

Limiting exposure to EDCs by opting for organic foods and chemical-free, self-care products, cosmetics, cookware, cleaning products, furniture, etc., can lessen the load on one's endocrine system, lower the risk for obesity and have a more favorable effect on metabolism.

❖ Exercise

Resistance training has the potential to increase metabolic rate and daily energy expenditure. The principal mechanism is by augmenting fat-free mass (FFM). Increasing protein intake during a resistance training program produces additional increases in FFM. Increasing lean body mass can also improve insulin sensitivity and lower the risk for diabetes

High-Intensity Interval Training and the concomitant Excess Post-Exercise Oxygen Consumption (EPOC) can also boost your metabolic rate. EPOC is the amount of oxygen required to restore your body to homeostasis.

Exercise programming to increase metabolism:

1. Resistance training.

- 3–6 times per week, with 2–4 strength exercises per body part
- 3–5 sets
- 6–12 reps
- 2/0/2 tempo
- 75%–85% intensity
- 0- to 60-second rest interval

2. HIIT 2x/week. Example: stationary bike. Pedal as hard and fast as possible for 30 seconds, then pedal at a slow, easy pace for one to two minutes. Repeat for 15 to 30 minutes.

❖ Diet

Protein-rich foods, such as meat, fish, eggs, dairy, legumes, nuts, and seeds, could help increase your metabolism for a few hours after a meal as your body uses more energy to digest them.

Due to TEF, the energy needed by your body to digest, absorb and process nutrients. TEF from protein can increase your metabolic rate by 15–30%, compared to 5–10% for carbs and 0–3% for fats.

Because protein-rich diets support lean body mass, they can also reduce the drop in metabolism often seen during weight loss. Protein may also help keep you fuller for longer, which can prevent overeating.

BALANCED PLATE METHOD:

Protein first → you will begin every meal with a protein option; aim to make the protein the size of your palm (which would come out to approximately 3-4 oz of a chicken breast for example)

Quality carb → after protein, pick a quality carb the size of your fist (a good guide is to opt for single ingredient, whole foods like rice, potatoes or fruit; portion control = 1 carb)

Nutrients → after your protein and carb are on your plate, fill the rest with nutrients (this is almost always a vegetable & 1-2 fist sizes; the volume here is a trick to feeling full and satiated)

Fats find their way in → typically, your cooking in oil or adding a dressing with fat onto your nutrients, so intentionally adding a fat source isn't always necessary. If you need to gauge the portion, try to keep it to about 2 fingers, which is about 2 tbsp.

AT MAINTENANCE:

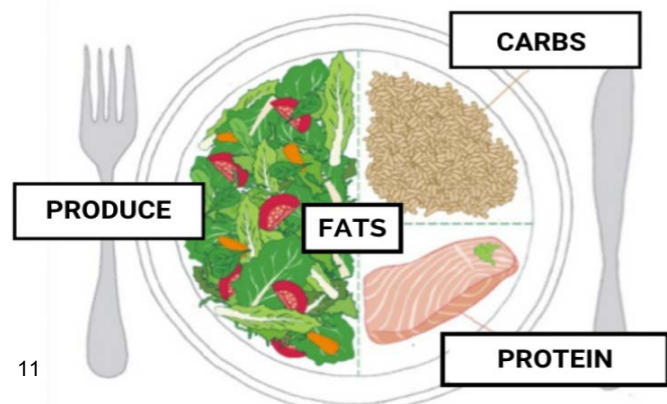
3 meals + 2 snacks

(snacks = ½ size of meal plates)

IN A CALORIE DEFICIT:

3 meals + 1 snack

(snack = ½ size of meal plate)



SAMPLE

MEAL-BY-MEAL GUIDE

BREAKFAST

PB&J English Muffin
+ Protein Shake

	CALORIES	PROTEIN	FAT	CARBS
1.5 scoops Protein Powder	159	38	---	2
8-12 oz Water (to mix with protein powder)	---	---	---	---
1 Thomas' Original English Muffin	150	5	1	28
2 tbsp Jif Natural Peanut Butter	190	7	16	8
1 tbsp Strawberry Preserves	35	---	---	9
MEAL TOTAL	534	50 G	17 G	47 G

LUNCH

Chicken Cordon Bleu Wrap

1 Joseph Lavash Wrap	100	12	3	16
2 oz Rotisserie Chicken	113	10	7	1
2 oz Deli Ham	70	10	3	1
1 slice Kraft Swiss Cheese	60	4	5	---
2 tbsp Bolthouse Farms Classic Ranch Dressing	45	1	3	3
MEAL TOTAL	388	37 G	21 G	21 G

DINNER

Cheeseburger Packets

4 oz 90% lean Ground Beef	200	22	11	---
1 Egg	70	6	4	1
170 grams Baby Potatoes	131	3	---	31
¼ Medium Onion, chopped	12	---	---	3
1 slice Kraft Cheddar Cheese	54	4	4	---
Salt, Pepper & Garlic Powder	---	---	---	---
MEAL TOTAL	467	35 G	19 G	35 G

SNACK 1

Beef Stick + String Cheese

1 stick Chomps Beef Stick	100	9	6	1
1 Kraft String Cheese	80	7	5	1
MEAL TOTAL	180	16 G	11 G	2 G

SNACK 2

Banana Snickers Bar

1 Banana, sliced lengthwise	105	1	---	27
1 tbsp Jif Natural Peanut Butter	95	4	8	4
1 oz Nestle Chocolate Chips, melted	150	2	8	18
.5 oz Chopped Peanuts	84	3	6	3
MEAL TOTAL	434	10 G	22 G	52 G

DAILY TOTAL	2,003	148 G	90 G	157 G
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How to Read a Nutrition Label

Macaroni and Cheese

Nutrition Facts			
Serving Size 1 cup (228g) Serving Per Container 2			
Amount Per Serving			
Calories 250	Calories from Fat 110		
	% Daily Value*		
Total Fat 12g	18%		
Saturated Fat 3g	15%		
<i>Trans</i> Fat 3g			
Cholesterol 30g	10%		
Sodium 470 mg	20%		
Total Carbohydrate 31g	10%		
Dietary Fiber 0g	0%		
Sugars 5g			
Protein 5g			
Vitamin A	4%		
Vitamin C	2%		
Calcium	20%		
Iron	4%		
*Percent Daily Value are based on a 2,000 calorie diet. your Daily Value may be higher or lower depending on your calorie needs.			
	Calories	2,000	2,500
Total Fat	Less than	65g	80g
Sat Fat	Less than	20g	25g
Cholesterol	Less than	300mg	300mg
Sodium	Less than	2,400mg	2,400mg
Total Cabohydrate		300g	375g
Dietary Fiber		25g	30g

1 Start Here →

2 Check Calories

3 Limit these Nutrients

4 Get Enough of these Nutrients

5 Footnote

6 Quick Guide to % DV

- 5% or less is Low
- 20% or more is High

The Serving Size

The size of the serving on the food package influences the number of calories and nutrient amounts listed on the top part of the label. In the sample label, one serving of macaroni and cheese equals one cup. If you ate the whole package, you would eat two cups. That doubles the calories and other nutrient numbers, including the % Daily Values.

Calories (and Calories from Fat)

The calorie section of the label can help you manage your weight (i.e., gain, lose, or maintain.) Remember: the number of servings you consume determines the number of calories you actually eat (your portion amount).

In the example, there are 250 calories in one serving of this macaroni and cheese. How many calories from fat are there in ONE serving? Answer: 110 calories, which means almost half the calories in a single serving come from fat. What if you ate the whole package content? Then, you would consume two servings, or 500 calories, and 220 would come from fat.

General Guide to Calories

- 40 Calories is low
- 100 Calories is moderate
- 400 Calories or more is high

The Nutrients: How Much?

Look at the top of the nutrient section in the sample label. It shows you some key nutrients that impact on your health and separates them into two main groups:

Limit These Nutrients

The nutrients listed first are the ones Americans generally eat in adequate amounts, or even too much. They are identified in yellow as "Limit these Nutrients". Eating too much fat, saturated fat, trans fat, cholesterol, or sodium may increase your risk of certain chronic diseases, like heart disease, some cancers, or high blood pressure. Important: Health experts recommend that you keep your intake of saturated fat, trans fat and cholesterol as low as possible as part of a nutritionally balanced diet.

Get Enough of These

Most Americans don't get enough nutrients such as dietary fiber, vitamin D, magnesium, potassium, or calcium in their diets. They are identified in blue as "Get Enough of these Nutrients".

Eating enough of these nutrients can improve your health and help reduce the risk of some diseases and conditions. Additionally, a diet rich in fruits, vegetables, and grain products that contain dietary fiber, particularly soluble fiber, and low in saturated fat and cholesterol may reduce the risk of heart disease.

Understanding the Footnote on the Bottom of the Nutrition Facts Label

Note the * used after the heading “Percentage Daily Value” on the Nutrition Facts label. It refers to the Footnote in the lower part of the nutrition label, which tells you “Percentage DVs are based on a 2,000 calorie diet”. This statement must be on all food labels. But the remaining information in the full footnote may not be on the package if the size of the label is too small. When the full footnote does appear, it will always be the same. It doesn’t change from product to product, because it shows recommended dietary advice for all Americans--it is not about a specific food product. The Daily Values (DV) for each nutrient listed is based on public health experts’ advice. DVs are recommended levels of intakes. DVs in the footnote are based on a 2,000 or 2,500-calorie diet. Note how the DVs for some nutrients change, while others (for cholesterol and sodium) remain the same for both calorie amounts.

The Percent Daily Value (%DV):

The Percentage Daily Values (%DV) are based on the Daily Value recommendations for key nutrients but only for a 2,000-calorie daily diet--not 2,500 calories. The %DV helps you determine if a serving of food is high or low in a nutrient. The %DV column doesn’t add up vertically to 100%. Instead each nutrient is based on 100% of the daily requirements for that nutrient (for a 2,000 calorie diet). This way you can tell high from low and know which nutrients contribute a lot, or a little, to your daily-recommended allowance (upper or lower).



Quick Guide to % DV:

	% Daily Value*
Total Fat 12g	18%
Saturated Fat 3g	15%
<i>Trans</i> Fat 3g	
Cholesterol 30g	10%
Sodium 470 mg	20%
Total Carbohydrate 31g	10%
Dietary Fiber 0g	0%
Sugars 5g	
Protein 5g	
Vitamin A	4%
Vitamin C	2%
Calcium	20%
Iron	4%

5% DV or less is low and 20% DV or more is high. This guide tells you that 5% DV or less is low for all nutrients, those you want to limit (e.g., fat, saturated fat, cholesterol, and sodium), or for those that you want to consume in greater amounts (fiber, calcium, etc). As the Quick Guide shows, 20% DV or more is high for all nutrients.

Valuable Resources

General nutrition information:

myplate.gov

nutrition.gov

webmd.com

Weight control information:

Centers for Disease Control: cdc.gov/healthy-weight-growth/losing-weight

Weight control information and serving sizes: nih.gov

Sports nutrition information

National Academy of Sports Medicine: nasm.org

American College of Sports Medicine: acsm.org

National Strength Training and Conditioning Association: nsca-lift.org NSCASportsNutrition

QUICK Strategies For Improving Nutrition Habits

Ever wondered how many calories you need for weight loss? Calorie calculators, like the ones you'll find online, make it easy. They factor in your activity levels, overall goals, and calorie usage to help you craft a plan.

Here's how they work:

They look at your Basal Metabolic Rate (sometimes simply called Resting Metabolic Rate), your Total Daily Energy Expenditure (TDEE), your target weight for a set date, and how you're currently splitting up carbs, fats, and proteins in your diet.

How to calculate calories:

➤ Step 1

- Calculate basal metabolic rate (BMR)

Your BMR represents the number of calories your body needs to maintain its current weight without any additional activity. You can calculate it using the Mifflin-St Jeor equation:

Men: $(10 \times \text{weight in kg}) + (6.25 \times \text{height in cm}) - (5 \times \text{age in years}) + 5$

Women: $(10 \times \text{weight in kg}) + (6.25 \times \text{height in cm}) - (5 \times \text{age in years}) - 161$

➤ Step 2

- Determine total daily energy expenditure (TDEE)

Once you have your BMR, adjust it based on your activity level to get your Total Daily Energy Expenditure (TDEE):

Sedentary (little to 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

Super active (very hard exercise & physical job or 2x training): BMR x 1.9

Your TDEE gives you the estimated number of calories you need to maintain your current weight based on your activity level.

➤ Step 3

- Set Your Goal Weight And Time Frame

If you want to lose weight, subtract 500-1000 calories from your TDEE to get a daily intake goal. For weight gain, add extra calories.

Remember, these are general guidelines. It's crucial to monitor your progress and adjust as necessary. Consulting with a nutritionist or health professional is always recommended for personalized advice.

Here's how to estimate how long it will take to reach your goal:

Sally's current weight is 150 lbs. She wants to lose 20 lbs.

$150\text{lbs} - 20\text{lbs} = 130\text{lbs}$.

$20\text{lbs loss at } 2\text{lbs/week} = 10 \text{ weeks}$.

It will take Sally about 10 week to lose the weight.

➤ Step 4

- Break Down Macronutrient Ratios

Protein - Is a huge catalyst for weight loss and hunger satiation. Let's compare and contrast sedentary versus moderately active individuals and their protein requirements.

For sedentary/lightly active individuals: 1-1.2g/kg/day
For moderately active - extremely active: 1.4-2.2g/kg/day

- How to calculate daily protein needs:

Convert body weight in pounds to kg's (round to the nearest 10th).
Multiply weight in kilograms by the range that best fits your activity levels.

Let's look at an example:

$$150\text{lbs} / 2.2 = 68.2\text{kg}$$
$$68.2\text{kg}(1\text{g}) = 68\text{g}$$
$$68.2\text{kg}(1.2) = 82\text{g}$$



Fat - To prevent any fatty acid deficiencies it is recommended to consume at minimum 1g/kg of fat per day. The Dietary Guidelines for Americans also recommends fat should make up 20-35% of one's total daily calories. Using both of these references you can calculate your daily fat needs:

- How to calculate daily fat needs:

Convert body weight in pounds to kg's (round to the nearest 10th).
Multiply weight in kilograms by 1.

Let's look at an example:

$$150\text{lbs} / 2.2 = 68.2\text{kg}$$
$$68\text{g of fat needed per day}$$



Carbohydrates - The Dietary Guidelines for Americans recommends that carbohydrates should make up 45-65% of one's daily calories.

- How to calculate grams of carbohydrates. Multiply daily calorie requirements by 0.45 & 0.65 to obtain calories from carbohydrates.

- a. $0.45(2000) = 900$ calories
- b. $0.65(2000) = 1300$ calories

Divide answers in step 1 by 4 since there are 4 calories per 1 gram of carbohydrate

- a. $900/4 = 225\text{g}$
- b. $1300/4 = 325\text{g}$

