Canelith

NUTRITION COLLECTION

CLEARLY EXPLAINED









FREE GUIDE · EATING FOR TRAINING

Protein and nutrients

How much protein to eat, what macros are, how to adjust if you're cutting or bulking, evidence-based supplements, hydration and digestion. Made simple.

Free | With real examples | With sources

INSIDE

1 How much protein you need for your goal
2 Calories for cutting or bulking
3 Table of protein foods
4 Protein powder and supplements
5 Hydration, digestion and labels
6 A sample day for each goal

Welcome and how to use this guide

Hi. This guide goes with your Canelith training guides (glutes, legs, upper body, full body, fat loss, high performance and abs) and with our recipe books.

Training gives your body the reason to change. Food gives it the material. If you train well but eat at random, you progress more slowly. Here you learn the basics of eating with intention, without weird diets or miracle products.

Everything you'll read comes from the recommendations of recognized scientific bodies and societies (WHO, EFSA, the US National Institutes of Health, the International Society of Sports Nutrition, the American College of Sports Medicine and others). Food values come from the FoodData Central database of the US Department of Agriculture (USDA). You'll find all the references at the end.

How to use it

- **If you're short on time:** read chapters 3 (calories), 4 (protein) and 13 (the plate). That's enough to start building your meals.
- **If you want to understand it all:** read it in order. Each chapter builds on the one before.
- **If you have a specific question:** go to "Common myths" (chapter 16), "Frequently asked questions" (chapter 17) or the glossary (chapter 18).
- **If you cook from our recipe books:** every recipe lists calories, protein, carbs and fat per serving. With this guide you'll know how much of each you need.

All figures are **approximate**. Every body is different, and foods vary by brand, cut and cooking method. Use them as a starting point and adjust based on your results.

This guide is not a medical plan

It's general information for healthy people who train. It doesn't replace a dietitian or a doctor. **Talk to a professional before changing how you eat or taking supplements if:**

- You're pregnant, trying to get pregnant or breastfeeding.
- You're under 18.
- You have kidney, liver, heart or thyroid disease, diabetes, high blood pressure, high cholesterol or another chronic condition.
- You take medication every day (some supplements interact with it).
- You have or have had a difficult relationship with food: binge eating, strong restriction, self-induced vomiting, fear of eating or constant guilt.
- Your period has stopped, become very irregular or is very heavy.
- You feel tired all the time, get dizzy, get out of breath with little effort or lose weight without trying.
- You have significant food allergies or intolerances.



Minchu's tip: save this guide on your phone. You'll use it more as a reference than as a one-time read.

Macronutrients made simple

Macronutrients are the nutrients you eat in the largest amounts and that give you energy: **protein, carbohydrates and fat**. Energy is measured in **kilocalories (kcal)**, which almost everyone simply calls "calories".

NUTRIENT	ENERGY PER GRAM	WHAT IT DOES FOR YOU
Protein	4 kcal	Builds and repairs muscle, skin, hair, enzymes and your immune defenses. It's the most filling.
Carbohydrates	4 kcal	The preferred fuel for training hard. Fills your energy stores in muscle and liver (glycogen).
Fat	9 kcal	Hormones, absorption of vitamins A, D, E and K, cell health. It's the most concentrated source of energy.
Alcohol (not a nutrient)	7 kcal	Gives you nothing you need. Its calories still count.

Notice: a gram of fat has more than twice the calories of a gram of protein or carbohydrate. That's why one tablespoon of oil (about 14 g) adds about 124 kcal, almost the same as 100 g of cooked white rice (about 130 kcal), which is a little over half a cup.

Protein

Protein is made of small pieces called **amino acids**. There are 20, and 9 of them are **essential**: your body can't make them, so they have to come from food. One of them, **leucine**, works like a "switch" that tells the muscle to start building.

When you do strength training, you slightly damage the muscle fibers. With enough protein and rest, your body repairs them and leaves them a little stronger. Without enough protein, that process falls short.

Carbohydrates

They're in grains, root vegetables, legumes, fruit, vegetables and dairy. There are two big groups:

- **The ones that suit you almost always:** oats, rice (better if it's sometimes brown), corn, arepas (corn cakes), tortillas, potatoes, sweet potatoes, cassava, plantains, quinoa, beans, lentils, whole fruit and vegetables. They bring fiber, vitamins and minerals.
- **The ones worth limiting:** table sugar, panela (unrefined cane sugar), honey, soda, sweetened juices, candy, cookies and pastries. The WHO recommends keeping **free sugars** below 10 % of your calories and, even better, below 5 %. On a 2000 kcal diet, 10 % is 50 g of sugar a day (about 12 teaspoons). The sugar in whole fruit and plain milk doesn't count as free sugar.

Fat

- **Unsaturated (the ones that suit you most):** olive, canola or sunflower oil, avocado, peanuts, almonds, walnuts, seeds, oily fish like salmon, sardines or tuna.
- **Saturated (in moderation):** butter, lard, heavy cream, full-fat cheeses, fatty meats, coconut oil. The WHO recommends they stay under 10 % of your calories.

- **Industrial trans fats (avoid them):** some hard margarines, packaged fried snacks and factory-made baked goods. Look for "partially hydrogenated oils" on the label. The WHO asks for less than 1 % of calories.

Fiber

It's the part of plants you don't fully digest. It gives little energy (about 2 kcal per gram). It helps you go to the bathroom regularly, feel full and look after your heart and blood sugar. The WHO and EFSA recommend **at least 25 g of fiber a day** for adults. You'll find it in legumes, oats, fruit, vegetables, whole grains and seeds.

Water

It has no calories, but nothing works without it: it controls your temperature, carries nutrients and keeps up your performance. Chapter 11 is all about it.



Bella's tip: no food is "good" or "bad" on its own. What counts is what you eat most days. A dessert at a birthday party ruins nothing; one every day does add up.

Calories and goals

Your weight depends, above all, on the balance between the calories you eat and the calories you burn.

- **Maintain:** you eat about the same as you burn. Your weight stays stable.
- **Cut (lose fat):** you eat a little less than you burn (a **deficit**). Your body uses its fat stores. If you eat enough protein and do strength training, you keep your muscle.
- **Bulk (build muscle):** you eat a little more than you burn (a **surplus**). You give your body extra material to build muscle.

There's a special case: **body recomposition**, which is losing fat and gaining muscle at the same time while eating close to maintenance. It happens mostly if you're a beginner, if you're coming back after a break or if you have quite a bit of fat to lose.

Step 1: estimate your maintenance calories

We'll use just one formula, **Mifflin-St Jeor**, which estimates what you burn at rest. You need your weight (kg), your height (cm) and your age (years). If you use pounds and inches: kg = lb ÷ 2.2 and cm = in × 2.54.

- **Women:** (10 × weight) + (6.25 × height) − (5 × age) − 161
- **Men:** (10 × weight) + (6.25 × height) − (5 × age) + 5

Then multiply the result by your activity level:

YOUR DAY-TO-DAY	MULTIPLY BY
Desk job and you barely train	1.2
You train 1 to 3 days a week	1.375
You train 3 to 5 days a week	1.55

YOUR DAY-TO-DAY	MULTIPLY BY
You train 6 or 7 days or have a physical job	1.725

Example 1. Woman, 30 years old, 60 kg (132 lb) and 165 cm (5 ft 5 in), trains 4 days a week: (10 × 60) + (6.25 × 165) − (5 × 30) − 161 = 600 + 1031 − 150 − 161 = **1320 kcal at rest**. 1320 × 1.55 = **about 2050 kcal to maintain**.

Example 2. Man, 30 years old, 80 kg (176 lb) and 178 cm (5 ft 10 in), trains 4 days a week: (10 × 80) + (6.25 × 178) − (5 × 30) + 5 = 800 + 1113 − 150 + 5 = **1768 kcal at rest**. 1768 × 1.55 = **about 2740 kcal to maintain**.

It's an estimate. Over the next few weeks, your scale will tell you the real number.

Step 2: adjust for your goal

GOAL	HOW MUCH TO ADJUST	HEALTHY RATE OF CHANGE	EXAMPLE: WOMAN, 60 KG	EXAMPLE: MAN, 80 KG
Cut	Subtract 300 to 500 kcal	Lose 0.5 to 1 % of your weight per week	1550 to 1750 kcal · lose 0.3 to 0.6 kg per week	2240 to 2440 kcal · lose 0.4 to 0.8 kg per week
Maintain	Don't add or subtract	Stable weight (±1 kg)	2050 kcal	2740 kcal
Bulk	Add 10 to 20 %	Gain 0.25 to 0.5 % of your weight per week	2250 to 2450 kcal · gain 0.15 to 0.3 kg per week	3010 to 3290 kcal · gain 0.2 to 0.4 kg per week

These rates come from scientific reviews on strength athletes: losing 0.5 to 1 % of your weight per week helps you keep muscle while cutting, and gaining 0.25 to 0.5 % per week limits extra fat while bulking. If you're advanced, stay at the low end of the surplus.

Step 3: check if you're on track

Your weight goes up and down from one day to the next because of water, salt, food still in your gut, your menstrual cycle or stress. That's why you shouldn't look at a single day's number.

1. **Weigh yourself 3 to 7 times a week**, on an empty stomach, after using the bathroom and in light clothes.
2. **Work out the weekly average** and compare it with the previous week's.
3. **Every 2 to 4 weeks, measure** your waist (at belly-button height), hips, thigh and arm. Always measure at the same spot and at the same time.
4. **Take photos** from the front, side and back every 4 weeks, in the same light.
5. **Write down your strength** in the log of your training guide. If you keep your weights while cutting, you're keeping muscle. If your weights go up while bulking, you're gaining muscle.

Step 4: correct calmly

WHAT YOU SEE AFTER 2 TO 3 WEEKS	WHAT TO DO
Cutting and the average doesn't go down	Subtract another 100 to 200 kcal or add daily steps.
Cutting and you lose more than 1 % a week or your strength drops a lot	Add 100 to 200 kcal.

WHAT YOU SEE AFTER 2 TO 3 WEEKS	WHAT TO DO
Bulking and the average doesn't go up	Add 100 to 200 kcal.
Bulking and your waist grows fast	Subtract 100 to 200 kcal.
Maintaining and you're happy with your body	Don't change anything.



Wilson's tip: in the first 1 or 2 weeks of a cutting diet you may drop faster because you lose water. Don't get excited or scared: judge the rate from week three.

How much protein you need

The minimum recommendation for the general population is **0.8 g of protein per kilo of body weight a day** (0.83 g according to EFSA). That covers the basic needs of a healthy, sedentary person. **If you do strength training, you need more.** (To use pounds: 1 kg = 2.2 lb, so 1.6 g/kg is about 0.7 g per lb.)

The number for your goal

YOUR SITUATION	GRAMS PER KILO OF BODY WEIGHT A DAY	PERSON OF 60 KG (132 LB)	PERSON OF 80 KG (176 LB)
General health, no training	0.8	48 g	64 g
You do strength training and want to keep or build muscle	1.4 to 2.0 (practical target: 1.6)	84 to 120 g (96 g)	112 to 160 g (128 g)
Cutting (losing fat) and doing strength training	1.8 to 2.4	108 to 144 g	144 to 192 g
Bulking	1.6 to 2.2	96 to 132 g	128 to 176 g
Over 50 and training	1.2 or more (ideally 1.4 to 2.0 if you do strength training)	72 g or more	96 g or more

WHERE THESE NUMBERS COME FROM

- The **International Society of Sports Nutrition (ISSN)** recommends **1.4 to 2.0 g/kg** for most people who train.
- A **meta-analysis of 49 studies (Morton and colleagues, 2018)** found that, on average, above **1.6 g/kg** a day extra protein no longer added more muscle. That's why 1.6 is a good starting point. Since some people respond better to more, the authors suggest going up to 2.2 g/kg if you want to be sure.
- **When cutting**, high protein helps you not lose muscle. The ISSN states that in a deficit you may need 2.3 to 3.1 g/kg, and Helms and colleagues (2014) propose 2.3 to 3.1 g per kilo of **lean mass** for very lean athletes. For most people, 1.8 to 2.4 g per kilo of total body weight works well and is easy to hit.
- **When bulking**, the review by Iraki and colleagues (2019) recommends 1.6 to 2.2 g/kg.
- **With age**, muscle responds less to the same amount of protein. The PROT-AGE expert group recommends at least 1.0 to 1.2 g/kg for people over 65, and more if they exercise. If you're over 50 and do strength training, aim for the high end and don't skip protein at any meal.

If you have a lot of excess weight, using your total weight gives very high numbers. In that case use your goal weight or ask your dietitian to work it out with you.

How to spread it over the day

The daily total matters most. Spreading it well is the next step:

- **Have 3 to 5 meals with protein**, about 3 to 4 hours apart.
- **At each one, aim for 0.25 to 0.4 g per kilo of body weight**, which for most people is **20 to 40 g of protein**.
- People over 50 need the high end of that range per meal.
- There's no 30 g limit per meal: your body absorbs all the protein you eat. Spreading it out simply gives your muscle more chances to build throughout the day.

Worked example: person of 60 kg who does strength training

- Goal: 1.6 g/kg × 60 kg = **96 g a day** (if cutting, 2.0 g/kg = 120 g).
- Per meal: 0.4 g/kg × 60 kg = **about 24 g**.

MEAL	EXAMPLE	APPROX. PROTEIN
Breakfast	2 eggs + 1 medium arepa or 1 large corn tortilla	16 g
Lunch	80 g of cooked chicken + ¾ cup of rice + ½ cup of beans + salad	37 g
Afternoon snack	1 plain Greek yogurt (170 g) with fruit	18 g
Dinner	2 scrambled eggs with vegetables + 1 corn tortilla + 1 glass of milk	24 g
Total		**95 g**

Breakfast is a little short. If you add 30 g of fresh cheese, you get 5 g more protein and reach about 21 g.

Worked example: person of 80 kg who does strength training

- Goal: 1.6 g/kg × 80 kg = **128 g a day** (if cutting, 2.0 g/kg = 160 g).
- Per meal: 0.4 g/kg × 80 kg = **about 32 g**.

MEAL	EXAMPLE	APPROX. PROTEIN
Breakfast	3 eggs + 1 glass of milk + oats	32 g
Lunch	100 g of cooked lean ground beef + ¾ cup of rice + ½ cup of lentils + salad	40 g
After training	Shake with 1 scoop of protein (30 g of powder) and 1 glass of milk	31 g
Dinner	1 can of tuna (about 100 g drained) + 1 potato + 1 cup of broccoli	31 g
Total		**134 g**



Oliver's tip: if you struggle to reach your goal, don't start with the shake. Start by putting a palm-sized portion of protein on your plate at every meal. That's almost always enough.

Carbs and fat

Once you've set your protein, the rest of your calories are split between carbs and fat. You have a lot of freedom here: what matters is that you reach your calories, eat enough fiber and have energy to train.

Fat: how much

- **Between 20 and 35 % of your calories.** In practice, that's usually **0.6 to 1 g per kilo of body weight**.
- **Don't go below 20 % for long.** Very low fat doesn't improve performance and can affect your hormones and vitamin absorption.
- When cutting, some athletes temporarily drop to 15-20 % to leave more room for carbs. If you're a beginner, you don't need to.

Example: the 60 kg woman cutting on 1720 kcal. 25 % is 430 kcal, which divided by 9 gives **about 48 g of fat**.

Carbs: how much

For people who do strength training or gym classes for about 45 to 75 minutes a day, a useful reference is **3 to 5 g per kilo of body weight**. If you train longer or do endurance sports, you need more:

YOUR TRAINING LOAD	CARBS PER DAY
Light (low intensity or short sessions)	3 to 5 g/kg
Moderate (about 1 hour a day)	5 to 7 g/kg
High (1 to 3 hours a day, moderate or high intensity)	6 to 10 g/kg

Source: joint position statement of the Academy of Nutrition and Dietetics, Dietitians of Canada and the American College of Sports Medicine (2016).

The simplest way: **set your protein, set a moderate amount of fat and let carbs fill the rest of your calories.**

Which ones to choose

BETTER MOST OF THE TIME	ONCE IN A WHILE
Oats, rice, quinoa, corn, arepas, corn tortillas, whole-grain bread and pasta	White bread, cookies, sugary cereals
Potatoes, sweet potatoes, cassava, plantains, arracacha (Andean root vegetable)	Packaged chips, fried snacks
Beans, lentils, chickpeas, peas	Candy, desserts, pastries
Whole fruit	Sweetened juices, soda, energy drinks

BETTER MOST OF THE TIME	ONCE IN A WHILE
Olive or canola oil, avocado, peanuts, nuts, seeds	Butter, heavy cream, fatty cold cuts

Around your workout

BEFORE TRAINING

- **2 to 3 hours before:** a normal meal with carbs, protein and little fat and fiber (so it doesn't sit heavy). - Rice with chicken and vegetables. - An arepa or tortilla with scrambled eggs and a piece of fruit. - Oatmeal cooked with milk and banana.
- **30 to 60 minutes before:** a small, easy-to-digest bite, if you're hungry or haven't eaten for many hours. - A banana. - A slice of bread with jam or honey. - A yogurt with fruit. - Two rice cakes with a little peanut butter.
- For sessions longer than 60 minutes or very intense ones, the 2016 position statement recommends **1 to 4 g of carbs per kilo, 1 to 4 hours before**. For a 60 kg person, a meal 2 hours before with 60 to 120 g of carbs (for example, 1½ cups of cooked rice plus a piece of fruit) is great.

What if I train fasted? If you feel good and your session is short, you can. If you get dizzy, feel weak or train for more than an hour, eat something small before. After training, don't put it off: eat soon.

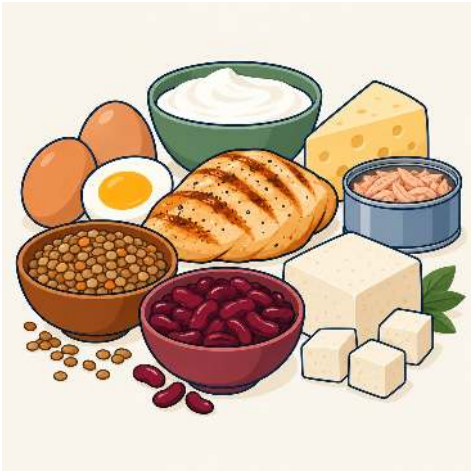
AFTER TRAINING

- Have a meal with **20 to 40 g of protein** (about 0.25 to 0.3 g per kilo) and carbs within the **next 2 hours**. No need to rush: the "anabolic window" doesn't close after 30 minutes. The effect of training on your muscle lasts at least 24 hours. - Milk shake with banana and 1 scoop of protein powder. - Eggs with an arepa and avocado. - Greek yogurt with oats and fruit. - Rice, beans, meat and salad. - Stir-fried tofu with rice and vegetables.



Merlyna's tip: if you train early and with almost no breakfast, have a big meal with protein the night before and eat a solid breakfast right after training.

Protein sources



Approximate values calculated with USDA FoodData Central data. Meat and fish are listed cooked (raw, they weigh about 25 to 30 % more). Prices are relative and change by country: **$** cheap, **$$** mid-range, **$$$** more expensive.

Animal protein

FOOD	OTHER NAMES	HOUSEHOLD PORTION	PROTEIN	KCAL	PRICE
Whole egg	—	1 large (50 g)	6 g	72	$
Egg whites	—	3 whites (100 g)	11 g	52	$
Skinless chicken breast, cooked	—	100 g (palm of your hand)	31 g	165	$$
Lean beef, cooked	sirloin, steak	100 g	28 g	200	$$$
Lean ground beef 90/10, cooked	minced beef (UK)	100 g	26 g	230	$$
Pork loin, cooked	—	100 g	27 g	190	$$
White fish, cooked	tilapia, hake, cod	100 g	26 g	128	$$
Salmon, cooked	—	100 g	22 g	206	$$$
Canned tuna in water, drained	—	100 g (1 small can)	25 g	116	$$
Canned sardines, drained	—	100 g	25 g	208	$
Turkey ham	sliced turkey, deli turkey	3 slices (60 g)	10 g	62	$$
Milk (whole or skim)	—	1 glass (240 ml)	8 g	149 whole · 83 skim	$
Plain unsweetened yogurt	—	1 cup (245 g)	9 g	149	$
Plain Greek yogurt 0 %	—	1 container (170 g)	17 g	100	$$

FOOD	OTHER NAMES	HOUSEHOLD PORTION	PROTEIN	KCAL	PRICE
Fresh cheese (queso fresco)	farmer's cheese, white cheese, queso blanco	1 slice (30 g)	5 g	78	$$
Part-skim mozzarella	—	1 slice (30 g)	7 g	76	$$
Cottage cheese	—	½ cup (113 g)	12 g	111	$$

Plant protein

FOOD	OTHER NAMES	HOUSEHOLD PORTION	PROTEIN	KCAL	PRICE
Cooked beans	frijoles, black or red beans	1 cup (172 g)	15 g	218	$
Cooked lentils	—	1 cup (198 g)	18 g	230	$
Cooked chickpeas	garbanzo beans	1 cup (164 g)	15 g	269	$
Peas	green peas	1 cup (145 g)	8 g	117	$
Firm tofu	—	100 g	17 g	144	$$
Edamame	green soybeans	1 cup shelled (155 g)	18 g	188	$$
Textured soy protein (dry)	TVP, soy mince	30 g (½ cup dry)	15 g	98	$
Unsweetened soy drink	soy milk	1 glass (240 ml)	7 g	81	$$
Unsalted roasted peanuts	—	1 handful (30 g)	7 g	176	$
Unsweetened peanut butter	—	2 tablespoons (32 g)	8 g	188	$$
Almonds	—	1 handful (30 g)	6 g	174	$$$
Pumpkin seeds	pepitas	30 g	9 g	168	$$
Rolled oats	oat flakes	40 g (½ cup)	5 g	152	$
Cooked quinoa	—	1 cup (185 g)	8 g	222	$$
Cooked pasta	noodles	1 cup (140 g)	8 g	221	$
Whole-grain bread	wholemeal bread (UK)	2 slices (60 g)	7 g	151	$

Notice something important: nuts and peanut butter have protein, but they bring much more fat. Count them as **fat** on your plate, not as your main protein source.

How to combine plant proteins

Animal proteins and soy have all 9 essential amino acids in good proportions. Most plant proteins are lower in one of them: legumes are low in methionine and grains are low in lysine. Together they complement each other.

- **You don't have to combine them on the same plate.** Eating a variety throughout the day is enough.
- Classic combinations: **rice and beans**, **arepa or tortilla with beans**, **lentils with rice**, **hummus with pita bread**, **pasta with chickpeas**, **oats with peanut butter**.
- If you only eat plant protein, aim for the high end of your protein range, because it's digested a little less well.



Thunderbolt's tip: legumes are the cheapest protein in the world. Cook a big pot on the weekend, freeze it in portions and you'll have protein ready for several days.

If you're vegetarian or vegan

The US Academy of Nutrition and Dietetics considers well-planned vegetarian and vegan diets healthy, complete and suitable for every stage of life, athletes included. The key is "well-planned". Pay attention to these nutrients:

NUTRIENT	WHY IT MATTERS	WHERE TO FIND IT
Vitamin B12 (a must if you're vegan)	Without it you get anemia and nerve damage, sometimes irreversible. Only animal foods have it naturally.	**A supplement** or fortified foods (plant milks, cereals, fortified nutritional yeast). Your doctor or dietitian sets the dose. Vegetarians who eat few eggs and little dairy usually need it too.
Iron	Plant iron is absorbed less well. The US National Institutes of Health say people who don't eat meat need almost twice as much.	Lentils, beans, chickpeas, tofu, pumpkin seeds, oats, spinach, fortified cereals. Pair them with vitamin C (lime, orange, guava, bell pepper, tomato).
Calcium	Bones, muscles, nerves.	Calcium-set tofu, fortified plant milks, broccoli, kale, sesame seeds. If you eat dairy, yogurt and cheese.
Omega-3	Heart and brain health.	Ground flaxseed, chia, walnuts and canola oil (they provide ALA). For EPA and DHA, an algae oil supplement is the vegan option.
Iodine	Thyroid function.	Iodized salt (in small amounts). If you don't use iodized salt, talk to your doctor.
Zinc	Immunity, wound healing, hormones.	Legumes, seeds, nuts, whole grains, tofu. Soaking legumes and grains, and eating fermented foods, improves absorption.
Vitamin D	Bones and muscles.	Sun, mushrooms exposed to UV light, fortified plant milks. You may need a supplement (chapter 9).
Protein	Muscle and recovery.	Soy and soy products, legumes, seitan, plant protein powder. Aim for the high end of your range.



Zapote's tip: if you're vegan, get a blood test once a year (B12, iron and ferritin, vitamin D). That way you adjust in time, not blindly.

Protein powder



Protein powder is **food in a convenient form**, not a magic product. It works exactly the same as the protein in chicken or yogurt.

When it helps

- You don't reach your protein goal with food.
- You need something quick after training or between classes and work.
- You're cutting and want lots of protein with few calories.
- You're vegetarian or vegan and struggle to reach your goal.
- You have a small appetite or eat little in the morning.

When you don't need it

- You already reach your protein goal with food.
- Your budget is tight: eggs, milk, beans, lentils and sardines give you protein at a very good price.
- You want it because "you won't grow without shakes". That's false.

Types

TYPE	WHAT IT IS	WHO IT'S FOR
Whey concentrate (concentrated milk whey)	Usually 70 to 80 % protein. Has some lactose and fat. Good taste and price.	Most people who tolerate milk.
Whey isolate	More filtered: 90 % protein or more, almost no lactose or fat. More expensive.	If lactose doesn't agree with you or you want the fewest extra calories.
Hydrolyzed whey	"Pre-digested" protein, absorbed faster. The most expensive and usually more bitter.	Almost nobody needs it. For muscle it shows no clear advantage over the others.

TYPE	WHAT IT IS	WHO IT'S FOR
Casein	The other milk protein. Digested slowly.	Useful before bed: the ISSN says 30 to 40 g of casein at night increases muscle building during sleep.
Plant: pea	Good amount of leucine, no lactose.	Vegans and people with milk allergy.
Plant: rice	Low in lysine on its own.	Better mixed with pea.
Plant: soy	Complete protein.	Vegans.
Plant: blends (pea + rice, for example)	They complement each other and form a complete amino acid profile.	The best plant option for most people.

How to read your protein label

1. **Grams of protein per serving.** Look for **20 to 30 g** per scoop.
2. **Protein percentage.** Divide the protein by the serving weight. Example: 24 g of protein in a 30 g scoop = 80 %. Above 70 % is good.
3. **Sugar.** Less than 5 g per serving is ideal.
4. **Ingredient list.** The shorter, the better. Protein should come first. Be suspicious if you see loose amino acids like glycine, taurine or creatine in the protein list: some brands add them so the protein "looks" higher in the analysis.
5. **Third-party quality seals.** The **Informed Sport** or **NSF Certified for Sport** seals mean an independent lab tested the product for banned substances and contaminants. They matter if you compete (because of drug testing) and are a quality guarantee for anyone.
6. **Products registered** with your country's health authority. Avoid products without a clear label or sold "in bulk".

How much to use

- **One scoop (20 to 30 g of protein) a day** is usually enough. Two, if you really can't get there with food.
- **Don't regularly replace full meals** with shakes: real food brings fiber, vitamins and minerals the powder doesn't have.
- Mix it with water, milk, plant milk, yogurt, oats or into the recipes in our recipe books (pancakes, ice cream, smoothie bowls and more).

YOU CAN USE THE PROTEIN YOU ALREADY HAVE OR THE ONE WE RECOMMEND BASED ON WHAT YOU'RE AFTER; IF YOU WANT A RECOMMENDATION MADE FOR YOU, BOOK YOUR COACHING SESSION AT CANELITH.COM.



Canela's tip: if protein powder bloats you or gives you gas, try a whey isolate or a plant protein before giving it up. Sometimes the problem is the lactose or the sweeteners, not the protein.

Supplements: the ones with evidence and the ones without

First, the important part: **no supplement makes up for a poor diet, little sleep or disorganized training.** In 2018 the International Olympic Committee (IOC) concluded that only a few supplements have good evidence of improving performance, including **caffeine** and **creatine**. It also warns that some supplements can be contaminated with banned substances.

Before taking any supplement, check with your doctor or dietitian, especially if you have a medical condition, take medication, are pregnant or breastfeeding, or are under 18.

Quick summary

SUPPLEMENT	IS IT WORTH IT?	IN A FEW WORDS
Creatine monohydrate	Yes, with solid evidence	More strength and more muscle with training.
Caffeine	Yes, with solid evidence	Improves performance. Watch the dose and your sleep.
Vitamin D	Only if you're low	Get a blood test.
Omega-3	Only if you barely eat fish	Eating fish is better.
Magnesium	Only if your diet is low in it	Food first.
BCAA and EAA	No, if you eat enough protein	A meal with protein does the same, and better.
Melatonin or sleep gummies	Only with medical advice	Sleep habits first.
Collagen	Not for building muscle	It's an incomplete protein.
Fat burners	No	Risky and no real results.

Creatine monohydrate

- **What it does:** increases the stores of quick energy in your muscle. It lets you do one or two more reps, and over time that turns into more strength and more muscle.
- **Dose: 3 to 5 g a day**, every day (rest days too), at whatever time you like. You can mix it with water, juice or your shake.
- **Loading (optional):** 0.3 g per kilo a day (about 20 g, split into 4 doses) for 5 to 7 days, then 3 to 5 g a day. Loading only speeds up the effect; without it, your muscles fill up in 3 to 4 weeks.
- **Safety:** the ISSN concludes that creatine monohydrate is safe in healthy people, with studies of up to 30 g a day for 5 years without harmful effects.
- **What you should know:** it's normal to gain **1 to 2 kg (2 to 4 lb)** in the first weeks: it's water inside the muscle, not fat. **If you have kidney disease, don't take it without your doctor's approval.**
- **What to buy:** pure creatine monohydrate. The "advanced", more expensive versions haven't been shown to be better.

Caffeine

- **What it does:** improves strength, endurance and focus.
- **Evidence-based dose:** the ISSN states **3 to 6 mg per kilo**, about 60 minutes before training. Lower doses (from about 2 mg/kg) can also work.
- **Safety limits (EFSA):** up to **400 mg a day** in healthy adults and up to **200 mg per dose**. During pregnancy, 200 mg a day at most.
- **Example:** for a 60 kg person, 3 mg/kg is 180 mg. Start low and see how it feels.
- **Watch your sleep:** according to EFSA, even 100 mg close to bedtime can make it harder to fall asleep. If you train at night, use little or none.
- **Careful with pre-workouts and energy drinks:** many combine caffeine with other stimulants. Add up all your caffeine for the day (coffee, tea, soda, pre-workout).
- It's not for you if you have heart problems, anxiety, uncontrolled high blood pressure or are underage, unless your doctor says otherwise.

Vitamin D

- Your bones and muscles need it. You make it from sunlight, and it's in few foods.
- Daily recommendation (NIH): **600 IU (15 µg)** from 19 to 70 years and **800 IU (20 µg)** from 71. **Upper limit: 4000 IU (100 µg) a day** from all sources.
- If you almost always train indoors, wear a lot of clothing or live far from the equator, your risk of being low goes up.
- **Get a blood test** (25-hydroxyvitamin D) and let your doctor decide the dose. Don't take high doses on your own.

Omega-3

- If you eat oily fish (sardines, salmon, tuna, mackerel, trout) once or twice a week, you probably don't need it.
- If you don't eat fish, a fish oil or algae oil supplement can be useful. Talk to your dietitian about the dose.
- The US FDA recommends not going above 5 g a day of EPA and DHA from supplements. If you take blood thinners, check first.

Magnesium

- Daily recommendation (NIH): 400 to 420 mg for men and 310 to 320 mg for women.
- You'll find it in pumpkin seeds, almonds, peanuts, spinach, black beans and whole grains.
- If your doctor recommends it, don't go above **350 mg a day from supplements**. More than that often causes diarrhea.

Amino acids: BCAA and EAA

- **BCAAs** (leucine, isoleucine and valine) are only 3 of the 9 essential amino acids. On their own they're not enough to build muscle: the body needs all 9. A review by Wolfe (2017) concluded that BCAAs alone don't meaningfully increase muscle building.

- **EAAs** (all 9 essential ones) work better than BCAAs, but **if you eat enough protein during the day you don't need them**. A glass of milk or a Greek yogurt gives you the same, for less money.

Melatonin and sleep gummies

- Only with medical advice. In some countries melatonin requires a prescription.
- Gummies can contain a different amount than the label says, and they don't fix the cause of poor sleep.
- Before that, try the basics: a fixed schedule, a dark and cool room, no screens in the last hour, little caffeine after noon.

Collagen

- It's an **incomplete protein** (it lacks tryptophan, an essential amino acid) and has little leucine. **Don't count it as protein for building muscle.**
- There are early studies on collagen or gelatin with vitamin C for tendons and joints, but the evidence isn't solid yet.

Fat burners: no

- There's no evidence they make you lose a meaningful amount of fat.
- They often have high doses of stimulants and, in some cases, undeclared or banned substances. They can cause palpitations, anxiety, insomnia and blood pressure spikes.
- What does work for losing fat: a moderate deficit, enough protein, strength training, daily steps and good sleep.



Minchu's tip: if you compete in a drug-tested sport, use only supplements with the Informed Sport or NSF Certified for Sport seal. You're responsible for what you take, even if it's contaminated without your knowing.

Key micronutrients for people who train

Micronutrients are vitamins and minerals. You need them in small amounts, but without them your body doesn't perform. If you eat a varied diet, with fruit, vegetables, legumes, whole grains and protein, you cover almost everything. These are the ones most worth watching:

Iron

- **What for:** it carries oxygen in your blood to your muscles. If you're low, you tire quickly and perform worse.
- **How much (NIH): 18 mg a day** for women aged 19 to 50 and **8 mg a day** for men and people over 51. People who don't eat meat need almost twice as much.
- **Periods:** every month you lose iron with the blood. That's why women who menstruate, especially heavily, are more at risk of falling short. The 2016 position statement says female athletes may need up to 70 % more than the basic recommendation.
- **Warning signs:** constant tiredness, weakness, paleness, getting out of breath with little effort and trouble concentrating.
- **Where it is:** - Well-absorbed iron (heme): red meat, liver, chicken, fish, seafood. - Less well-absorbed iron (non-heme): lentils, beans, chickpeas, tofu, spinach, pumpkin seeds, fortified cereals.
- **Trick:** pair plant iron with vitamin C (lime, orange, guava, kiwi, bell pepper, tomato, broccoli). Have coffee or tea **away from meals**: they can cut iron absorption by up to 50 %.
- **Don't take iron on your own.** Too much is harmful (the limit is 45 mg a day for adults). Ask for a blood test with ferritin and let your doctor decide.

Calcium

- **What for:** bones, muscle contraction, nerves.
- **How much (NIH): 1000 mg a day** from 19 to 50 years. **1200 mg** for women from 51 and for everyone from 71.
- **Where it is:** milk, yogurt, cheese, canned sardines with bones, calcium-set tofu, fortified plant milks, kale, broccoli.

Vitamin D

- **What for:** helps you absorb calcium and plays a part in muscle function.
- **How much:** 600 IU a day (800 IU from 71). Details in chapter 9.
- **Where it is:** sunlight, oily fish, egg yolk, fortified milk and plant milks (about 120 IU per cup), mushrooms exposed to UV light.

Magnesium

- **What for:** more than 300 processes in the body, including energy production and muscle function.
- **How much:** 310 to 320 mg for women and 400 to 420 mg for men.
- **Where it is (NIH):** - 30 g of pumpkin seeds: 156 mg. - 30 g of almonds: 80 mg. - ½ cup of cooked spinach: 78 mg. - ¼ cup of peanuts: 63 mg. - ½ cup of cooked black beans: 60 mg.

Potassium

- **What for:** fluid balance, muscle contraction, blood pressure.
- **How much:** the WHO recommends **at least 3510 mg a day** for adults.
- **Where it is:** bananas, potatoes, sweet potatoes, beans, lentils, avocado, yogurt, milk, oranges, tomatoes, spinach. With 5 servings of fruit and vegetables a day, plus legumes, you're well on your way.

Sodium

- **What for:** fluid balance and nerve signals. You lose it in sweat.
- **How much:** the WHO recommends **less than 2 g of sodium a day**, which equals **less than 5 g of salt** (about one teaspoon).
- **Where it is:** most of it doesn't come from the salt shaker but from cold cuts, canned foods, instant soups, sauces, bouillon cubes, snacks and fast food.
- **If you sweat a lot** (you train for more than an hour, in the heat, or get white marks on your clothes), you may need a bit more sodium that day. We cover it in chapter 11.

Bella's tip: "eat the rainbow" isn't just a nice slogan: each color of fruit and vegetable brings different vitamins and minerals. Aim for **400 g of fruit and vegetables a day**, as the WHO recommends (about 5 servings).

Hydration



How much water a day

EFSA considers a total water intake of **2.0 L a day for women and 2.5 L for men** adequate. That includes the water in food (fruit, vegetables, soups), which provides about a fifth. In drinks, that's **around 1.6 L for women and 2 L for men** (about 7 and 8.5 cups), plus what you lose when you train or in the heat.

You don't need to count glasses all day. Carry a bottle with you and check the color of your urine.

Urine color

COLOR	WHAT IT MEANS
Almost clear or light yellow	You're well hydrated.
Medium yellow	You're fine, but drink water soon.
Dark yellow	You need fluids. Drink water.
Brown or with blood	Seek medical attention.

Some B vitamins turn urine bright yellow even when you're well hydrated.

Before, during and after training

- **2 to 4 hours before:** drink **5 to 10 ml per kilo of body weight**. For a 60 kg person that's 300 to 600 ml; for an 80 kg person, 400 to 800 ml.
- **During:** in one-hour gym sessions, sip water according to your thirst. As a starting point, the American College of Sports Medicine suggests **0.4 to 0.8 L per hour**, depending on the heat and how much you sweat. The goal is not to lose more than **2 % of your body weight** (1.2 kg if you weigh 60 kg), because beyond that performance can drop.
- **After:** if you weigh yourself before and after training, drink **1.25 to 1.5 L for every kilo you lost**. If you don't weigh yourself, drink water with your post-workout meal and keep using your urine as a guide.
- **Don't overdo it:** drinking much more than you sweat, in very long sessions, can lower the sodium in your blood (hyponatremia), which is dangerous.

Electrolytes

Electrolytes are minerals like sodium, potassium and magnesium. Sodium is the one you lose most in sweat.

- **Session under 1 hour:** water is enough.
- **Over 1 hour, very hot or you sweat a lot:** a sports drink, water with a pinch of salt and some fruit, or water and a salty snack.
- **Coconut water:** hydrates and has potassium, but little sodium. Fine for everyday; it's not better than water.
- **Energy drinks:** they're not for hydrating. They have caffeine and, many of them, a lot of sugar.

Signs of dehydration

Strong thirst, dry mouth, dark and scant urine, headache, dizziness, unusual tiredness, cramps. **If you also feel confused, vomit or stop sweating in the heat, stop and get medical help right away.**



Wilson's tip: weigh yourself before and after one intense session in the heat, just once. That way you learn how much you sweat and know how much to drink in your next workouts.

How to read a nutrition label



Labels change a little from country to country, but almost all have the same information. Read them in this order:

1. **Serving size.** Everything else refers to that amount. Often the package holds 2 or 3 servings.
2. **Calories per serving.**
3. **Protein.** How much does a serving give you?
4. **Added sugars.** This is the sugar added to the product, different from the sugar it has naturally (like the lactose in milk). If your label doesn't list them separately, check the ingredients for sugar, syrup, panela, honey, dextrose, maltodextrin or fructose.
5. **Sodium.**
6. **Ingredient list.** It goes from largest to smallest amount. If sugar is among the first three, it's a sweet product.

In several Latin American countries you'll see **black warning seals** on the front of the package, like "HIGH IN SUGARS" or "EXCESS SODIUM". In the UK you may see traffic-light colors. They're a quick alert: they don't mean you can never eat it, just that it's for once in a while.

The **% Daily Value (%DV)**, when shown, tells you what part of the recommended daily amount one serving covers, based on a diet of about 2000 kcal.

Example: two yogurts

PER SERVING	STRAWBERRY GREEK YOGURT (150 G)	PLAIN GREEK YOGURT 0 % (150 G)
Calories	140 kcal	89 kcal
Protein	12 g	15 g
Carbs	17 g	5 g
Total sugars	15 g	5 g
Added sugars	9 g	0 g
Fat	3 g	0.6 g
Sodium	60 mg	54 mg

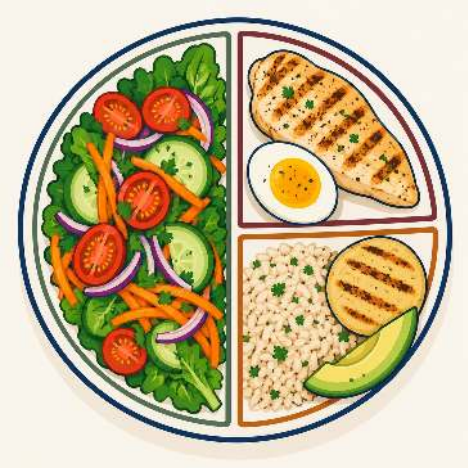
The first is an illustrative example; the second uses USDA values.

HOW TO READ IT

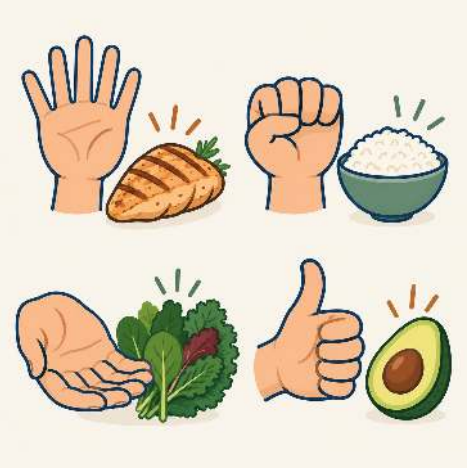
- The strawberry one has 9 g of added sugar: almost a fifth of the 50 g the WHO considers the maximum for a 2000 kcal diet.
- The plain one has **more protein with fewer calories**. A trick: divide the protein by the calories and multiply by 100. The strawberry one gives 8.6 g of protein per 100 kcal; the plain one, 17 g. The plain one is twice as efficient.
- **Practical fix:** buy plain and sweeten it yourself with chopped fruit and cinnamon. If you want a sweet touch, a teaspoon of honey (about 7 g) is still less than what the strawberry one had.

Oliver's tip: when a product says "fit", "light", "natural" or "sugar-free", check the label anyway. "Sugar-free" can have the same calories because of the fat or flour.

The healthy plate



The plate



Hand portions

You don't need to weigh everything to eat well. Use your plate (about 23 to 25 cm, or 9 to 10 in) and your hand as a measure.

How to build each meal

- **Half the plate: vegetables** (and some fruit). Salad, sautéed, steamed, in soup or roasted.
- **A quarter of the plate: protein.** Chicken, fish, meat, eggs, tofu, legumes, tuna.
- **A quarter of the plate: carbs.** Rice, potatoes, arepas, tortillas, pasta, quinoa, plantains, cassava.
- **A serving of good fat.** Olive oil for cooking or on your salad, avocado, a small handful of seeds.
- **To drink:** water, or coffee or tea without sugar.

If you use legumes as your main protein, they take the protein quarter and also provide carbs. In that case you can shrink the rice or potato quarter a little.

Hand portions

FOOD	MEASURE	PER MEAL
Protein	The palm of your hand (thickness and size)	1 to 2 palms
Carbs	Your closed fist	1 to 2 fists
Vegetables	Your closed fist	2 fists or more
Fat	Your whole thumb	1 to 2 thumbs

Your hand grows with your body: a bigger person has bigger hands and needs bigger portions.

Cutting version

- **More than half the plate vegetables.** They fill you up with few calories.
- **Generous protein:** 1½ to 2 palms.
- **Moderate carbs:** ½ to 1 fist. Put them mainly in the meals close to your workout.
- **Fat:** 1 thumb.
- Choose grilling, baking, steaming or soups instead of frying.

Bulking version

- **Vegetables:** a third of the plate, so you don't get too full.
- **Protein:** 1½ to 2 palms.
- **Plenty of carbs:** 1½ to 2 fists or more.
- **Fat:** 2 thumbs (more oil, avocado, peanuts).
- Add an extra snack or shake. If it's hard to eat that much, drinks (milk, shakes) and healthy fats help add calories without making you too full.



Merlyna's tip: serve the vegetables and protein first. That way the carbs take the space they should, not whatever space is left.

A sample day for cutting and one for bulking

These are examples, not required menus. They're here so you can see what the numbers look like in real life. Weights for meat, fish, potatoes and vegetables are **raw**; rice and legumes are **cooked**. Calculated with USDA FoodData Central data and rounded.

Cutting day: woman, 60 kg (132 lb)

Estimated maintenance: 2050 kcal. Goal: about 1700 kcal and about 120 to 130 g of protein (2.0 to 2.2 g/kg).

MEAL	WHAT YOU EAT	KCAL	PROTEIN
Breakfast	2 eggs scrambled with tomato and scallion in 1 teaspoon of oil + 1 medium corn arepa (80 g) or 1 large tortilla + 30 g of fresh cheese + 1 cup of diced papaya (150 g) + coffee	460	23 g
Lunch	130 g of grilled chicken breast + ¾ cup of cooked white rice (150 g) + ½ cup of cooked beans (100 g) + lettuce, tomato and cucumber salad with lime and 1 teaspoon of olive oil + ¼ avocado (40 g)	618	45 g
Afternoon snack	1 plain Greek yogurt (170 g) + 1 cup of strawberries (100 g) + 2 tablespoons of oats (20 g) + 10 g of chopped peanuts	267	23 g
Dinner	150 g of baked white fish (tilapia or hake) + 1 medium potato (150 g) + 1½ cups of steamed broccoli and carrot + 1 teaspoon of olive oil	375	38 g
Day total		**1720 kcal**	**128 g**

Rest of the day: about 194 g of carbs (3.2 g/kg), 51 g of fat (27 % of calories) and 31 g of fiber.

Bulking day: man, 80 kg (176 lb)

Estimated maintenance: 2740 kcal. Goal: about 3000 kcal (10 % more) and about 160 to 175 g of protein (2.0 to 2.2 g/kg).

MEAL	WHAT YOU EAT	KCAL	PROTEIN
Breakfast	Oatmeal: 80 g of oats cooked with 300 ml of whole milk + 1 banana (120 g) + 1 tablespoon of peanut butter (16 g) + 1 boiled egg	759	32 g
Lunch	150 g of lean ground beef stewed with tomato and onion + 1¼ cups of cooked rice (250 g) + ¾ cup of cooked beans (150 g) + ½ small avocado (70 g) + salad	924	53 g
Before training (1 to 2 hours)	2 slices of whole-grain bread (60 g) with 1 tablespoon of peanut butter (16 g) + 1 banana (120 g)	352	13 g
After training	Shake: 300 ml of skim milk + 1 scoop of whey protein (25 g of powder) + 1 cup of strawberries (100 g)	229	30 g
Dinner	150 g of baked skinless chicken thigh + 2 medium potatoes (300 g) + 1 cup of green beans and carrot + 2 teaspoons of olive oil	565	38 g
Before bed	1 cup of plain yogurt (200 g) + ½ cup of diced mango (100 g)	182	8 g
Day total		**3010 kcal**	**174 g**

Rest of the day: about 390 g of carbs (4.9 g/kg), 91 g of fat (27 % of calories) and 52 g of fiber.

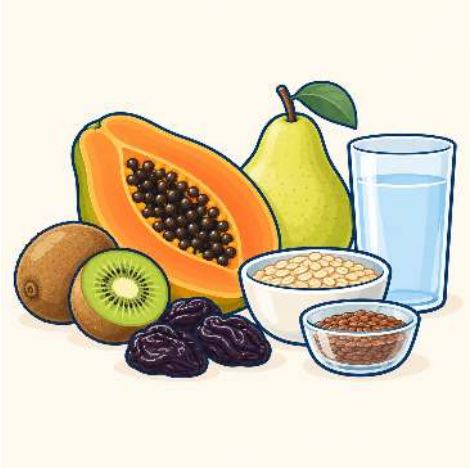
How to adapt these days

- **If you weigh something different:** raise or lower the carb and fat portions to reach your calories. Adjust protein following chapter 4.
- **If you're vegetarian:** swap the chicken for tofu or eggs, the fish for lentils with cheese, the beef for beans with textured soy protein.
- **If you're vegan:** also use soy milk instead of milk, soy yogurt instead of yogurt and plant protein powder.
- **If you don't have an ingredient:** swap the arepa for a corn tortilla, bread or potato; the papaya for any fruit; the tilapia for any white fish or tuna.
- In our recipe books you'll find many more meals with their calories and protein per serving.



Thunderbolt's tip: you don't have to eat exactly the same every day. Have 2 or 3 breakfasts, lunches and dinners you like and rotate them. A bit of routine makes everything easier.

Digestion and constipation



Going to the bathroom less often, with effort or with hard stools is very common, especially when you change how you eat, eat more protein and fewer vegetables, travel, sleep little or drink little water. The good news: in most cases it improves with simple habits.

What does help (with evidence)

WHAT	HOW MUCH	WHY IT HELPS
Fiber	25 to 30 g a day, increasing little by little (about 5 g more per week)	Adds bulk and softness to stools. Found in fruit, vegetables, legumes, oats and whole grains.
Water	What chapter 11 says, plus one more glass for each extra serving of fiber	Fiber needs water to work; without water it can make constipation worse.

WHAT	HOW MUCH	WHY IT HELPS
Kiwi	2 kiwis a day, with or without the skin	In studies with constipated people, 2 kiwis a day increased bathroom trips and were better tolerated than other options.
Prunes	50 to 100 g a day (about 6 to 10)	They have fiber and sorbitol, a natural sugar that draws water into the gut.
Papaya, pear, apple with skin, mango	1 or 2 servings a day	Fiber and water; pears and apples also have sorbitol.
Ground flaxseed or chia	1 to 2 tablespoons a day, with enough water	Soluble fiber that forms a soft gel. Flaxseed, always ground.
Oats, beans, lentils and chickpeas	One serving a day	Soluble and insoluble fiber, plus protein.
Moving	Walking 20 to 30 minutes a day and training	Physical activity helps your gut move.
Routine	Going to the bathroom without rushing, at the same time, especially after breakfast	Your gut wakes up after eating; a low footstool helps your posture.



Zapote's tip: if you eat very little fiber today, don't jump straight to 30 g: increase it little by little over 2 to 3 weeks to avoid gas and bloating. The "Green juices and smoothies" recipe book has a "For your digestion" section.

What's worth checking

- **Lots of protein and little fiber:** if you raised your protein (meat, eggs, shakes), make sure you add vegetables, fruit and legumes at every meal.
- **Iron or calcium supplements:** they can harden stools. Don't stop them on your own; tell your doctor.
- **Laxatives:** don't use them often without medical advice.
- **"Detox" teas or juices:** they don't clean your gut; many are laxatives that irritate it if used often.

When to see a doctor

See a doctor soon if your constipation comes with **blood in your stool**, **strong abdominal pain**, **weight loss without trying**, **vomiting**, fever, if it **lasts more than 3 weeks** despite the changes, or if it's **a new change in your habits after age 50**. Also if you're pregnant, have a bowel condition or take medication that can cause it. A gastroenterologist or your doctor can check what's going on.

Common myths

"Your body only absorbs 30 g of protein per meal." Reality: your body absorbs all the protein you eat. What happens is that muscle makes better use of protein when you spread it over several meals. A meal with 50 g doesn't "waste" 20 g.

"Eating a lot of protein damages your kidneys." Reality: in healthy people, studies haven't shown harm with the amounts in this guide. If you have kidney disease, it's different: your doctor should set your protein.

"Carbs at night make you fat." Reality: what counts is your total calories for the day. If you train in the afternoon or evening, eating carbs at dinner even helps you recover.

"You have to eat every 3 hours to speed up your metabolism." Reality: the number of meals barely changes what you burn. Choose the number of meals that works for you, as long as you reach your protein and spread it over 3 to 5 meals.

"If you don't have your shake within 30 minutes of training, you lose muscle." Reality: the effect of training lasts at least 24 hours. Eat a meal with protein in the next 2 hours and you're done.

"Detox juices cleanse your body." Reality: your liver and kidneys already do that job, every day and for free. A fruit juice gives you vitamin C, water and some potassium, and that's fine, but it doesn't "detox" anything.

"Sweating a lot burns more fat." Reality: sweat is water. What you lose in a sweatsuit or a waist trainer comes back as soon as you drink.

"Creatine is a steroid" or "it damages your kidneys". Reality: creatine is a compound your body already makes and that you eat in meat and fish. It's one of the most studied supplements and it's safe in healthy people.

"Women who eat a lot of protein and lift weights get bulky." Reality: building muscle is slow for everyone. What you'll notice is a firmer, stronger, better-shaped body.

"Eating fat makes you fat." Reality: you gain fat when you eat more calories than you burn, wherever they come from. Good fats are necessary; just watch the portion, because they're calorie-dense.

"Fruit makes you fat because of the sugar." Reality: whole fruit brings fiber, water, vitamins and potassium. The WHO doesn't count its sugar as "free sugar". What's worth limiting is sweetened juice.

"You need supplements to build muscle." Reality: you need to train well, eat enough protein and calories, and sleep. Supplements are, as the name says, a supplement.

"To get visible abs you have to do hundreds of crunches." Reality: ab exercises strengthen the muscle, but whether you see it depends on losing fat all over your body. You can't burn fat in just one area.



Canela's tip: when something promises fast results with no effort, or tells you a single food is to blame for everything, be suspicious.

Frequently asked questions

Do I have to weigh my food? It's not required. Weighing it for 2 or 3 weeks teaches you to estimate portions by eye. After that, the hand method is enough for most people.

Can I lose fat and build muscle at the same time? Yes, especially if you're a beginner, coming back after time off, or have quite a bit of fat to lose. Eat close to maintenance or in a small deficit, with high protein, and do strength training with progression.

How long until I notice? Strength improves in a few weeks. Changes in the mirror usually show between 6 and 12 weeks if you're consistent. That's why Canelith guides are built in 12-week blocks.

Does intermittent fasting work? It's a way of organizing your meals, not a magic method. It works if it helps you eat fewer calories. If you use it, make sure you reach your protein within your eating window, split over at least 2 or 3 meals.

Can I have protein powder if I don't train? Yes, it's food. But if you don't train, you probably don't need that much protein and can cover it with food.

Does protein powder make you fat? No more than any food with the same calories. One scoop has about 110 to 130 kcal. If you add it without adjusting the rest of your food, you add calories.

Can I drink alcohol? You can, but it has 7 kcal per gram, provides no nutrients and makes recovery and sleep worse. If you drink, keep it small, with food and away from your workouts.

I'm pregnant or breastfeeding. Is this guide for me? Your needs change (calories, protein, iron, iodine, folic acid and more). Don't eat in a deficit or take supplements without talking to your doctor or dietitian.

I'm under 18. Can I follow it? The general ideas of the healthy plate, yes. But don't eat in a deficit or take supplements without supervision from a responsible adult and a health professional. You're growing and need enough energy.

What do I do when I eat out? Use the plate: order grilled or baked protein, swap the fries for salad or vegetables and ask for the sauce on the side. If you eat more one day, don't make up for it by skipping meals the next: go back to your normal routine.

I feel tired all the time and my performance dropped. What do I do? Check whether you're eating too little, sleeping too little or training too much. Eating far below what you burn for a long time affects your hormones, bones and periods. If it doesn't improve in one or two weeks, see your doctor and ask for tests (iron, vitamin D, thyroid and others).

Do I need a dietitian? If any of the situations in chapter 1 apply to you, yes. And if you want a custom plan, it helps a lot too. This guide gives you the basics to understand it and make the most of it.



Minchu's tip: if you have a question that isn't here, write to us from **canelith.com**. We add the most common questions to the next version of this guide.

Words you'll see

Amino acids: the pieces that make up proteins. There are 20; 9 are essential and must come from food.

Essential amino acids (EAA): the 9 amino acids your body can't make.

Added sugars: sugars added to a food when it's prepared or made.

Free sugars: added sugars plus the sugars in honey, syrups and fruit juices. They don't include the sugar in whole fruit or milk.

BCAA: branched-chain amino acids (leucine, isoleucine and valine). They're 3 of the 9 essential ones.

Casein: a milk protein that's digested slowly.

Creatine: a compound your body uses to make quick energy in muscle.

Calorie deficit: eating fewer calories than you burn. Used to lose fat.

Cutting: a phase where you aim to lose fat and keep muscle.

Electrolytes: minerals like sodium, potassium and magnesium that control your body's fluids and how your muscles and nerves work.

Ferritin: the form in which your body stores iron. A blood test measures it and shows whether your stores are low.

Fiber: the part of plants you don't fully digest. Helps digestion, your heart and feeling full.

Glycogen: the form in which your body stores carbs in muscle and liver.

Kcal (kilocalorie): the unit of energy in food. In everyday life it's called a "calorie".

Leucine: an essential amino acid that switches on muscle building.

Macronutrients: protein, carbs and fat. The nutrients that give you energy.

Maintenance: the calories you need to keep your weight.

Lean mass: everything that isn't fat: muscle, bones, organs and water.

Micronutrients: vitamins and minerals.

Serving: the amount of food the numbers on a label refer to.

Complete protein: protein that has all 9 essential amino acids in good amounts (for example, eggs, dairy, meat, soy).

Body recomposition: losing fat and gaining muscle at the same time.

Bulking: a phase where you eat a little more than you burn to build muscle.

Calorie surplus: eating more calories than you burn.

IU (international units) and µg (micrograms): ways of measuring some vitamins, like D. 1 µg of vitamin D = 40 IU.

Whey: milk whey protein. It can be concentrate, isolate or hydrolyzed.

%DV (percent Daily Value): what part of the recommended daily amount one serving of a food gives you.

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