HEALTH BASICS

How much protein you need

Protein is a nutrient your body needs to maintain tissues and perform essential functions.

WHAT IT IS
A nutrient used to build and maintain body tissues

WHERE IT COMES UP
Meals, food labels, nutrition plans, and medical conditions

WHY IT MATTERS
Supports muscles, organs, enzymes, hormones, and immune function

WHAT IT IS NOT
Not a disease or diagnosis

WHO TO ASK
A registered dietitian or primary care clinician

HOW IT IS CHECKED
Diet history; no single blood test measures protein intake

Overview

Protein is one of the main nutrients in food. Your body uses it to maintain muscles, skin, blood, organs, and other tissues. Protein also forms enzymes, many hormones, antibodies, and chemical messengers.

Proteins are made from smaller units called amino acids. Your body uses 20 common amino acids. It can make some of them, but nine must come from food. These are called essential amino acids.

Both animal and plant foods can provide protein. Common sources include:

Protein in your diet is not a disease or a diagnosis. There is also no single "best" protein food for everyone. Your needs and food choices may be shaped by your age, body size, activity, pregnancy, health conditions, culture, budget, and preferences.

- Beans, peas, lentils, soy foods, nuts, and seeds
- Fish, shellfish, poultry, meat, and eggs
- Milk, yogurt, cheese, and fortified soy alternatives
- Grains and smaller amounts from many vegetables

How it works

Digestion breaks food proteins into amino acids and short chains of amino acids. These are absorbed through your small intestine and carried in your blood. Your cells then use them to make the proteins your body needs.

Body proteins are continually being built and broken down. This process is called protein turnover. Because your body does not keep a dedicated protein store, you need a regular dietary supply.

Different foods provide different amounts and patterns of essential amino acids. Many animal proteins and soy contain all essential amino acids in proportions the body can use readily. Individual plant foods may contain less of one or more essential amino acids, but a varied plant-based diet can provide all of them.

You do not usually need to combine specific plant proteins at the same meal. Eating a range of foods across the day is generally enough.

Protein also supplies energy. Each gram provides about 4 calories. If amino acids are not needed for building body proteins or other compounds, their nitrogen is removed. Much of that nitrogen becomes urea, which leaves the body in urine. The remaining parts may be used for energy or stored after conversion into other forms.

Why it matters for your health

Adequate protein helps maintain muscle and other lean tissue. It is especially relevant during growth, pregnancy, recovery from injury, and later life, when preserving muscle can become more difficult.

The recommended dietary allowance (RDA) for a generally healthy adult is 0.8 grams of protein per kilogram of body weight each day. That equals about 0.36 grams per pound. The RDA is designed to meet the needs of nearly all healthy adults, but it is not a personalized target.

Children and teenagers need protein for growth. Pregnancy and breastfeeding also change protein needs. Some older adults, athletes, and people recovering from illness or surgery may benefit from an individual assessment rather than relying only on the adult RDA.

The source of protein matters as well as the amount. Protein foods come with other nutrients and ingredients. For example, beans provide fibre, fish may provide omega-3 fats, and dairy foods can provide calcium. Some processed meats can contain substantial sodium and saturated fat.

A balanced eating pattern usually includes several protein sources rather than relying heavily on one food or supplement.

What can go wrong

A low overall food intake can lead to too little protein and energy. This may happen with food insecurity, a very restricted diet, poor appetite, swallowing problems, digestive conditions, or serious illness. Prolonged inadequate intake can contribute to protein-energy malnutrition, loss of muscle, reduced strength, and slower wound healing.

A high-protein eating pattern is not automatically harmful, but it can create problems if it crowds out fruit, vegetables, whole grains, or other sources of fibre and nutrients. Its effects also depend on the foods chosen. A pattern based mainly on processed meat is different from one that includes beans, fish, nuts, and other varied foods.

People with chronic kidney disease (CKD) may need a planned amount of protein. Too much or too little can be unhelpful, depending on kidney function, nutritional status, and whether dialysis is used. Do not make a major protein restriction based only on a laboratory result or online calculator.

Some inherited metabolic conditions require special protein management. In phenylketonuria, for example, the body cannot process the amino acid phenylalanine normally. This requires specialist dietary treatment and is not the same as choosing a general low-protein diet.

Protein foods can also cause food allergy. Common examples include milk, egg, peanut, tree nut, fish, shellfish, wheat, and soy allergies. An allergy is an immune reaction to a particular protein, not an allergy to protein as a nutrient.

Blood tests such as albumin or total protein do not directly show how much protein you eat. Abnormal results may relate to inflammation, liver or kidney conditions, fluid balance, or other factors. They need to be interpreted in context.

What you can do

If you eat a varied diet and have no condition affecting nutrition, you may not need to count protein. Including a protein source at meals can make it easier to meet your needs.

Practical steps include:

Protein powders and drinks can be convenient, but most people can meet their needs through food. Supplements may add sugar, sweeteners, caffeine, vitamins, minerals, or herbal

ingredients. The label should be checked for serving size and all added ingredients.

Arrange routine follow-up with a primary care clinician or registered dietitian if you have ongoing poor appetite, unintended weight loss, difficulty swallowing, a highly restricted diet, kidney disease, or concerns about a child's growth. A dietitian can review your usual intake rather than relying on one meal or one blood test.

Seek emergency help for possible anaphylaxis after eating, especially trouble breathing, throat or tongue swelling, faintness, or symptoms affecting more than one body system. Anaphylaxis is a severe allergic reaction and needs immediate treatment.

- Check grams of protein per serving on food labels
- Keep a food record for a few typical days if intake is uncertain
- Include several sources, such as legumes, eggs, fish, dairy, or soy
- Ask whether your medical condition changes your protein needs
- Discuss supplements before using them to replace meals regularly

Common questions

Do I need protein at every meal?

Not necessarily. Your total intake over the day matters most. Having some protein at meals may be practical, particularly if you have a small appetite or are trying to maintain muscle.

Are plant proteins incomplete?

Some individual plant foods contain lower amounts of certain essential amino acids. This does not mean a plant-based diet is incomplete. A varied intake of legumes, soy foods, grains, nuts, seeds, and vegetables can supply all essential amino acids.

Is more protein always better for building muscle?

No. Muscle growth also requires resistance exercise, enough total food, rest, and time. Protein beyond what your body can use does not automatically become muscle.

Can a blood test show whether I eat enough protein?

There is no single blood test that measures dietary protein intake. Clinicians may consider your food history, weight pattern, muscle function, medical conditions, and selected test results together.

Should I calculate my exact requirement?

You may not need to. Calculation can be useful if you have a medical condition, follow a restrictive diet, train intensely, or have concerns about growth, weight loss, or recovery. A

registered dietitian can help set a suitable target.

Sources

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