FITNESS & EXERCISE

Do You Need to Eat Before a Workout?

The answer depends less on fitness folklore than on whether you are lifting, playing for hours, training fasted or simply getting moving.

The snack can become the workout

You have your shoes on, your session planned-and one unresolved question standing between you and the door: should you eat first? The internet can turn that decision into a miniature nutrition exam. Suddenly an ordinary walk or gym session appears to require perfect timing, calculated carbohydrate and a specialised snack.

The evidence offers a calmer answer. Eating beforehand can matter, but its value changes with the activity. A routine strength session, a demanding soccer match and exercise after deliberately depleting carbohydrate stores are not interchangeable. Advice that makes sense for one may add little to another.

That distinction matters because exercise itself does not need to be elaborate. Physical activity is movement that works your muscles and requires more energy than resting; structured exercise includes activities such as lifting weights or taking an aerobics class. Even modest amounts are good for your health, and regular practice helps your body adapt.

Food should support that habit, not become another obstacle to it. Before asking what to eat, ask a more useful question: what are you asking your body to do today?

Most lifting sessions are less demanding than the advice

Carbohydrate is routinely recommended to athletes, including people who strength train. Yet a 2022 systematic review of 49 studies found that higher carbohydrate intake often did not improve strength or resistance-training performance. In the acute studies, 13 reported no improvement and six found a benefit.

The details explain why both claims-"you need carbohydrates" and "it makes no difference"-can sound convincing. Benefits appeared mainly when the comparison group had trained while fasted and when workouts involved more than 10 sets for each muscle group. One study found that a carbohydrate meal performed better than water, but not better than a sensory-matched placebo breakfast.

Across the review, there was no evidence that progressively more carbohydrate produced

progressively better results. None of the seven short-term carbohydrate-manipulation studies found a benefit. In longer-term research, carbohydrate intake did not influence performance in 15 studies; one favoured higher carbohydrate and one favoured lower carbohydrate.

For a fed person completing up to 10 sets per muscle group, the reviewers concluded that carbohydrate intake itself was unlikely to improve strength-training performance. That is not a declaration that eating is pointless. It means a pre-workout meal should not be treated as the price of admission to every weights session.

Food should support that habit, not become another obstacle to it.

Long, hard sport changes the equation

The picture shifts when the activity is long enough or demanding enough to deplete muscle glycogen, the stored carbohydrate used during exercise. A 2025 systematic review of 71 studies in female athletes and physically active women found that high-carbohydrate diets enhanced performance in activities that depleted those stores. Meals rich in carbohydrate before exercise also increased carbohydrate metabolism.

That review came with an important limitation. The risk of bias was moderate, with problems including incomplete study protocols, inadequate dietary control, limited blinding and insufficient control of menstrual-cycle phase. Its findings are useful, but they are not a promise that one meal will transform every session for every woman.

Soccer provides a clearer example of a sport in which carbohydrate can matter. A 2024 systematic review of 61 studies found that carbohydrate before and during matches improved speed and sprint numbers, delayed fatigue, supported cognitive function and reduced declines in shooting accuracy and speed. Evidence was not consistent for passing, dribbling, jumping or agility.

The contrast is the point. A match with repeated sprints is not the same demand as an ordinary lifting session. The soccer findings should not be stretched into a rule that everyone needs to eat before moving. They show that the harder and more carbohydrate-depleting the task becomes, the more relevant carbohydrate may be.

Fasted is not automatically better or worse

Some of the apparent benefit of eating before strength training may come from what it is being compared with. In the 2022 review, positive findings were concentrated partly in studies using fasted control groups. A meal can therefore look powerful when the alternative is

beginning a demanding, high-volume workout without having eaten.

After exercise-induced glycogen depletion, carbohydrate supplementation improved performance in three studies, particularly when people completed two workouts in a day. But benefits were not found when carbohydrate was compared with controls containing the same amount of energy. That leaves an unresolved question: was carbohydrate itself responsible, or did consuming energy account for the difference?

This is why a universal command-always eat, or always train fasted-goes beyond the evidence supplied here. Your activity, whether you have already eaten, and the amount of work in the session all change the comparison. The trials do not establish one pre-workout ritual for everyone.

There is also a point where this stops being a snack question. If you have heart disease, high blood pressure, diabetes, a disability affecting activity, or concerns about whether exercise is safe, ask a health professional what type and amount of activity suits you. If exercise brings pain, extreme shortness of breath, dizziness or a sense that something is wrong, stop and seek help right away.

Make Monday's decision before Monday

For the next week, sort each planned workout into one of two broad buckets. The first is ordinary movement or a routine, fed strength session. The second is prolonged, high-volume or repeatedly sprinting activity-the kind of work in which the reviews found carbohydrate more likely to matter. This is not a calculation. It is a way to stop treating every workout as the same nutritional event.

If Monday holds a routine weights session and you have already eaten, the evidence does not say you need an additional carbohydrate snack. If it holds a long match, unusually high-volume lifting, or demanding activity after fasting, plan a carbohydrate-containing meal rather than leaving the decision until you are dressed to train. The sources do not establish one food that everyone must choose.

Write the workout and whether you expect to begin fed or fasted in a small notebook. Afterward, record only whether you completed the planned activity and whether anything felt wrong. Goal-setting and putting a specific plan in writing can help you stick with physical activity; you do not need to turn the page into a nutrition spreadsheet.

This step takes a notebook and a pen. On Monday, use them to make one decision that fits the session in front of you-not the most extreme workout advice you saw online.

Where this comes from

- Exercise and Physical Fitness

  MedlinePlus, U.S. National Library of Medicine · https://medlineplus.gov/exerciseandphysicalfitness.html
- Exercise for Older Adults

  MedlinePlus, U.S. National Library of Medicine · https://medlineplus.gov/exerciseforolderadults.html
- Physical Activity and Your Heart - What Is Physical Activity?

  National Heart, Lung, and Blood Institute · https://www.nhlbi.nih.gov/health/heart/physical-activity
- Tips for Starting Physical Activity

  National Institute of Diabetes and Digestive and Kidney Diseases · https://www.niddk.nih.gov/health-information/weight-management/tips-get-active/tips-starting-physical-activity
- The Effect of Carbohydrate Intake on Strength and Resistance Training Performance: A Systematic Review.

  Nutrients, 2022 · https://pubmed.ncbi.nlm.nih.gov/35215506/
- Nutritional Strategies for Optimizing Health, Sports Performance, and Recovery for Female Athletes and Other Physically Active Women: A Systematic Review.

  Nutrition reviews, 2025 · https://pubmed.ncbi.nlm.nih.gov/38994896/
- Influence of Carbohydrate Intake on Different Parameters of Soccer Players' Performance: Systematic Review.

  Nutrients, 2024 · https://pubmed.ncbi.nlm.nih.gov/39519564/