ACTIVE NUTRITION FOR **HIKING**

Hiking requires the ability to walk for long distances over varied terrain and surfaces while carrying a pack that can weigh up to 20 percent of your body weight. The demands of hiking depend on the difficulty of the trail and weight of your gear. Consuming adequate energy while hiking is important to maintain stamina during long days on the trail.

MEET STEPHANIE HOWE VIOLETT

A professional ultra-runner who loves spending time on the trails. With a PhD in sports nutrition and experience as a Team CLIF Bar athlete, Stephanie combines her love for the outdoors with her education and passion for real food.

Performance Priorities: Fueling Basics

Carbohydrate

Carbohydrate is the most important type of fuel for sustained energy on the trail. It is needed before (to be stored in the muscles as glycogen to provide fuel to working muscles), during (for immediate energy needs), and after hiking (to replenish used muscle glycogen).

- For **hikes longer than two hours,** consume **30-60 grams of carbohydrate/hour** from a mix of whole, plant-based, nutrient-dense foods and sports products to sustain energy on the trails.
- If you plan to be on the trail for **more than four hours,** consume **additional protein and fat** — like a banana and almond butter or a CLIF® Nut Butter Filled Energy Bar — that will help keep you satisfied.

On the Trail

Eating on the trail doesn't have to be boring. It's easy to prepare **nonperishable and portable foods** to bring along with you while hiking.

- Spread peanut butter and jelly on a flour tortilla and roll it up for easy transport.
- Combine your favorite dried fruit, nuts and cereal to make your own trail mix for a quick afternoon snack.
- Grab a CLIF BAR® Energy Bar for an energy break mid-hike.

"Make sure to start fueling before you feel like you need it to prevent a drop in energy, otherwise referred to as bonking. Start fueling within the first 90 minutes of a hike. I like to start with something small, like a couple of CLIF® BLOKS™ Energy Chews that are easy to pop in my mouth while on the trail."

– STEPHANIE

Hydration

Don't forget to hydrate! Sweat losses while hiking can vary from 10-80 ounces per hour, depending on the individual. Fluid losses greater than 2 percent of body weight can compromise physical and mental performance. Make sure to drink water before, during and after your hike to prevent dehydration.

- A few hours before hitting the trail, drink **8-24 ounces** of water.
- Aim to drink **13-27 ounces** of water per hour while hiking.
- If the temperature is warm, consider an electrolyte-replenishing beverage with approximately 250 milligrams of sodium per 8 ounces of fluid.

Want a training day nutrition plan?

Work with a registered dietitian to use the **Active Nutrition Guide** at www.clifbar.com/activenutritionguide to develop a personalized training day nutrition plan.

PRO TIP

Be a trail steward and do your part to minimize your wilderness footprint and nourish the planet while hiking. Reduce waste by packing a reusable water bottle and bring a bag to pack out your trash so you can leave the trail as you found it.

The ideas and suggestions are provided for general educational purposes only and should not be construed as medical advice or care. The contents of this article are not intended to make health or nutrition claims about Clif Bar & Company products. Always seek the advice of a physician or other qualified health provider before beginning any physical fitness or health and nutrition related activity. This module was developed with the support of Clif Bar & Company. Clif provided financial support to the author for their time and expertise. The Clif nutrition team and their agency of registered dietitians provided project support and reviewed the content.

PERSONALIZED ACTIVE NUTRITION FOR **HIKING**

Hikers have specific day-to-day nutrition needs based on the terrain, duration and intensity of the hike. The following steps can help you develop your athlete's own personalized nutrition plan.

The following content is to be used by a nutrition professional. Consult a registered dietitian to determine your individual nutrition needs.

STEP 1: Calculate Energy Needs

Energy needs for hikers will vary substantially based on distance, terrain, pack weight and individual body weight. Total daily energy expenditure (TDEE) takes into account resting metabolic rate (RMR) and physical activity level, while TDEE plus energy expended during purposeful exercise determines total energy needs.

TDEE = RMR x Physical Activity Level (PAL)*

RMR for males (kcal/day) = (9.99 x weight in kg) + (6.25 x height in cm) – (4.92 x age in yrs) + 5

RMR for females (kcal/day) = (9.99 x weight in kg) + (6.25 x height in cm) – (4.92 x age in yrs) – 161

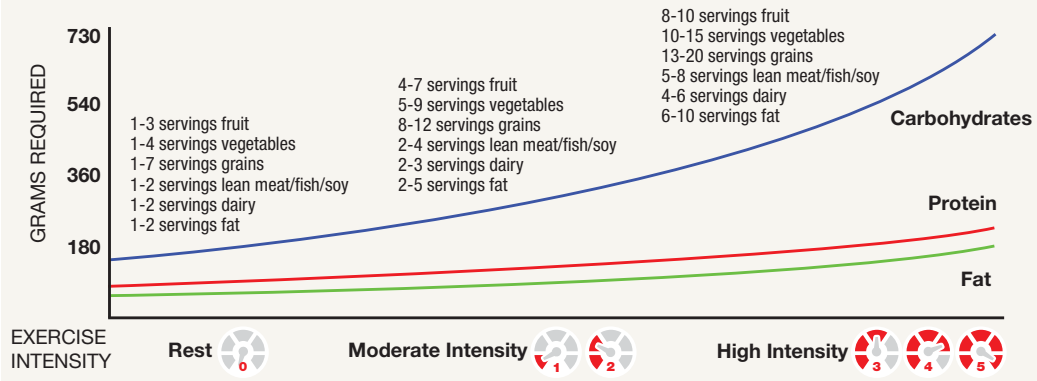
Total Energy Needs = TDEE + Calories Used During Exercise

*Refer to the PAL factor table in the Active Nutrition Guide at *clifbar.com/activenutritionguide* for guidance.

STEP 2: Create a Custom Meal Pattern

Use the calculated energy needs to create a personalized nutrition plan. As activity duration and intensity change, so do food and beverage needs. Carbohydrate, fat and protein needs will vary each day based on individual goals, activity length and intensity — adjusting meals, snacks and recovery nutrition for the day's needs will help optimize energy and performance.

Macronutrient Needs Based on Exercise Intensity



Meal Pattern Recommendations

(servings/day)

CARBOHYDRATE
50-65 percent of total calories

_____ Fruits
_____ Vegetables
_____ Grains/Starch

PROTEIN
10-20 percent of total calories

____ Lean Meat/Fish/Soy
____ Dairy
____ Legumes/Beans

FAT
20-35 percent of total calories

___ Oils
___ Nuts/Seeds

SPORTS FOODS

____ Sports Drinks
____ Chews
____ Gels
____ Bars

For more information on developing personalized, periodized meal plans, and for additional athlete examples, visit *clifbar.com/activenutritionguide* to download the **Active Nutrition Guide**.

Author Bio

Stephanie Howe Violett, PhD, is an expert in sports nutrition and a professional trail/ultra-runner. She loves spending long days in the mountains and helping others dial in their nutrition, so they, too, can enjoy the trails.

[1]Pasteris J. How Much Should Your Pack Weigh? REI Co-Op Journal. 2018 July. www.rei.com/blog/camp/how-much-should-your-pack-weigh.
[2]Thomas DT, Erdman KA, Burke LM. American College of Sports Medicine Joint Position Statement. Nutrition and Athletic Performance. Med Sci Sports Exerc. 2016 Mar;48(3):543-68.
[3]Jeukendrup A. A step towards personalized sports nutrition: carbohydrate intake during exercise. Sports Med. 2014; 44(Suppl 1):S25-S33.