

MAKE PROTEIN WORK HARDER FOR YOU

It's not always easy to find healthy sources of protein during a busy day. CLIF Builder's bars provide nutritious and convenient protein after a workout or as a snack. With 20 grams of protein from soy and nuts, CLIF Builder's bars come in six delicious flavors: Chocolate, Chocolate Mint, Cookies 'n Cream, Lemon, Peanut Butter and Vanilla Almond.

THIS BOOKLET IS ALSO AVAILABLE ONLINE AT WWW.CLIFBAR.COM/PROTEIN.



CLIF

BUILDER'S

PROTEIN

BUILDING BETTER HEALTH & FITNESS

MAKE PROTEIN WORK HARDER FOR YOU

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The recipe for getting in shape and staying in shape

can pretty much be boiled down to two simple ingredients – exercise and nutrition. That’s why we at Clif Bar & Company, active people who are passionate about fitness and nutrition, develop foods like CLIF Builder’s.

As we study nutrition, one thing we’ve learned is that some people count calories and some go so far as to monitor carbs, but few people give the same attention to how much protein they eat. This booklet is designed to help you understand just how important protein is to your overall health and fitness.

On behalf of everyone at Clif Bar, here’s hoping the following pages give you more insight into building and maintaining a healthy, active lifestyle!

THINGS YOU MIGHT NOT KNOW ABOUT PROTEIN

Protein is found throughout your body – in muscles, bones, brain cells, blood, skin, hair and fingernails. Protein is important for growth, tissue repair and replacement, muscles, organs – in fact, virtually every part of you needs protein to stay healthy.

Twenty amino acids join together to make all types of protein. Some essential amino acids can't be made by your body and must come from food. Your body is always breaking down protein to use, and that's why you need to keep eating protein-rich foods throughout the day.

When you work out, you need more protein because your body is breaking down and repairing tissue. It is recommended that recreational exercisers eat 0.5 to 0.75 grams of protein per pound of body weight. Carbohydrates give you the energy to activate protein, so you should eat both at the same time.

HOW MUCH PROTEIN DO YOU NEED?⁽¹⁾

ADULT RECREATIONAL EXERCISER

Weight in pounds \times 0.5–0.75⁽²⁾ = grams of protein/day⁽³⁾

ADULT COMPETITIVE ATHLETE

Weight in pounds \times 0.6–0.9 = grams of protein/day

ADULT BUILDING MUSCLE MASS

Weight in pounds \times 0.7–1.0 = grams of protein/day

GROWING TEENAGE ATHLETE

Weight in pounds \times 0.9–1.0 = grams of protein/day

SEDENTARY ADULT

Weight in pounds \times 0.4 = grams of protein/day

PROTEIN IN POPULAR FOODS

FOOD	grams of PROTEIN
3 oz. chicken breast	24 g
3 oz. salmon	23 g
3 oz. canned tuna	22 g
1 cup black beans	15 g
8 oz. yogurt (plain)	13 g
4 oz. tofu	8 g
8 oz. milk	8 g
1 oz. almonds	6 g
1 egg	6 g

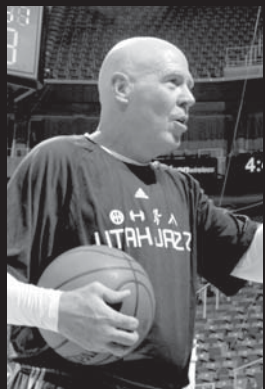
⁽¹⁾ Consult your physician for nutritional advice before starting a high-protein diet. These recommendations may not be appropriate for those with kidney disease and other conditions.

⁽²⁾ Recommended protein amounts per pound adapted from *Sports Nutrition: A Guide for the Professional Working with Active People*.

⁽³⁾ Sample equation: 180 pounds \times 0.5–0.75 = 90–135 grams of protein per day

“For more than 25 years it’s been my job to help athletes stay on top of their game. I ask each of my players – some of the best conditioned athletes in professional sports – to monitor what they eat, specifically how much protein they take in and where it comes from.”

- **Mark McKown**
Player Development Coach
NBA’s Utah Jazz



PROTEIN FOR MUSCLE REPAIR & RECOVERY

Muscle is a unique kind of tissue, made up of long, thin fibers composed of several different proteins that interlock and are capable of stretching – but only so far.

Exercise causes protein to break down, often taking muscles past their limits. You know that feeling of being stiff and sore after an intense workout.

Muscle repair requires protein, and the best time to eat it is within 30 minutes of completing a workout or competition, which helps your muscles recover quicker and gets you ready for the next training session.

PROTEIN FOR HEALTHY BONES & OTHER STUFF

Your skeletal system is made up of bones, tendons and ligaments that contain collagen, a structural protein you need to maintain healthy bones and connective tissues. Without this support mechanism, your body wouldn’t even be able to carry its own weight!

Protein also increases calcium absorption, which keeps your bones strong and dense and slows bone loss.

Exercise puts increased stress on your skeletal system – even elite athletes have to deal with injuries. These don’t have to be major setbacks, however, because more protein helps your body repair strains, stress fractures, broken bones and other problems, which shortens the time you’ll be on the sideline.

"I use a lot of protein in my training and race-day routine, and for me it's more than just muscle recovery. Protein helps me maintain my race weight, and I absolutely feel more full – and full for a longer period of time – when I eat a CLIF Builder's bar."

- Chris McCormack
2007 Ironman Triathlon
World Champion



PROTEIN: THE IMMUNE SYSTEM BOOSTER

Nobody likes to have their training derailed because of a cold, flu or fatigue. Unfortunately, that's a distinct possibility if you eat a low-protein diet.

Protein is essential for red blood cells and antibodies that resist infection. Special transport proteins – your body's taxi drivers – carry oxygen and nutrients through your bloodstream and create antibodies your immune system needs to fight off nasty bugs.

AN ORGAN TUNE-UP WITH PROTEIN

Organs are muscles that must stay active even when you're not. Protein helps keep organs working properly by producing enzymes, antibodies and hormones that run and regulate your body.

All of your body's systems – such as the circulatory, digestive, central nervous and metabolic – are controlled by organs that need protein to run smoothly.

Take your brain for example. It's an organ that tells your muscles – and everything else – what to do. Brain cells talk to each other via messengers that are made up of amino acids, the building blocks of protein. Therefore, what you eat affects which neurons will be firing, and that in turn affects whether you'll feel energized or sluggish.

And did you know that skin is your body's biggest organ? It provides the perfect example of protein at work as cuts and wounds heal.

"I'm constantly eating in the mountains and I'm always in a rush, so I don't have time to make a whole bunch of protein-rich food in the morning. That's why I always throw in a couple of CLIF Builder's bars. They keep me feeling full and I know I'm getting enough protein to get me through long days."

- Jeremy Jones
Professional Snowboarder



CONVENIENT, PORTABLE PROTEIN

Protein comes from both plants and animals, but remember – not all protein is created equal!

Choosing Builder's protein has definite advantages; namely, the absence of antibiotics, hormones and genetic modifications – a valuable investment in your total body health.

So, while an extra lean top sirloin steak or an organic chicken breast are ideal sources of protein, it's not always convenient to throw those in your gym bag. That's why it's helpful to have a portable source of great tasting protein with ingredients you know and trust.

WEEKLY PROTEIN TRACKER

Tracking the amount of protein you eat is important when working toward health, fitness or nutrition goals, and we've tried to make that a little simpler! Check out CLIF Builder's Protein Tracker at

www.clifbar.com/protein.

It's an easy-to-use tool that provides the amount of protein in a wide range of foods as well as a weekly chart to fill in what you eat.

SAMPLE PROTEIN TRACKER

DAY	FOOD	grams of PROTEIN ⁽¹⁾
Sunday	Bagel with cream cheese	8 g
	Glass of orange juice	2 g
	Yogurt (plain)	13 g
	Turkey sandwich	31 g
	DAILY TOTAL	54 g
Monday	2 pieces of toast with peanut butter	13 g
	Chicken burrito with cheese	24 g
	Hamburger	14 g
	Banana	1 g
	DAILY TOTAL	52 g
WEEKLY TOTAL		106 g

⁽¹⁾ Protein estimates based on information provided by the USDA National Nutrient Data Laboratory.