



GLADIATOR NUTRITION

By Linda Hepler
Photo by Ralph DeHaan

A mixed martial artist spends many grueling hours of work building the cardio endurance and impressive musculature necessary to survive numerous rounds of fighting. But it takes more than training to become an American Gladiator—or even just to look like one. A balanced diet of carbohydrates, fats and proteins, along with the vitamins and minerals present in these foods, helps to assure a successful athletic performance. And while all these nutrients are important, protein takes center stage when it comes to muscle building and post-training muscle recovery. “Protein is crucial for muscle development,” says Phillip Harvey, PhD, RD, CNS and Chief Scientific Officer of Max Muscle, “because the protein you get from your diet

supports the proteins in your body. And muscle is a high protein tissue.”

Protein is composed of smaller units called amino acids, explains Harvey. And while your body can manufacture some of the 20 amino acids, there are others that can only be obtained from the food you eat (called essential amino acids or EAAs). The body doesn’t store amino acids like it does fats or carbohydrates, though, so you need a daily supply of them to create an anabolic (muscle building) effect. If you don’t get enough amino acids, your body will compensate by breaking down muscle tissue. This sounds simple enough, but it’s important to understand that the type, amount, quality and timing of dietary protein all influence muscle growth and repair.

ANIMAL OR PLANT PROTEIN

Is animal or plant protein better for athletic performance? Analysis of Gladiator skeletons found near an ancient Ephesus stadium in what is now Turkey revealed the presence of the trace element strontium, which is associated with plant-based diets. This led researchers to conclude that these men took in most of their protein through a vegetarian diet, eating primarily barley, beans, nuts and figs. But according to Larrian Gillespie, MD and nutrition advisor, who researched the history of Gladiators for her book, "The Gladiator Diet," some of these athletes became more successful fighters when their trainer decided to add oxen meat to their diet. "This particular trainer emphasized animal protein and he had the most winners in Gladiator trials," says Gillespie.

The reason for this improved performance may have been that animal-based proteins such as meat, poultry, fish, dairy products and eggs contain all of the EAAs in one tidy package. Most plant proteins, on the other hand, are missing one or more of these amino acids, meaning that you must solve this dietary problem by eating a large variety of plant-based foods, such as grains, vegetables and fruits throughout the day.

One exception to this plant dilemma is soy, which, like animal protein, contains all of the essential amino acids. But before you grab the nearest tofu dog, you should be aware that some research suggests that soy products may not be the ideal protein source. "Soy contains phytoestrogens (plant estrogens)," says Kaayla Daniel, PhD, author of "The Whole Soy Story." "Although these are not identical to human estrogens, they are similar enough to cause significant endocrine disruption. They interfere with both the production and utilization of hormones in the body, including testosterone."

And testosterone is a powerful muscle building hormone, for both men and women. Daniel's recommendation? Avoid soy products, especially the "modern" or processed ones, such as those found in veggie burgers and other ready made food products. "There is no benefit whatsoever to adding soy protein to the diet—and plenty of risk," she claims.

The bottom line: Animal proteins, supplemented by a variety of whole grains, fruits and veggies, can supply you with a healthy balance of EAAs. But avoid those fatty steaks, cautions Harvey. "Lean protein is always better."

PROTEIN NEEDS

While the recommended dietary allowance (RDA) of protein is 50-60 grams per day, many nutrition specialists believe that those involved in heavy resistance or endurance training should eat as much as one to one-and-a-half grams of protein per pound of body weight each day, which would amount to 200-300 grams of protein daily for a 200 pound person. Some athletes find it easier to consume this amount of protein each day by splitting the total number of grams and combining them with carbs and fat into three meals and two to four snacks of roughly equal nutrient value, eating at intervals of every couple of hours. This may provide greater availability of nutrients to your body—and also helps to control blood sugar levels, giving you an optimal supply of energy throughout the day. >>>

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HIGH PROTEIN RECIPES

GREEK SALAD WITH TUNA

This is so simple, but makes a great starter. It can also be used in a pita pocket for a delicious sandwich.

- ½ seedless cucumber
- ½ pound cherry tomatoes
- 1/3 cup Kalamata olives
- 3 ounces feta
- 6-ounce can tuna in olive oil

Halve cucumber lengthwise and cut crosswise into ¼ inch thick pieces. Quarter tomatoes; pit and quarter olives. Cut feta into ¼ inch dice. In a bowl, toss together cucumber, tomatoes, olives, feta, tuna with oil from can, and salt and pepper to taste, keeping tuna in large chunks.

Serves 4
Per serving:
Calories: 201
Carbs: 5g
Protein: 17g
Fat: 13g, Saturated Fat: 5g

LEMON DILL COD

- 1/3 cup minced fresh dill
- ¼ cup fresh lemon juice
- 1 tablespoon extra virgin olive oil
- 4 teaspoons Dijon mustard
- ¼ teaspoon sea salt
- ¼ teaspoon freshly ground black pepper
- 4 (6-ounce) white fish fillets (such as pollock or cod)

Combine all ingredients in a large zip-lock plastic bag; seal and marinate in refrigerator 20 minutes. Remove fish from bag and discard marinade. Place fish on a grill rack or broiler pan coated with cooking spray or misted olive oil. Cook for 4 minutes per side or until fish flakes easily when tested with a fork.

Serves 4
Per Serving:
Calories: 166
Protein: 30g
Carbs: 0g
Fat: 5g, Saturated Fat: 1g

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Quizzical Answers (from pg. 16)

If Statement 1 best matches your personality, you are Justice/Hellga:

You are probably what some like to call a “gym rat.” That, or there must be something in the water you drink! You certainly have a very strong physique and intimidating air about you. In sports, this has probably always been a great advantage for you. But in life, it’s might make relationships difficult. Try softening your expressions when speaking with others and they’ll be more likely to feel the warmth you want to show, rather than fear your physical power.

If Statement 2 best matches your personality, you are Militia/Crush:

There is certainly an appeal to your look. You’ve got the nice ‘n sweet look down, for sure! It’s too bad that people associate physical attractiveness with a lack of knowledge at times. Be sure to open up to others and demonstrate your non-physical traits to others. But remember that the people who are worth it will be the ones that stick around long enough to get a sense of who you really are. And no doubt, you are an amazing person!

If Statement 3 best matches your personality, you are Toa/Siren:

Definitely not one to back down from a confrontation, you certainly have a strong personality. While it’s great to stand up for yourself and your beliefs, there are some situations in which immediate reactions aren’t the best solution. Sometimes, you might want to sit back and analyze a situation before reacting. If you are dealing with someone who also tends to be confrontational, cooling down before addressing an issue, problem, etc. might help you come up with a solution that much faster.

If Statement 4 best matches your personality, you are Titan/Fury:

Clearly a strong individual, you are a true competitor in sports and life. You’ve probably been deemed an A Personality all your life. And there’s nothing wrong with that. When adversity arises, you face it with aggression and tactical precision. Just be sure to separate sports and game play from relationships, as your aggressive nature may not bring the best results to your personal relationships. Some people don’t respond very well to aggression and you could do more harm than good with them unless you soften your approach.

If Statement 5 best matches your personality, you are Mayhem/Venom:

You’re kind of like a ninja: intense, quick and full of surprises! You may not always get the recognition you deserve, but once others see you in action, there is no questioning your amazing abilities. Just have patience. It may take some longer than others to acknowledge your strong suits, but there’s no doubt they’ll get it at some point. And when they do, you’ll get their respect.

If Statement 6 best matches your personality, you are Wolf/Stealth:

While some might think you take a back seat at times, you are really observing and analyzing everything around you to prepare for your next move. You have the ability to easily figure people and situations out. In relationships, this is a HUGE bonus! Part of any friendship or relationship is understanding how to communicate with the other. And that comes naturally to you! Very lucky. Use your power wisely.

As for what you’ve heard about high protein diets causing kidney damage, “A healthy body can process excess protein,” says Harvey.

Gillespie agrees, noting that many of the studies suggesting that high protein diets affect kidney function were done on patients with kidney damage undergoing dialysis (a way of removing waste products from the blood and excess fluid from the body when the kidneys have failed). “That is not the normal body,” says Gillespie.

Keep in mind, though, that as we age, kidney function often declines. So if you’re older than 50, it’s a good idea to check with your physician before starting or continuing a high protein diet.

TIMING IS EVERYTHING

In addition to consuming enough protein throughout the day, the timing of protein intake in relation to training is one of the most important aspects of building muscle. When you undergo a strenuous workout, you cause microscopic damage (or breakdown) of muscle tissue, which can result in muscle inflammation and pain. Research shows that protein consumption within one hour of exercise results in muscle repair and decrease of inflammation and pain. Put simply, more amino acid to the muscle translates into more “building blocks” for protein and thus greater muscle size.

Some researchers argue that eating protein before a workout may be more beneficial, because the enhanced blood flow to the muscles during exercise allows for enhanced amino acid delivery. Others believe that the pre-workout protein should be combined with a rapidly digestible carbohydrate, because this causes a release of insulin, which acts to speed amino acids into the muscle cells. Carbohydrates also help to replace glycogen stores (glucose stored in the muscles to be used for energy), which keeps your body from breaking down protein for energy.

Whether before or after—or both, it’s important to consume a protein source with all of the EAAs for the best results. One cup of lowfat milk or yogurt should provide you with enough protein to support muscle growth; add a granola bar for an extra carbohydrate boost.

SUPPLEMENTAL PROTEINS

Many athletes favor protein supplements in between meals for their ease of use. “Protein is protein,” says Harvey, “and protein powders can be a good low fat source. They have a long shelf life, don’t cost that much, and best of all, there’s no cooking involved.”

Many athletes swear by whey protein because of its easily digestible “branch chain” amino acids (try MMSN’s Triple Whey Protein powder with 26g of protein per serving). “Whey protein has no fat and is full of amino acids,” says Gillespie. “It’s more easily absorbed than other forms of protein.”

Protein powders can be mixed in water, milk or fruit juice or made into a shake by adding ice, whole fruit and frozen yogurt or ice cream. Here are some options: Max Gourmet Protein in chocolate fudge brownie, strawberry shortcake and vanilla caramel swirl flavors or Max Lean Protein in chocolate mousse, French vanilla or strawberry shortcake.

Whether or not you use supplemental proteins for pre or post exercise fueling, it’s important to include a variety of protein sources—both animal and plant-based—in your daily diet for maximum muscle growth. And don’t forget the whole grains, fruits and vegetables as well as a dose of healthy fats. Additional dietary protein will not add muscle mass even with strength training if you don’t take in enough calories above your maintenance level of food energy. **MS&F**