

At Goodyear Chiropractic Health Center, we offer only the highest quality nutritional supplements. The brands we offer are formulated with the highest regard for safety and efficacy with the highest quality ingredients and standardized extracts for best absorption and consistent results. Some of the brand names we offer are ***Advocare, Metagenics, Nutrition Dynamics, Optimum Nutrition, Standard Process, and Nutrina.***

Protein/ Meal Replacement Products

Protein is one of the three macro nutrients. Unlike carbohydrates and fats, proteins are comprised of nitrogen-containing groups called amino acids. There are about 20 different types of amino acids commonly found in foods. All of them are important for building and maintaining muscle, but eight are vital. These are the eight Essential Amino Acids (EAAs). Contrary to what most people believe, there is no actual requirement for protein; the body simply has a requirement for the eight essentials.

The EAAs cannot be synthesized in any of your tissues, so they must be obtained through high protein foods. Lean meats, fish, poultry, eggs, milk, cheese, and soybeans are good food sources of protein. And in order to receive the entire essential amino acid spectrum a well rounded diet of different types of protein is necessary. In most people's diets routine sources are ingested which depletes certain essential Amino Acids. The only pure protein source that provides all eight Essential AA at once is the egg white. The egg white is the 100% gold standard. Powdered whey, casein, egg, and soy proteins offer the same amino acids as whole food sources in more concentrated doses – with lower levels of calories, fat, carbs, cholesterol, and other non-protein ingredients.

Whey Proteins

Currently the undisputed king of proteins. Here's why: whey proteins are quickly and easily digested (hence the "fast-acting" description that they're often given), they are loaded with essential amino acids (EAAs) – including the three branched chain amino acids (BCAAs), and they contain subcomponents that appear to provide benefits above and beyond amino acids and elemental nitrogen. Whey is one of two major dairy proteins and accounts for about 20% of the protein in milk.

Casein Proteins

Comprising 80% of the protein in milk, casein is the dominant dairy protein. Often referred to as a "slower-acting" or "time-released" protein, because they are digested and absorbed much more slowly than whey or soy proteins. Casein proteins are especially useful when taken at bedtime and during other prolonged periods without eating.

Milk Proteins

Milk proteins are pretty much what you'd expect: dried milk with most of the fat and carbohydrate removed. Like liquid moo juice, powdered milk proteins are about 20% whey protein and 80% casein protein, so utilization is somewhere in between the two.

Egg Proteins

Ask any dietitian, "What's the best source of protein?" and eggs will probably top the list. In fact, most nutrition textbooks still refer to eggs as the "gold standard" for protein quality. With loads of all eight essential amino acids (EAAs) and some of the highest scores in all measures of protein quality. Naturally dairy-free, eggs are a great alternative to whey, casein, and whole milk proteins for those with milk allergies or severe lactose intolerance.

Soy Proteins

Vegetarian? Don't do well with dairy or egg? Go green. Like their animal counterparts, soy proteins contain all of the required amino acids in sufficient amounts to support muscle growth and development.

Blended Proteins

If you can only afford one type of protein, this is probably the type that you should go with. Combining faster-, intermediate-, and slower-protein sources in one convenient place, blended proteins give you more sustained protein digestion than single-source proteins like whey, casein, egg, or soy.

TIMING

When it comes to protein, it's not just what you take; it's when you take it. Although the human body does process protein every time that you consume it, there are certain instances when your system is more receptive to protein. More specifically, there are times when you should consume different kinds of proteins. Don't miss out on these five important occasions.

First thing in the Morning:

The period between when you go to bed and wake up in the morning is the longest that your body goes without the food. "Break the fast" with protein. In addition to providing much needed amino acids for muscle maintenance and rebuilding, proteins provide more stable, sustained energy than a higher carb cereal. Opt for a faster-acting protein like whey first thing in the morning.

Pre-Workout:

By drinking a whey protein shake about an hour before your workout, you'll "prime" your bloodstream with BCAAs and other essential amino acids for growth. Once again, whey protein is a good choice, because it's easy to drink and quickly digested.

Post-Workout:

The 30-60 minute timeframe following exercise is the single most important time of the day to get protein. The enzymes and hormones in your muscles are actively repairing and rebuilding exercise-induced damage as well as replenishing glycogen stores, so they are especially receptive to nutrients. By

supplying a post-workout recovery protein containing whey and casein during this "window" of opportunity, you'll help ensure that you're recharged and be ready for your next training session.

Between Meals:

Drinking a protein shake in-between meals not only helps keep muscle synthesis maximized, it also helps keep body fat and body weight in check. Proteins help stimulate the release of gut hormones that trigger a feeling of fullness or satiety. Dairy proteins (whey, casein, and milk) are considered to be better to curb appetite than other protein sources – especially when combined with dietary fiber – so choose a product with one or more of these proteins if weight control is part of your goals.

Before Bed:

Prepare your body for the long fast ahead with a casein protein shake a half an hour before bed. Unlike whey which is rapidly broken down in the gut, casein is digested at a much slower rate releasing its amino acid constituents over several hours throughout the night while you sleep. For this reason, casein is commonly referred to as a time-released protein. Casein is also considered anti-catabolic because it's rich in glutamine and other amino acids that help protect against muscle breakdown.

PUTTING IT ALL TOGETHER

Like a new training program, scheduling-in protein can be a little overwhelming in the beginning. But, stay with it and you'll be an expert before you know it. You'll start to notice some serious performance, recovery, and appearance improvements in just a few short weeks too. Here's a personalized schedule to get you started; progress through the ranks at your own pace.

BEGINNER/INTERMEDIATE

BLENDED COMPLEX w FIBER & MONOUNSATURATED OILS

- Morning
- Between Meals
- Before & After Workouts
- Before Bed

ADVANCED

100% WHEY

- Morning
- Before & After Workouts

100% CASEIN

- Before Bed

PROFESSIONAL/COMPETITION

BLENDED COMPLEX

- Morning
- Before Workouts

2:1:1 RECOVERY

- After Workouts

100% CASEIN

- Before Bed

Daily Protein Intake

Make sure that you're eating about 1-1.5 grams of protein per pound of bodyweight per day from a combination of high protein foods and supplements. If you're very active, trying to add significant lean mass, or following a low-carb meal plan, aim towards the higher end of this guideline.

Spread It Out

Spread your total daily protein goal out over 4-6 smaller meals & snacks. Doing so helps ensure better absorption and consistent amino delivery day and night.

Protein Types & Timing

Try to use a faster-acting protein in the morning and before workouts, a recovery formula after workouts, and a slower-digesting protein between meals and before bed.

Read Carefully

Read your labels carefully and stick with a reputable brand, so you're confident that you're getting what you're paying for.

Maintain a healthy Lifestyle

Protein provides the building blocks, but even the best sources won't build new muscle without the proper stimulus and **consistency!** So, make sure that you're eating a sensible diet, training regularly and intensely, staying well hydrated, and getting at least seven hours of sleep every night.

Product Recommendations

100% WHEY GOLD STANDARD – (Optimum Nutrition) *100% Whey Protein uses Whey Isolates, 24 grams of the purest and fastest absorbing muscle-building protein per serving, with a lot less of the fat, cholesterol or lactose.* Whey Isolates are "90% pure - the purest and most expensive form that exists." There's no question this is the standard by which other whey proteins are measured. \$52.99 (5 lbs)

PRO COMPLEX -- (Optimum Nutrition) Since different proteins have distinct amino acid profiles and utilization rates, *Pro Complex combines 60 grams of the highest quality proteins Whey Isolates, Egg Albumen, and Hydrolyzed Proteins, and key Free Form Amino Acids sources to create a superior protein blend, designed to enhance your muscle-building potential.* Pro Complex is created for a varied of protein digestion rates and an amino acid profile that's off the charts. \$69.95 (4.6 lbs)

100% GOLD STANDARD CASEIN PROTEIN – (Optimum Nutrition) Sometimes slower is better - especially when it comes to the rate of protein digestion. While rapid protein absorption is desirable immediately before or after exercise, delayed release is probably more beneficial throughout the remainder of the day. *100% Casein Protein uses 24 grams of gel formed pH sensitive protein to allow the unique time-released qualities of caseins to be broken-down 2 x's slower into their amino acid*

subcomponents than whey and other proteins. As a result, you can ingest a larger quantity to be slowly digested over a longer time. Because of this caseins are aptly described as anti-catabolic or muscle-protecting proteins. \$53.99 (4 lbs)

100% EGG PROTEIN – (Optimum Nutrition) Egg whites have been a staple of the bodybuilding diet almost as long as there has been bodybuilding. *100% Egg Protein provides 24 grams of egg white protein - equivalent to 7 Egg White - with Just 100 Calories and a complete profile of Essential Amino Acids, L-Chained Amino Acids and Glutamic Acid.* 100% Egg Protein provides a 100% Egg Protein is an instantized formula that mixes easily with a spoon. Enjoy it with water, milk, or juice. It can also be mixed with oatmeal, muffin or pancake recipes. \$33.99(2 lbs)

100% SOY PROTEIN – (Optimum Nutrition) An economical and great-tasting protein supplement specifically formulated to meet the FDA's heart-healthy claim for soy in just one serving. *100% Soy Protein provides 25 grams of lactose-free, cholesterol-free, sugar-free formula non-GMO protein, which offers a wide range of benefits for vegetarians, those with specific food allergies, and health conscious individuals alike.* And with only 2 grams or less of carbs per serving, 100% Soy Proteins low-fat, is also ideal for anyone on a low-carb diet. 100% Soy Protein can also be used in pancake batters, hot cereals, and other baked goods to increase the protein content. \$18.99 (2 lbs)

NITROCORE 24 – (Optimum Nutrition) It has 10 strategically-chosen types of protein in every serving of NitroCore 24. From ultra-fast acting, partially hydrolyzed whey proteins to much more slowly-digested micellar casein proteins, *NitroCore 24 provides 24 grams of sustained-release, full-spectrum protein blend, 5 grams of hunger-satisfying dietary fiber as well as omega, monounsaturated, and MCT fats per scoop, a taste that's creamy and incredibly delicious promoting energy for use of day or night.* \$29.99 (3 lbs)

2:1:1 RECOVERY – (Optimum Nutrition) Our 2:1:1 Recovery is based on science demonstrating that blending different types of carbs and proteins maximizes absorption and leads to better results. *2:1:1 Recovery provides 25 grams of whey, casein, and egg albumen proteins, simple and rapidly-digesting carbs, and 5 grams of added BCAAs in the proven 2:1:1 ratio to provide a spectrum of immediate and sustained amino acids to refuel and replenish hard-working muscles and stimulate muscle protein synthesis for repair and rebuilding.* 2:1:1 Recovery helps refuel and replenish hard-working muscles. of Leucine to Isoleucine to Valine to stimulate muscle protein synthesis, there's no question that 2:1:1 Recovery is an indispensable part of every serious athlete's routine. \$43.99 (3.7 lbs)

MUSCLE GAIN™ PROTEIN SHAKE – (Advocare) Muscle Gain Protein Shake offers **25 grams** of a protein blend of Whey, Casein, and Milk as a comprehensive approach to supply the body with the essential protein, vitamins and minerals such as vitamin C, calcium and vitamin B-6 to give the body a **balanced support it needs to build muscle, stamina and maintain health.** (Protein blend, carbohydrates, papain, bromelain, vitamin C, thiamine (B-1), riboflavin (B-2), niacin, pantothenic acid (B-5), calcium, magnesium, branched-chain amino acids). \$33.95 per box (10 pouches), \$71.95 per canister (25 servings)

POST-WORKOUT RECOVERY SPORTS DRINK – (Advocare) Post-Workout Recovery (available in chocolate and vanilla flavors) is a great source of more than 30 vitamins, minerals and other nutrients that support your muscle's metabolic processes in recovery. *Post-Workout Recovery is a unique blend of 12 grams of Soy and Casein protein, combined with glucose polymers and other carbohydrates replenishes your glycogen storage and L-chained amino acids right after a work out to optimism your recovery, growth and endurance for the next physical performance.* Finally, the antioxidants present in this advanced sports drink help the body ward off free radicals and associated soreness that are commonly produced as a result of exercise. (Soy protein powder, branched-chain amino acids (BCAAs), chromium, casein (modified), medium-chain triglycerides, creatine, gamma-oryzanol, vanadium (vanadyl sulfate), calcium, magnesium, zinc, sodium, potassium, eleuthero root, carbohydrates).
\$47.50 box (14 pouches), \$75.95 canister (25 servings)

MEAL REPLACEMENT SHAKE – (Advocare) Receive complete nutrition in a light, refreshing meal even when you're pressed for time or trying to lose weight. *Meal Replacement Shakes offer a powerful combination of 26 vitamin, 5 grams of fiber and minerals and only 220 calories per serving, 24 grams of easily blended digestible Whey, Casein, and Milk protein, carbohydrates and fiber that are wholesome and easy to digest.* Meal Replacement Shakes provide that optimal 1:1 protein-to-carbohydrate ratio to support weight loss and provide sustained energy for healthy weight loss. Nutrition authorities recommend that we consume at least 25 grams of fiber each day, although most of us only consume 12 to 15 grams. Fiber helps curb your appetite and supports regularity. Calcium is vital not only for strengthening our bones and teeth, but it also plays a vital role in every cellular activity in our bodies. Meal Replacement Shakes provide 500 mg (50% DV) of calcium in every single serving. Available in berry, chocolate and vanilla flavors. \$39.95 box (14 pouches)

MEAL REPLACEMENT BAR – (Advocare) *Meal Replacement Bars provide balanced nutrition with 18 vitamins and minerals, only 3 grams of fat and 215 calories and 16 grams of blended Soy, Whey, Peanut protein for supporting metabolism and maintaining lean muscle mass during calorie restriction.* Busy parents, athletes and active teens who need a convenient, nutritious take-along meal will also discover the easily digested protein, and high levels of eight B vitamins to support cellular energy production.
\$29.95 per box (12 bars)

UltraMeal–(Metagenics) *Medical food that provides 15 grams of soy protein, essential vitamins and minerals and 17 mg of isoflavones designed to nutritionally support healthy heart function and the management of conditions associated with metabolic syndrome, including, central obesity, altered body composition and insulin resistance.* UltraMeal promotes the loss of body fat while helping to maintain lean muscle mass. Available in a variety of natural and delicious, dairy-free flavors.
\$32.25 (14 servings)

UltraMeal Rice–(Metagenics) *Tasty, non-dairy, nutritionally fortified, high-quality powdered meal replacement source of 15 grams of vegetable (rice) protein for those who want to support healthy body composition but may be sensitive to soy.* The rice protein in UltraMeal RICE ensures consistent quality, and is suitable for modified dietary elimination programs. Offers a comprehensive, healthy source of

foundation nutrition with all essential vitamins and minerals. Available in delicious Natural Chocolate and Natural Vanilla. \$35.95 (14 servings)

UltraMeal® Plus – (Metagenics) *Medical food formulated to provide 15 grams of soy protein and 2 grams of plant sterols blend to nutritionally support the management of conditions associated with metabolic syndrome and cardiovascular disease, such as, hypercholesterolemia, hypertriglyceridemia, and hypertension.* UltraMeal Plus—along with a low-glycemic-index dietary program and regular exercise—has been clinically tested and shown to improve important markers of cardiovascular health and support a healthy body composition. Diets low in saturated fat and cholesterol that include 25 grams of soy protein and at least 1.3 g plant sterols a day may reduce the risk of heart disease from cholesterol-lowering effects. \$35.95 (14 servings)

UltraMeal® Plus 360°-- (Metagenics) *Multi-mechanistic Medical food with 15 grams soy protein and isoflavones to improve fasting insulin and triglyceride level for patients with metabolic syndrom , acacia extract, Selective kinase response modulators (SKRMs) in the form of reduced iso-alpha acids (RIAA), plant sterol , 2 g of plant sterols and 5-methyl tetrahydrofolate (5-MTHF)—a body-ready, nature-identical folate—to promote healthy homocysteine levels for cardiovascular health.* Available in natural and delicious, dairy-free Natural Vanilla, Natural Dutch Chocolate, and Strawberry Supreme. \$48.95 (14 servings)

UltraMeal© PLUS 360° RICE – (Metagenics) *Medical food that provides 15 grams of low-allergenic-potential rice protein in a multi-mechanistic nutritional support promoting healthy systolic and diastolic blood pressure levels, insulin, triglyceride and homocysteine levels for optimal cardiovascular.* Easily digestible source of high quality protein suitable for those who want to avoid soy and milk products. Available in natural and delicious Vanilla and Chocolate. \$53.25 (14 servings)

UltraMeal® Bar – (Metagenics) UltraMeal Bar is a convenient bar that nutritionally supports the management of conditions associated with metabolic syndrome, such as central obesity, altered body composition, hypertension and insulin resistance. *Medical food with 190 low-glycemic-index calories , 17 grams of soy protein , 15 - 23 mg of isoflavones, 5 grams of prebiotic fiber and 70 - 100 mg of catechins to support healthy intestinal function, hormone balance, glucose function, and blood sugar levels.* A delicious and satisfying meal option available in a variety of delicious flavors—Apple Cinnamon, Lemon Zinger, Chocolate Banana, Chocolate Raspberry, and Chocolate Fudge. \$29.75 (12 bars)

UltraMeal© RICE Bar—(Metagenics) *Meal replacement bar provides 12 grams of high quality, easily digestible rice protein designed for those who want to improve their body composition while avoiding soy and dairy products.* Available in convenient, satisfying, delicious Chocolate Fudge and Vanilla Almond flavors. \$29.75 (12 bars)

UltraMeal WHEY—(Metagenics) *Nutritionally fortified, meal replacement that provides 15 grams of blended whey protein isolate and predigested hydrolysates with only 140 calories for those who want to support healthy body composition and a complete amino acid profile, making it an excellent protein*

source for protein-repletion diets. Suitable for lactose-intolerant individuals. UltraMeal Whey protein has the highest biological value of any naturally occurring protein and comprehensive foundation nutrition to promote a healthy immune system and boost antioxidant defenses by supplying a full complement of vitamins and minerals, including high potency B vitamins and calcium. Available in delicious Natural Vanilla and Natural Dutch Chocolate. \$38.75 (14 servings)

Be sure to discuss nutritional supplementation with your health care provider, especially if you have a health condition or are currently taking medication.

For more on why nutritional supplements are an important part of healthy eating, schedule your nutrition consult.