

Department of Nutritional Sciences Newsletter

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Baby Blue Tubs: Collagen Peptides Revealed

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By now, many have seen the latest health trend of baby blue tubs filled with a flavorless powder lining the aisle ends of Whole Foods or streaming across as banners on Facebook. This powdery substance for which consumers budget an extra \$40 per month, is known as collagen peptides. Nutritional and lifestyle bloggers, registered dietitians, and professional athletes quickly adopted the use of this foreign powder, sparking a dramatic demand for the famous substance most know little about. To help you determine the worth of the monthly budget increase, let's dive in to the world of the baby blue tub: collagen peptides.

Collagen serves as the most abundant protein in the human body making it crucial to the integrity of principal functions. Adequate collagen promotes healthy hair and nails, proper joint and bone health, glowing skin, a sound intestinal wall and gastrointestinal tract, normal melatonin levels for healthy sleep, and vital inflammatory and immune response. In simple terms, our body is a building, and collagen is the cement. In order to create the famous powder, collagen protein is hydrolyzed, or broken down, into small amino acids, or peptides. Because the hydrolysis completes the first step of digestion, these lightweight peptides are almost completely absorbed by the small intestine and deposited directly into the blood. This quick and complete absorption offers another benefit of the supplement, especially for those with poor digestion. Once absorbed, the peptides travel through the bloodstream to add integrity and strength to the cement structure.

With age, collagen production decreases, weakening the collagen scaffolding throughout

our bodies, resulting in poor digestion, joint pain, wrinkles, and all of the other fun signs of aging all humans must endure. The baby blue of the tub may be hinting that the contents within hold the key to the fountain of youth. A study conducted by the [Journal of Food and Function](#) found that supplementation of collagen peptides improved intestinal dysfunction by enhancing tightness and structure of the intestinal wall cells. A second study published by the [NRC Research Press](#) confirmed the efficacy of collagen peptide intake on activity-related knee joint discomfort. If those two studies still didn't convince you to try out the baby blue tub, a third study published by the [Journal of Cosmetic Dermatology](#) found that collagen peptides successfully improved the common symptoms of skin aging including dryness and wrinkles due to the peptides promoting the growth of new collagen in the skin. Whether for the beauty or the biological, the baby blue might bring the results.

Although Vital Proteins® stole the show for collagen peptides with the enticing fountain of youth packaging, many other brands may offer the same, high quality supplement including Primal Kitchen and Thrive Market. When deciding between marine or bovine collagen, you must decide your intent for the supplement. Marine collagen contains mostly type I collagen, which is essential to skin health as well as hair, nails, and bones. Bovine (cattle), chicken, and porcine (pigs) contain mostly type II collagen, which is essential for joint health. These flavorless powders can be stirred into your morning cup o' joe or your mid-afternoon smoothie for that boost of youth, and if your guilty pleasure is coffee creamer, as is mine, certain brands offer a collagen peptide coffee creamer to offer a dual purpose. Whether promoting beauty and health or adding additional protein to your diet, the baby blue might be something for you.

Don't Forget to Feed Your Eyes!

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Eating is more than just consuming food. It involves many senses, including taste, smell, touch, and even sight. "Eating with your eyes" is a very necessary part of a meal. I admit, most of my life has consisted of waking up, mindlessly throwing some cereal into a cup, pouring milk, and heading out the door. Soon enough I started skipping breakfast altogether. However, I decided to transform my morning with a delicious and hearty breakfast due to the numerous studies about the potential harm with skipping the first meal of the day. This transition was not easy, but the colorful and beautiful-looking plates of food kept me wanting more. There was such satisfaction in stepping back and admiring my work. I became excited to wake up and whip up a plate that is palatable to the eye (and the stomach).

This may not sound like it could make such a difference, but Brian Rohrig from the American Chemical Society explains how the appearance of food affects our desire to want to eat more. He writes "eating involves more than just taste. It is a full sensory experience." Just like smell, texture, and taste play an important role in enjoying our food, sight is also just as important to fully appreciate what we eat.

Don't let your eyes go hungry; feed them! This Fast & Easy Oatmeal Bowl is one of many breakfasts that appeases both the eyes and the stomach. Give yourself enough time to wake up, head to the kitchen, and let your creativity take over. Come up with a nutritious and beautiful product that will keep you coming back for more. As Brian Rohrig mentions: "You really can't help *watching* what you eat."

Fast & Easy Oatmeal Bowl:



1/2 cup quick oats
1 cup water/milk of choice
1 ripe banana, smashed
1/2 tsp vanilla extract
1 cup blueberries
Honey or agave, for flavoring
1/4 cup shredded coconut
1/4 cup trail mix or nut of choice
Strawberries, and/or any other fruit of your choice for toppings

1. Cook the quick oats with the water/milk according to the directions on the container.
2. Keep on medium-low heat, and add the smashed banana, vanilla extract, blueberries, and honey/agave for sweetness.
3. After the blueberries have begun to melt, remove from heat, and pour into a bowl.
4. Top with shredded coconut, trail mix/nut of choice, strawberries, and any other fruit of choice. You can even drizzle some nut butter! (This is where creativity takes place; make it look beautiful!)

Carbs, Carbs, Carbs

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Nowadays, everyone seems to be “low-carb” or “gluten-free” in an effort to avoid those dreaded grains. I have to ask – why? Carbohydrates are an essential energy source for the body. Athletes need adequate amounts of carbs, especially when the body needs fuel for a long race. So why are people avoiding this nutrient that is actually crucial for daily activity?

Let's break it down:

A carbohydrate can be simple, complex, or fiber. Simple carbohydrates exist as monosaccharides (single building blocks) or disaccharides (two monosaccharides linked together), which will be broken down to single units. All single sugars are converted to glucose, the sugar that provides energy to the brain.

What does all this really mean? Well, you know that 3 PM wave of exhaustion that hits? The one halfway between lunch and dinner when you think, “Hmm...maybe I shouldn't have stayed up so late last night?” This isn't entirely related to sleep deprivation, though a few more zzz's couldn't hurt. It is partly due to a lack of glucose. Once all the carbohydrates from lunch are digested, the brain uses the glucose for energy. When it's gone, you typically become tired. At this point, you can take a nap, or you can grab a snack – one with carbohydrates, mind you. So, what are some good sources of carbohydrates that won't kill your diet but will also help you stay awake?

First and foremost: Grains include whole grain breads/pasta/cereals, oats, quinoa, rice, popcorn; the list goes on. These are all primarily sources of complex carbohydrates,

big tangled molecules of glucose. Broken down slowly over time, they provide lots of energy for the body.

Whole grains also have vitamins and minerals that are just as important. Many whole grain (contain all parts of the wheat kernel) bread products have vitamins thiamin, niacin, riboflavin, iron, folate, magnesium, fiber, and even vitamin E. White breads often do not have these nutrients naturally. Instead, they are enriched with thiamin, niacin,

riboflavin, and iron, but they do not compare to the real deal. They often have added sugars and other fillers too. Whole grains also contain fiber, an indigestible form of carbohydrate that keeps your digestive tract moving.

Next: Fruits are also composed primarily of carbohydrates. They contain large quantities of vitamins and minerals too: vitamins A, C, potassium, copper, manganese, and more!

Another: Dairy, especially milk, is another carbohydrate-rich source people may not realize. Did you know that an 8 oz. glass of 2% milk contains 12 grams (g) carbohydrate, 8 g protein, and some calcium? Some milks are even fortified with vitamins A and D. Even though some people may be afraid of carbs, you don't have to be. Carbs, when paired with protein, are a sustainable source of energy that keep you going for a long time. Bottom line: carbs are good for you. They give you that late-afternoon boost of energy, provide a wide array of nutrients, and they taste good.



Benefits of Dark Chocolate

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How many times have we justified our after-dinner sweet treat with the claim that chocolate is healthy? We're probably all a little guilty. Although this claim is technically true, it is important to investigate the facts in order to prevent possible overindulgence, unhealthy sugar intake, or excessive calorie consumption.

Chocolate dates back to 2000 B.C., when Mayans in Central America began cultivating this prized agricultural product. Chocolate production begins with a cacao pod, which contains about 40 cacao beans inside. When the pods are ready for harvest, the cacao beans are removed, fermented, dried, roasted, hulled, and ground into cacao nibs. Another process separates the cacao from the cocoa butter. The cacao is further refined into either cocoa solids or cocoa powder. These products are then used to make other chocolate products containing varying amounts of cocoa solids, cocoa butter, milk, and sugar.

White chocolate contains no cacao solids. It is made from cocoa butter, milk, sugar, and other ingredients. Milk chocolate is composed of cocoa butter, milk, sugar, and anywhere from 10-50% cacao solids. Dark chocolate is made from cocoa butter, sugar, and 50-90% cacao solids. These percentages are typically displayed on the outside of a chocolate bar and indicate how strong the cacao flavor will be. The higher the percentage, the more bitter the chocolate flavor. The percentage of cacao is also correlated with the health benefits one can receive from the chocolate.



Cacao is rich in several essential vitamins and minerals such as iron, magnesium, potassium, copper, calcium, zinc, and phosphorus. All of these nutrients play a role in regulating metabolism, improving blood flow, and promoting bone growth. Cacao also contains flavonoids, a type of antioxidant that protects cells against free radicals that can cause cellular inflammation. Flavanols (a type of flavonoid) protect the heart, decrease blood pressure, and

A few brands of dark chocolate to try:

- Divine
- Green and Blacks
- Taza
- Endangered Species
- Primal Chocolate
- CrioBru

decrease insulin sensitivity. This is a lot of complicated scientific jargon, so put simply, the antioxidants in cacao can

help decrease the risk of developing chronic diseases such as diabetes, hypertension, and heart disease, all of which are running rampant in our country right now.

It would be remiss to ignore the caffeine content in chocolate. There are about 25-30 milligrams of caffeine in one ounce of 70% dark chocolate. (An 8 oz. cup of coffee contains 100-200 mg). The amount of caffeine in dark chocolate increases as the cacao solid percentage increases. One little square of dark chocolate could be a perfect snack to boost your energy and focus during that mid-afternoon lull!

Before you go running off to eat an entire Snickers® bar, there are some important things to keep in mind. One, you receive the most benefits (antioxidants, vitamins, minerals, and caffeine) from dark chocolate that has over 70% cacao solids. Further, it only takes about six grams, or 1-2 small squares, of dark chocolate to receive these benefits. Additionally, look for products containing cacao, as this form of chocolate retains more of the flavonols and other nutrients. Finally, be wary of excess calories, sugar, and fat that can be packed into chocolate products. Even dark chocolate, with all of its health benefits, can still contribute to excess calories which could potentially lead to weight gain. One bar of Divine Exquisitely Rich Dark Chocolate (85% cacao) contains 460 calories, or about 40 calories per square.

The decreased risk of developing heart disease or cancer from increased dark chocolate consumption will most likely be outweighed if you eat an entire pint of chocolate ice cream each night. However, by enjoying dark chocolate in moderation, you can improve your heart health, receive essential nutrients, and enjoy a simple and satisfying sweet treat every day!

What Is Good Nutrition?

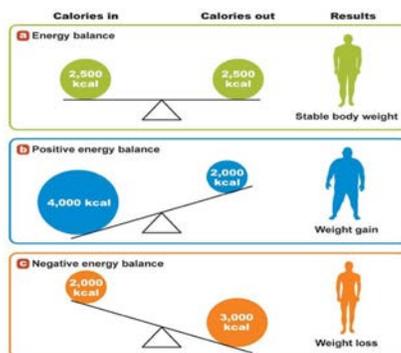
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What is good nutrition? A Google search of this question turns up about 424,000,000 results. If you ask 100 different people what “good nutrition” is or what “healthy” means, you may get nearly 100 different answers. Some may tell you it means cutting out carbohydrates, eating less meat, or going on a specific diet. But how do you define good nutrition in a way that works for everyone?

According to *The Essentials of Sport and Exercise Nutrition*, good nutrition meets five criteria:

1. It properly controls energy balance.
2. It provides nutrient density.
3. It achieves health, body composition, and performance goals.
4. It is honest and outcome-based.
5. It is sustainable for us and the planet.



Energy balance is the ratio between “energy in” from food and “energy out” from daily activity and determines if weight is lost, maintained, or gained. A positive energy balance means more energy in than out, causing weight gain. A neutral energy balance means energy in equals energy out, causing a stable body weight. A negative energy balance means more energy out than in, causing weight loss.

Nutrient density is the ratio of nutrients to calories. High nutrient-dense foods, such as broccoli and blueberries, are high in nutrients and often low in calories. Low nutrient-dense foods, such as cookies and ice cream, are high in calories and low in nutrients. According to Health.gov, over 80% of Americans are not eating enough vegetables and dairy, and over 70% are not eating enough fruits and are eating too much added sugar and saturated fat. Improving intake of these food groups will provide more nutrient density.

Good nutrition should improve our health, performance, and body composition. Achieving the “ideal body image” should never compromise our health. Our diet and exercise habits should make you feel good, improve athletic performance, and promote a healthy body fat percentage, while markedly improving overall health. It also must be honest and outcome-based about whether it achieves these three results—we measure the effectiveness of a diet by its results. If we achieve better performance at the sacrifice of our health, then we’re not doing a very good job. Good nutrition should be sustainable, meaning one can personally sustain his or her diet and exercise habits, as well as sustain the vital ecology. Paying attention to the sources of the food we eat, buying local, and eating more plant foods such as vegetables, beans, and legumes requires some effort, but delivers a high payoff.

When evaluating a nutrition program, ask these five questions: Does it control energy balance? Does it provide nutrient density? Does it achieve health, body composition, and performance goals? Is it honest and outcome-based? Is it sustainable for both you and the planet? Good nutrition should meet all five of these criteria.

