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A Wonder Mighty Seed- Chia

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Abstract

Chia seeds are among the healthiest foods on the planet. They are loaded with nutrients that can have important benefits for your body and brain. Chia seeds are tiny black seeds from the plant *Salvia Hispanica*. Chia plant is a species in the mint family that is native to Central America. Chia seeds are incredibly easy to incorporate into diet. The seeds themselves taste rather bland. They also don't need to be ground like flax seeds, which makes them much easier to prepare. They can be eaten raw, soaked in juice, added to porridge and pudding, or added to baked goods. It supplies only 137 calories and one gram of digestible carbohydrate. 1 ounce equals 28 grams, or about 2 tablespoons. If subtracted the fiber, which may not end up as usable calories for the body, chia seeds only contain 101 calories per ounce. This makes them one of the world's best sources of several important nutrients, calorie for calorie. To top things off, chia seeds are a "whole grain" food, are usually grown organically, are non-GMO and naturally free of gluten. Despite their tiny size, chia seeds are among the most nutritious foods on the planet. They are loaded with fiber, protein, Omega-3 fatty acids and various micronutrients.

Keywords: chia seeds, nutritive seeds, omega 3 fatty acid source, antioxidants.

Introduction

Chia seeds are among the healthiest foods on the planet. They are loaded with nutrients that can have important benefits for your body and brain. Chia seeds are tiny black seeds from the plant *Salvia Hispanica*. Chia plant is species in the mint family that is native to Central America. The seeds of this herb are known as "chia seeds" and they have gained quite a bit of popularity in recent years. Not only are they gluten/grain free naturally, but a single serving is reported to have:

- As much calcium as a glass of milk
- More Omega-3s than a serving of walnuts
- As many antioxidants as blueberries.

The Original "Super-Food"

Though these ancient cultures may not have completely understood the nutritional breakdown of these power-packed seeds, they noticed the benefits, and we now know that chia seeds are a good source of:

- Essential Fatty Acids and Antioxidants
- Protein
- Vitamins A, B, E and D
- Minerals like calcium, phosphorus, potassium, iron, copper, zinc, magnesium, manganese, niacin, Thiamine.(1)

Benefits of Chia

1. **Chia Seeds Deliver a Massive Amount of Nutrients with Very Few Calories**-Chia seeds were an important food for the Aztecs and Mayans back in the day. They prized them for their ability to provide sustainable energy... in fact; "chia" is the ancient Mayan word for "strength." Despite their ancient history as a dietary staple, only recently did chia seeds become recognized as a modern day superfoods. In the past few years, they have exploded in popularity and are now consumed by health conscious people

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all over the world. Don't be fooled by the size... these tiny seeds pack a powerful nutritional punch. 1 ounce (28 grams) serving of chia seeds contain-

- Fiber: 11 grams.
- Protein: 4 grams.
- Fat: 9 grams (5 of which are Omega-3s).
- Calcium: 18% of the RDA.
- Manganese: 30% of the RDA.
- Magnesium: 30% of the RDA.
- Phosphorus: 27% of the RDA.
- They also contain a decent amount of Zinc, Vitamin B3 (Niacin), Potassium, Vitamin B1 (Thiamine) and Vitamin B2.

It supplies only 137 calories and one gram of digestible carbohydrate. 1 ounce equals 28 grams, or about 2 tablespoons. If subtracted the fiber, which may not end up as usable calories for the body, chia seeds only contain 101 calories per ounce. This makes them one of the world's best sources of several important nutrients, calorie for calorie. To top things off, chia seeds are a "whole grain" food, are usually grown organically, are non-GMO and naturally free of gluten. Despite their tiny size, chia seeds are among the most nutritious foods on the planet. They are loaded with fiber, protein, Omega-3 fatty acids and various micronutrients.

Chia Seeds Are Loaded with Antioxidants

Another area where chia seeds shine is in their high amount of antioxidants. These antioxidants protect the sensitive fats in the seeds from going rancid. Although antioxidant supplements are not very effective, getting antioxidants from foods can have positive effects on health. Most importantly, antioxidants fight the production of free radicals, which can damage molecules in cells and contribute to aging and diseases like cancer.

Almost All the Carbs in Them Are Fiber Looking at the nutrition profile

Chia seeds, ounce has 12 grams of "carbohydrate." However... 11 of those grams are fiber, which isn't digested by the body. Fiber doesn't raise blood sugar, doesn't require insulin to be disposed of and therefore shouldn't count as a carb. The true carb content is only 1 gram per ounce, which is very low. This makes chia a low-carb friendly food. Because of all the fiber, chia seeds can absorb up to 10-12 times their weight in water, becoming gel-like and expanding in stomach. Theoretically, this should increase fullness, slow absorption of food and help automatically eat fewer calories. Fiber also feeds the friendly bacteria in the intestine, which is important because keeping gut bugs well fed is absolutely crucial for health. Chia seeds are 40% fiber, by weight. This makes them one of the best sources of fiber in the world. Almost all of the carbohydrates in chia seeds are fiber. This gives them the ability to absorb 10-12 times their weight in water. Fiber also has various beneficial effects on health.

Chia Seeds Are High in Quality Protein

Chia seeds contain a decent amount of protein. By weight, they are about 14% protein, which is very high compared to most plants. They also contain a good balance of essential amino acids, so bodies should be able to make use of the protein in them. Protein has all sorts of benefits for health.

It is also the most weight loss friendly nutrient in the diet, by far. A high protein intake reduces appetite and has been shown to reduce obsessive thoughts about food by 60% and the desire for night time snacking by 50%. Chia seeds really are an excellent protein source, especially for people who eat little or no animal products. Chia seeds are high in quality protein, much higher than most plant foods. Protein is the most weight loss friendly macronutrient and can drastically reduce appetite and cravings.

Due to the High Fiber and Protein Content

Chia Seeds Should be Able to Help Lose Weight Many health experts believe that chia seeds can help with weight loss. The fiber absorbs large amounts of water and expands in the stomach, which should increase fullness and slow the absorption of food

Chia Seeds Are High in Omega-3 Fatty Acids

Like flax seeds; chia seeds are very high in Omega-3 fatty acids. In fact, chia seeds contain more Omega-3s than salmon, gram for gram. However... it's important to keep in mind that the Omega-3s in them are mostly ALA (Alpha Linolenic Acid), which is not as beneficial as you may think. ALA needs to be converted into the "active" forms, EPA and DHA, before it can be used by the body. Unfortunately, humans are inefficient at converting ALA into the active forms. Therefore, plant Omega-3s tend to be vastly inferior to animal sources like fish. Studies have shown that chia seeds (especially if they are milled) can increase blood levels of ALA and EPA, but not DHA... which is a problem. Because they don't supply any DHA (the most important Omega-3 fat), in order to get the DHA your body and brain desperately need... either eat fatty fish regularly, take fish oil, or take a DHA supplement if vegan or vegetarian. Chia seeds are very high in the Omega-3 fatty acid ALA. However, humans are not good at converting this into DHA, the most important Omega-3 fatty acid.

Chia Seeds May Improve Certain Blood Markers, Which Should Lower the Risk of Heart Disease and Type 2 Diabetes

Given that chia seeds are high in fiber, protein and Omega-3s, they should be able to improve metabolic health. Chia seeds can lower triglycerides, raise HDL (the "good") cholesterol and reduce inflammation, insulin resistance and belly fat. Chia seeds can improve these risk factors, but probably won't have a major effect unless followed by other beneficial changes in the diet. The effects on cholesterol levels and other risk factors are inconclusive. Some studies show an effect, others do not.

They Are High in Many Important Bone Nutrients

Chia seeds are high in several nutrients that are important for bone health. This includes calcium, phosphorus, magnesium and protein. The calcium content is particularly impressive... 18% of the RDA in a single ounce. Gram for gram, this is higher than most dairy products. Chia seeds may be considered an excellent source of calcium for people who don't eat dairy. Chia seeds are high in calcium, magnesium, phosphorus and protein. All of these nutrients are essential for bone health.

Chia Seeds Can Cause Major Improvements in Type 2 Diabetics

The most successful application of chia seeds to date was in a study on type 2 diabetic patients. In this study, 20 diabetic patients received either 37 grams of chia seeds, or 37 grams of wheat bran, for 12 weeks. When they got the chia seeds, they saw improvements in several important health markers. Blood pressure went down by 3-6 mm/Hg and an inflammatory marker called hs-CRP went down by 40%. A risk factor called vWF also decreased by 21%. There was also a small drop in blood sugar, but it wasn't statistically significant. Given that chia seeds are high in fiber, it does seem plausible that they could help reduce blood sugar spikes after meals, but this needs to be confirmed in studies. A study in type 2 diabetics showed that chia seeds can significantly lower blood pressure and a marker for inflammation.

Chia Seeds Can Improve Exercise Performance as Much as a Sports Drink

Chia seeds can help athletes "carb load" for endurance events, while increasing their intake of nutrients and decreasing their intake of sugar. Given that most of the carbs in chia seeds are fiber, it doesn't make much sense that they could be used for carb loading.

Chia Seeds Are Easy to Incorporate into Diet

Chia seeds are incredibly easy to incorporate into diet. The seeds themselves taste rather bland. They also don't need to be ground like flax seeds, which makes them much easier to prepare. They can be eaten raw, soaked in juice, added to porridge and pudding, or added to baked goods. They can be sprinkled on top of cereal, yogurt, vegetables or rice dishes. Because of their ability to absorb both water and fat, they can be used to thicken sauces and even used as egg substitutes in recipes. They can also be mixed with water and turned into a gel. Adding chia seeds to recipes will dramatically boost the nutritional value. A common dosage recommendation is 20 grams (about 1.5 tablespoons) of chia seeds, twice per day. (2)

How to Use Chia Seeds

Chia seeds can be used in various recipes and added to favorite foods. Depending on the texture to accomplish, there are several ways to use them:

Soaked-Most sources recommend soaking chia seeds for the most benefit. Since they are hydrophilic, they will attract water in the body if not soaked or added to liquid.

Ground Up/Powdered-Another way to use them in recipes is to grind them up into a fine powder. This is especially helpful when using them as a thickener or want to get the benefits without changing the texture of a food. There is also some evidence that it may be easier for the body to absorb chia seeds when they are powdered before eating.

Whole-If adding directly to foods or recipes that contain liquid, it isn't necessary to soak or grind chia seeds first. They can be added directly to smoothies, soups, drinks, or even meat dishes to thicken without needing to soak first. (3)

Uses- Chia Seeds

1. as a Safe Egg Substitute

To substitute for an egg: Use 1 tablespoon finely ground

chia seeds (grind them dry in a blender, food processor, or coffee grinder) and 3 tablespoons of water per egg in a baked recipe.

2. To Make Healthy Pudding

- 2 cups of coconut milk or other milk
- 1/2 cup chia seeds
- 2-3 tablespoons cocoa powder (or to taste)(optional)
- 1 teaspoon vanilla (or to taste)
- 1 tablespoon or more sweetener of choice (optional)

Put in a blender and blend until smooth. Thicken in about 10 minutes in the fridge.

3. To Thicken Soup or Gravies-Just add a couple tablespoons of chia seeds (powdered or not) at a time to reach the desired thickness.

4. To Make Grain Free Crackers- Mixing them with equal parts coconut milk to thicken, adding some garlic powder and sea salt, and baking at a low temp for a couple hours.

5. To Thicken Meatballs Instead of Breadcrumbs-A couple tablespoons of ground chia seeds (per pound of meat) in place of bread crumbs. Also works to thicken meat-loafs, batters, etc.

6. Sprouted for Salads- Put some chia seeds in water drain the water off and leave in a jar for a couple days. Every 12 hours or so, rinse with water and pour the water off. In a day or two chia sprouts.

7. To Make Homemade Energy Gel-Add a couple tablespoons of chia seeds to a cup of coconut water. Let sit for about ten minutes and incredible energy gel is formed. It works for grownups for endurance activities.

8. As a "Breeding" for Baking Fish and Chicken-Mixed with some almond flour and garlic powder, or even by itself, Chia Seeds make an excellent "Breeding" for fish or chicken. It toasts up well and provides a nutty, crunchy flavor without the grain.

9. Chia Seed Energy Bars-This is my favorite way to use chia seeds so far! **These energy bars** are a great snack or treat for kids or a healthy breakfast addition if you need extra energy. They are also nut, dairy, and grain free so they are safe to send to schools even if there are allergy restrictions.

10. Coconut Chia Porridge-When crave a warm, nourishing breakfast, this coconut chia porridge will satisfy. It's grain-free and features a delicious flavor combo of figs, pistachios and vanilla beans. My kids love it, and love that it nourishes them, plus meets my need for avoiding eggs as breakfast.

11. Awesome Egg Substitute-Since finding out I'm allergic to eggs, I've tried lots of variations for replacing them in my favorite recipes. Chia seeds make an awesome egg substitute.

12. Strawberry Chia Seed Jam- Jams and jellies loaded with sugar can be made from chia seeds.

13. **Blueberry Chia Seed Smoothie**-For a fast meal or snack that doesn't require many ingredients or, ahem, actual cooking, but still offers tons of nutrition, this blueberry chia seed smoothie from The Family That Heals Together will keep both mama and kiddos happy, for more reasons than one.
14. **Chocolate Chia Mousse**-This from Healy Eats Real will satisfy your sweet tooth while healthy ingredients like chia seeds and coconut milk will satiate you with good fats and protein.
15. **Chia Seed Breakfast Cereal**-If on the grain-free bandwagon, cereal is likely a thing of the past. This grain-free chia seed breakfast cereal from Eat Beets changes all that.
16. **Strawberry Rhubarb Chia Muffins**-These grain-free goodies are the perfect treat or breakfast from The Real Food Dietitians.
17. **Strawberry Match Chia Pudding**-Matcha is all the rage these days, thanks to its super healing and energizing green tea origins. This fun takes on chia pudding with strawberries and matcha tea.
18. **Spinach Salad with Creamy Chia Vinaigrette**-A beautiful salad is nutritious on its own. Pair it with a chia seed-based dressing.
19. **Chia Seed Water**-Fancier than it sounds, this energy drink from Not Your Standard contains just a couple ingredients so it's easy to throw it together and sip throughout a busy day.
20. **Multi-Seed Crackers**-Serve these crackers up with a slice of avocado or cheese for snack time.
21. **Low-Carb Chia Bread**-This chia bread from Rosanna Davison Nutrition is grain-free and low carb, and looks like it would be fantastic for a sandwich or French toast!
22. **"Peanut Butter" and Jelly Overnight Chia Pudding**-More filling and way more nutritious than oatmeal, this "PB" and J overnight chia pudding is perfect for breakfast or after a workout.
23. **Chocolate Dipped Caramel Nut Bars**-These chocolate dipped caramel nut bars look amazing and are super healthy to boot.(4)

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