

OSTEOSTRONG[®]

Please enjoy these recipes from the 2023 Missoula OsteoStrong Member Appreciation Event, made by Rachel Ames and her mother Juanita Sherba.

Table of Contents

Caesar Deviled Eggs.....	1
Chicken Liver Paté.....	2
Creamy Miso-Yogurt Dipping Sauce.....	3
Serve With These Bone Fortifying Veggies.....	4
Pureed Beets with Yogurt and Za’atar.....	5
Avocado Stuffed Belgian Endive.....	6
RICOTTA SAGE HONEY STUFFED PRUNES.....	7
Broccoli Puree with Smoked Salmon.....	8
Kimchi Tacos.....	9
Elderberry Elixir Mocktail.....	10

Caesar Deviled Eggs

8 eggs
1 can anchovy filets
2 oz. grated Manchego
4 TB olive oil
1 TB lemon juice
1 garlic clove
salt, pepper
4 pitted black olives - halved
4 pitted green olives - halved
smoked paprika for dusting

Hard boil eggs, cool, cut in half, scoop yolks into food processor. Add next 5 ingredients to food processor and puree. Add salt and pepper to taste. Spoon mixture back into egg white halves. Top with ½ olive and dust with paprika. Chill.

Eggs are a good source of high-quality, complete protein. Most of it is found in the egg white: There are 4 to 5 grams protein, 17 calories, and virtually no fat in a single large egg white. Egg whites are also a good source of leucine, an amino acid that may help with weight loss. Egg yolk is also a great source of vitamin D.

Protein intake and bone health

Adequate nutrition plays an important role in the development and maintenance of bone structures resistant to usual mechanical stresses. In addition to calcium in the presence of an adequate supply of vitamin D, dietary proteins represent key nutrients for bone health and thereby function in the prevention of osteoporosis. Several studies point to a positive effect of high protein intake on bone mineral density or content. This fact is associated with a significant reduction in hip fracture incidence.

Getting enough protein is important for healthy bones. In fact, about 50% of bone is made of protein. Protein should account for 25% to 35% of your total daily calories. The recommended range of protein intake is between 0.8 g/kg and 1.8 g/kg of body weight, dependent on health and life-style. People who are highly active, or who wish to build more muscle should generally consume more protein. Some sources suggest consuming between 1.8 to 2 g/kg for those who are highly active.

Researchers have reported that low protein intake decreases calcium absorption and may also affect rates of bone formation and breakdown. However, concerns have also been raised that high-protein diets leach calcium from bones in order to counteract increased acidity in the blood. Nevertheless, studies have found that this doesn't occur in people who consume up to 100 grams of protein daily, as long as this is balanced with plenty of plant foods and adequate calcium intake.

In fact, research suggests that older women, in particular, appear to have better bone density when they consume higher amounts of protein. In a large, six-year observational study of over 144,000 postmenopausal women, higher protein intake was linked to a lower risk of forearm fractures and significantly higher bone density in the hip, spine and total body.

What's more, diets containing a greater percentage of calories from protein may help preserve bone mass during weight loss.

In a one-year study, women who consumed 86 grams of protein daily on a calorie-restricted diet lost less bone mass from their arm, spine, hip and leg areas than women who consumed 60 grams of protein per day.

Benefits of Anchovies

Despite their small size, anchovies are packed full of nutrients.

- 1) Anchovies Are Very High In Omega-3
- 2) A Rich Source of Selenium
- 3) Anchovies Offer a Good Supply of Vitamin D3
- 4) An Excellent Source of Protein

Chicken Liver Paté

- Soak 1 lb. chix livers in milk and 3 oz. of Marsala together with a few thyme sprigs overnight.
- Take out and pat dry.
- Season with salt and pepper, sauté over high heat in stainless steel or cast-iron pan until med rare. Set aside.
- Sauté 1 med red onion, sliced, 1 shallot sliced, and 1 clove garlic minced in same pan used for livers until soft and coated with all the juices from the liver.
- Add a handful of chopped sage, rosemary, and thyme to the pan and stir.
- Deglaze pan with more Marsala.
- Let everything cool.
- Place all ingredients in food processor with 4-5 cubes very cold butter and process until smooth adding more butter as necessary for consistency.
- Enjoy w crusty bread and a drizzle of really good balsamic.

Liver is considered to be one of the most **nutrient-dense** foods available. It is rich in **protein, iron, and B vitamins**. Liver is also one of the best animal-based sources of **vitamin A**. For example, a 3-ounce serving of beef liver provides more than 100% of your daily vitamin A requirement.

Eating liver can help you meet your daily recommended amount of most essential vitamins and minerals, reducing your risk of nutrient deficiency. It is also a good source of **vitamin C, potassium, phosphorus, and copper**.

However, it's important to note that while liver has significant health benefits, there are also some drawbacks to consider before adding it to your diet. Liver has a strong flavor and unique texture that can be polarizing, with some people loving it while others hating it. Additionally, liver from different animals may have varying flavors and textures. Some commonly available types of liver include: beef liver, calf liver, pork liver, lamb liver, chicken liver, goose liver, and cod liver.

Liver is a highly nutritious organ meat that contains:

- Calories: 133 per 100 grams (g)
- Protein: 20.35 g per 100 g
- Iron: 4.78 mg per 100 g, or 80% of the recommended daily intake (RDI)
- Vitamin A: 16,814 international units per 100 g, or 860–1,100% of the RDI
- Vitamin B12: 3,460% of the RDI per 100 g
- Riboflavin (B2): 210–260% of the RDI per 100 g
- Folate (B9): 65% of the RDI per 100 g
- Copper: 1,620% of the RDI per 100 g
- Cholesterol: 274 mg per 100 g

Creamy Miso-Yogurt Dipping Sauce

Prep Time:10 mins Total Time:10 mins Yield: 1 1/3 cup

Ingredients

- 1/2 cup roasted and salted cashews, or peanuts, or almonds
- 1/3 cup full-fat Greek yogurt
- 3 tablespoons white miso paste, can be pale yellow or darker beige
- 1 clove garlic
- 2 tablespoons rice vinegar
- 2 teaspoons honey, add one at a time, to taste
- 1 teaspoons gochujang, or 1/4 teaspoon crushed red pepper
- 1/2 teaspoon toasted sesame oil

Instructions

Add cashews to a food processor and process for 1-2 minutes to make a coarse paste. Add the remaining ingredients (only add 1 teaspoon of honey to start) and process with the cashews, scraping the sides and corners of the processor bowl if needed, until smooth and creamy.

Taste and adjust any of the ingredients as desired using this guide: miso = savory; yogurt or vinegar = tangy; gochujang = spicy heat; honey = sweet; sesame oil = toasted flavor. The flavor should be savory, tangy, and slightly sweet.

Yogurt is a rich source of protein. One cup (245 grams) of plain yogurt made from whole milk packs about 8.5 grams of protein. The protein content of commercial yogurt is sometimes higher than in milk because dry milk may be added to yogurt during processing. Protein in yogurt is either whey or casein, depending on its solubility in water.

Water-soluble milk proteins are called whey proteins, whereas insoluble milk proteins are called caseins.

Both casein and whey are nutritionally excellent, rich in essential amino acids, and easy to digest.

Calcium and diet

Your body doesn't produce calcium, so you must get it through other sources. Calcium can be found in a variety of foods, including:

- Dairy products, such as cheese, milk and yogurt
- Dark green leafy vegetables, such as broccoli and kale
- Fish with edible soft bones, such as sardines and canned salmon
- Calcium-fortified foods and beverages, such as soy products, cereal and fruit juices, and milk substitutes

To absorb calcium, your body also needs vitamin D. A few foods naturally contain small amounts of vitamin D, such as canned salmon with bones and egg yolks. You can also get vitamin D from fortified foods and sun exposure. The RDA for vitamin D is 600 international units (15 micrograms) a day for most adults.

Serve With These Bone Fortifying Veggies

Broccoli Nutrition Facts

The USDA provides the following nutrition information for one cup (91g) of raw, chopped broccoli.

- **Calories:** 31
- **Fat:** 0.3g
- **Sodium:** 30mg
- **Carbohydrates:** 6g

- **Fiber:** 2.4g
- **Sugars:** 1.5g
- **Protein:** 2.5g
- **Vitamin C:** 81.2mg
- **Calcium:** 42.8mg
- **Vitamin K:** 92.8µg
- **Magnesium:** 19.1mg

Celery Nutrition Facts

One medium (7 1/2" to 8" long) celery stalk (40g) contains 5.6 calories, 1.2g carbohydrates, and 0.3g protein. The nutrition information is provided by the USDA.

- **Calories:** 5.6
- **Fat:** 0.1g
- **Sodium:** 32mg
- **Carbohydrates:** 1.2g
- **Fiber:** 0.6g

- **Sugars:** 0.5g
- **Protein:** 0.3g
- **Potassium:** 104mg
- **Sodium:** 32mg
- **Phosphorus:** 9.6mg
- **Potassium:** 104mg
- **Vitamin A:** 8.8mcg
- **Folate:** 14.4mcg
- **Vitamin K:** 11.7mcg

Cucumber Nutrition Facts

One-half cup of sliced cucumber (52g), with the peel, provides 8 calories, 0.3g of protein, 1.9g of carbohydrates, and 0.1g of fat. Cucumbers are a good source of potassium and vitamins K and C. The following nutrition information is provided by the USDA.

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- **Calories:** 8
- **Fat:** 0.1g
- **Sodium:** 1mg
- **Carbohydrates:** 1.9g
- **Fiber:** 0.3g
- **Sugars:** 0.9g
- **Protein:** 0.3g
- **Vitamin K:** 8.5mcg
- **Vitamin C:** 1.5mg
- **Potassium:** 76.4mg
- **Vitamin B5:** 0.1mg
- **Magnesium:** 6.8mg

Pureed Beets with Yogurt and Za'atar

Ingredients

2 lbs. beets roasted and cut into quarters
2 cloves garlic peeled and sliced
1 red chili pepper seeded and minced
1 cup Greek yogurt
1 ½ TBSP date syrup
3 TBSP olive oil
1 TBSP Za'atar
salt



To Garnish:

2 green onions thinly sliced
2 TBSP toasted hazelnuts crushed
2 oz. soft goat milk cheese crumbled

Roast beets in a 400° oven uncovered about 1 hour or until a fork easily pierces the beet. Put cooled beets, garlic, chili, and yogurt in a food processor and blend to a smooth paste. Transfer to a wide bowl and add date syrup, olive oil, Za'atar and salt to taste. Sprinkle onions, hazelnuts and goat cheese on top and drizzle with a bit more oil. Serve at room temperature.

Beets boast an impressive nutritional profile

They're low in calories yet high in valuable vitamins and minerals. In fact, they contain a bit of almost all of the vitamins and minerals your body needs.

Here's an overview of the nutrients found in a 3.5-ounce (100-gram) serving of boiled beetroot:

- **Calories:** 44
- **Protein:** 1.7 grams
- **Fat:** 0.2 grams
- **Carbs:** 10 grams
- **Fiber:** 2 grams
- **Folate:** 20% of the Daily Value (DV)
- **Manganese:** 14% of the DV
- **Copper:** 8% of the DV
- **Potassium:** 7% of the DV
- **Magnesium:** 6% of the DV
- **Vitamin C:** 4% of the DV
- **Vitamin B6:** 4% of the DV
- **Iron:** 4% of the DV

Beets are particularly rich in folate, a vitamin that plays a key role in growth, development, and heart health. They also contain a good amount of manganese, which is involved in bone formation, nutrient metabolism, brain function, and more. Plus, they're high in copper, an important mineral required for energy production and the synthesis of certain neurotransmitters.

Avocado Stuffed Belgian Endive

2 Avocados
2 Tomatoes
2 TBSP fresh Cilantro chopped
2 TBSP fresh Chives
¼ cup Capers
¼ cup Lime Juice
Salt & Pepper

Belgian Endive Cups

Dice 1st 5 ingredients and transfer to bowl. Add lime juice and salt and pepper to taste. Toss. Allow to rest for an hour. Fill endive cups. Serve cool.

Avocados are high in a number of important nutrients, many of which are lacking in modern diets. Here is the nutrition breakdown for a 7-ounce (201-gram) avocado:

- **Calories:** 322
- **Fat:** 30 grams
- **Protein:** 4 grams
- **Carbs:** 17 grams
- **Fiber:** 14 grams
- **Vitamin C:** 22% of the daily value (DV)
- **Vitamin E:** 28% of the DV
- **Vitamin K:** 35% of the DV
- **Riboflavin (B2):** 20% of the DV
- **Niacin (B3):** 22% of the DV
- **Pantothenic acid (B5):** 56% of the DV
- **Pyridoxine (B6):** 30% of the DV
- **Folate:** 41% of the DV
- **Magnesium:** 14% of the DV
- **Potassium:** 21% of the DV
- **Copper:** 42% of the DV
- **Manganese:** 12% of the DV

Endive Nutrition Facts

One cup of raw chopped endive (50g) provides 8.5 calories, 0.6g of protein, 1.7g of carbohydrates, and 0.1g of fat. Endive is rich in vitamin K, potassium, and folate. The following nutrition information is provided by the USDA.¹

- **Calories:** 8.5
- **Fat:** 0.1g
- **Sodium:** 11mg
- **Carbohydrates:** 1.7g
- **Fiber:** 1.6g
- **Sugars:** 0.1g
- **Protein:** 0.6g
- **Vitamin K:** 115.6mcg
- **Potassium:** 157mg
- **Folate:** 71mcg

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RICOTTA SAGE HONEY STUFFED PRUNES

PREP TIME 10 minutes

TOTAL TIME 10 minutes

INGREDIENTS

- 8 ounces ricotta
- 4-6 leaves fresh sage
- salt and pepper
- 1 tablespoon extra-virgin olive oil
- 20-25 prunes
- 20-25 honey roasted almonds
- honey for drizzling

INSTRUCTIONS

1. Combine ricotta, sage, salt and pepper in a food processor. Process for 20 seconds until fluffy.
2. With the processor running, slowly pour in the olive oil and continue processing until incorporated.
3. Spoon the ricotta mixture into the prunes.
4. Top with an almond.
5. Drizzle the stuffed prunes with honey.

Prunes may help prevent bone loss and maintain healthy bone density and formation due to their **antioxidants and anti-inflammatory properties**. Clinical studies have shown that eating 5-6 prunes a day can preserve bone mass and density by 10%, thus arresting the development of osteoporosis. One study found that subjects who had already experienced substantial bone loss were able to completely reverse these losses by eating prunes every day.

The following nutrition information is provided by the USDA.

- **Calories:** 115
- **Fat:** 0.2g
- **Sodium:** 0.95mg
- **Carbohydrates:** 30.5g
- **Fiber:** 3.4g
- **Sugars:** 18.1g
- **Protein:** 1.1g
- **Vitamin K:** 28,25mcg
- **Potassium:** 347.5mg

Broccoli Puree with Smoked Salmon

Makes 10

½ lb. Broccoli Florets
 1 TBSP Crème Fraiche
 1 cup Vegetable Stock
 ¼ Leek thinly sliced
 2 TBSP grated Parmesan Cheese
 salt & pepper
 ¼ lb Smoked Salmon
 Crostini

Cook the broccoli and leeks in the stock about 5 min. until al dente. Drain
 Puree the broccoli and leek with the crème fraiche, stir in the grated cheese, season with salt & pepper.
 Spread the puree over the crostini and lay slice of smoked salmon on top.

Broccoli is considered one of the most nutritious vegetables. Consuming broccoli raw or cooked provides many nutrients, although some cooking methods will reduce flavonoids. Broccoli is bursting with vitamins and minerals. It's an excellent source of immune-boosting vitamin C, providing over 81mg per serving, or about 135% of your daily needs. It is also an excellent source of vitamin K, important in bone health and wound healing. It's also an excellent source of the B vitamin folate and a good source of vitamin A, manganese, potassium, and other B vitamins.

The USDA provides the following nutrition information for one cup (91g) of raw, chopped broccoli.

- **Calories:** 31
- **Fat:** 0.3g
- **Sodium:** 30mg
- **Carbohydrates:** 6g
- **Fiber:** 2.4g
- **Sugars:** 1.5g
- **Protein:** 2.5g
- **Vitamin C:** 81.2mg
- **Calcium:** 42.8mg
- **Vitamin K:** 92.8µg
- **Magnesium:** 19.1mg

Salmon is packed with heart-healthy omega-3s, high-quality protein, and rich micronutrients.

3 ounces (85g) of raw, wild Atlantic salmon provides beneficial anti-inflammatory effect of omega-3 fatty acids (many experts believe that inflammation is the root cause of most chronic diseases, including heart disease, diabetes, cancer and arthritis) as well as healthful polyunsaturated and monounsaturated fats. There is no fiber, sugars, or carbohydrates in salmon.

The following nutrition information is provided by the USDA.

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|---|---|
| <ul style="list-style-type: none"> • Fat: 5.4g • Sodium: 37.4mg • Carbohydrates: 0g • Fiber: 0g • Sugars: 0g • Protein: 17g • Vitamin B12: more than 100% of the DV • Niacin: 63% of the DV • Vitamin B6: 56% of the DV | <ul style="list-style-type: none"> • Riboflavin: 38% of the DV • Pantothenic acid: 38% of the DV • Thiamine: 23% of the DV • Folic acid: 7% of the DV |
|---|---|

Kimchi Tacos

SERVES 4 – 6

INGREDIENTS

2 lbs.	Pork Shoulder	1-2 Tbsp.	sesame oil
1 c	Soju	1 med.	onion - sliced
2/3 c	gochujang		corn tortillas
1 c	soy Sauce	2 c	kimchi
1 c	sugar	shredded	Oaxaca or other white cheese
½ c	grated garlic	4	scallions thinly sliced on bias
½ c	grated ginger		

INSTRUCTIONS

Put the meat in a slow cooker with the soju, gochujang, soy sauce, sugar, garlic, ginger and just enough water to cover meat. Cook on low for 5 hours.

Remove the meat, transfer the liquid to a pot, heat over high heat until reduced by half. Allow the meat to cool to comfortable handling temp and pick from bone. Break the meat up into bite-sized pieces. Place the pieces back into the braising liquid.

Heat oil in med skillet over med-high heat. Add onion and stir until translucent and begins to brown – about 10 min. Remove onion from skillet. Lift the braised meat from the liquid, shaking excess and lay in single layer in the skillet. Once the meat starts to crisp and the braising liquid begins to caramelize, scrape the bottom of the skillet with a spatula and flip the meat. Don't allow it to burn but keep scraping and flipping until the meat is crispy around the edges. Toss the onions back into the skillet, stir together with the meat and remove from heat.

Warm the tortillas. Arrange rows of meat and kimchi down the center and top with cheese and scallions.

Kimchi

Kimchi is a spicy, salty, tangy condiment that is a good source of vitamins and minerals, including vitamin C. Kimchi is also a source of vitamin K2, which is produced during the pickling or fermenting process that helps create pickles or slaws like kimchi and sauerkraut. One cup of kimchi contains 65 mcg of vitamin K2. Sauerkraut and kimchi contain both forms of vitamin K: K1 and K2. Kimchi is also a fermented food that contains lactobacilli bacteria, which are also found in yogurt and other fermented dairy products. Consuming kimchi can help you maintain a healthy digestion by supporting the growth of live, beneficial bacteria known as probiotics, which contribute to postbiotics in the gut. Consuming probiotics through kimchi promotes smooth digestion and reduced constipation. Kimchi may also help improve immune function.

Edamame beans are whole, immature soybeans, sometimes referred to as vegetable-type soybeans. Soybeans are a whole protein source. Unlike most plant proteins, they provide all the essential amino acids your body needs. One cup of edamame provides 18.4 gms of protein.

Choc up a winner – chocolate Knox Blox. (1976)

yield: 64 one-inch squares prep time: 5 minutes cook time: 5 minutes

additional time: 2 hours

Ingredients

- 1/2 cup sugar
- 1-1/2 cups semi-sweet chocolate chips (12 ounces)
- 4 envelopes Knox Unflavored Gelatine
- 1-1/2 cups cold water

Instructions

1. In a medium saucepan, combine all ingredients.
2. Stir constantly over low heat for 5 minutes or until the chocolate is melted*.
3. Pour into a 8 or 9-inch square pan and chill until firm.
4. To serve, cut into 1-inch squares.



Notes

* For special occasion variations, stir in 1/2 cup of any of the following: chopped nuts, raisins, marshmallow creme, or chopped maraschino cherries.

Collagen

Knox gelatin is made from collagen. Like other types of gelatin, this collagen is obtained from animal bones, skin and connective tissue. Unflavored gelatin powder has no additives and is essentially pure protein. A single tablespoon (7 grams) of Knox gelatin has 20 calories and 6.4 grams of protein.

Because gelatin comes from collagen, people often think that consuming gelatin can help boost your body's collagen production.

Some consume bone broth for the same reason. Collagen consumption is often thought to:

- Help relieve joint pain
- Improve skin appearance and health
- Support digestion
- Strengthen bones
- Prevent bone and joint diseases

Collagen is a type of protein. In fact, it's the most abundant structural protein in animals. A structural protein is one that makes up the structure or framework of your cells and tissues.

There are 28 known types of collagen, with type I collagen accounting for 90% of the collagen in the human body. Collagen is composed mainly of the amino acids glycine, proline, and hydroxyproline. These amino acids form three strands, which make up the triple-helix structure characteristic of collagen.

Collagen is found in connective tissue, skin, tendons, bones, and cartilage. It provides structural support to tissues and plays important roles in cellular processes, including: tissue repair, immune response, cellular communication, cellular migration, a process necessary for tissue maintenance.

Connective tissue cells called fibroblasts produce and maintain collagen. As people grow older, their collagen becomes fragmented, fibroblast function becomes impaired, and collagen production slows.

These changes, along with the loss of another key structural protein called elastin, lead to signs of aging such as sagging skin and wrinkles.

Elderberry Elixir Mocktail

This effervescent winter mocktail features immune-supporting elderberry syrup alongside anti-inflammatory turmeric and a dose of vitamin C from orange juice. Use freshly squeezed orange juice for the best flavor. Depending on the sweetness of your elderberry syrup, you may want to use more or a little less.

Active Time: 5 mins

Total Time: 5 mins

Servings: 1

Ingredients

- 2 ounces freshly squeezed orange juice
- 1 ounce elderberry syrup
- ½ ounce freshly squeezed lemon juice
- ¼ teaspoon ground turmeric, or more to taste
- Ice
- Sparkling water
- Orange slice for garnish

Directions

1. Combine orange juice, elderberry syrup, lemon juice and turmeric in a cocktail shaker. Add ice to make the shaker 3/4 full. Cover and shake until chilled, then strain into a rocks glass filled with ice. (Alternatively, for a layered look, shake the citrus juices and turmeric and strain into a glass filled with crushed ice. Drizzle the elderberry syrup over the ice.)
2. Top with sparkling water and garnish with an orange slice, if desired.

Turmeric

Turmeric is a spice that comes from the root of the curcuma longa plant, which is a perennial in the ginger family. Its major active ingredient is curcumin. Curcumin gives turmeric that yellowish color.

Turmeric's treasure lies in curcumin's benefits. Curcumin has antioxidants and anti-inflammatory properties. Researchers are investigating whether it may help diseases in which inflammation plays a role — from arthritis to ulcerative colitis.

Elderberry is a good source of nutrients, vitamins, minerals. Consuming 145 gram of this fruit supplies, 52.2mg Vitamin C, 2.32mg Iron, 10.2g Total Dietary Fiber, 0.334mg Vitamin B6, 26.68g carbohydrates, 0.088mg copper, 406mg potassium, 0.102mg Vitamin B1, 57mg Phosphorus, 0.087mg Vitamin B2 and 44 µg Vitamin A. Moreover many Amino acids like 0.132g of Phenylalanine and Tyrosine, 0.019g of Tryptophan, 0.042g of Methionine and cystine, 0.087g of Leucine, 0.039g of Isoleucine, 0.048g of Valine, 0.039g of Threonine and 0.022g of Histidine are also found in 100 gram of the fruit.