



Week 5: We'll Throw You a Bone: *Nutrients for Bone Health*

Did you know that there are over 200 bones in your body? Bones have many important jobs to perform, including their essential role as the body's support system, production of red blood cells, and other metabolic tasks. It is important to protect your bone health with good nutrition and regular physical activity through the years. In this class, we will be cooking up some delicious recipes full of important nutrients that will boost bone health!

- In order to support bone health, it's important to get adequate protein each day. Protein is used to support bone growth and structure. To meet your protein needs, make sure to include protein at each meal. Good sources of protein include meat, dairy, tofu, nuts, and beans.
- Calcium is a mineral that is essential to bone structure. The calcium RDA for people older than 50 is 1200 mg per day. Try to get at least three servings of dairy foods or calcium-fortified substitutes (such as soy milk or tofu) each day in order to hit this number. It may be a good idea to take a supplement if you are someone that has difficulty eating dairy, or if your appetite is often low. You can speak with your doctor about that.
- Vitamin D is famous for its role in helping the body absorb calcium. However, research over the past 5 years also shows that adequate vitamin D intake is linked to a decrease in falls. This is likely related to vitamin D's job in helping maintain muscle health. The Institute of Medicine (IOM) recently released updated recommendations for vitamin D intake. They now recommend that people up to age 70 get 600 International Units (IU) of vitamin D daily, while those over 70 get 800 IU. Talk with your doctor about whether a daily vitamin D supplement is right for you.

Calcium Fact Sheet

Calcium is essential for supporting bone strength and health, in addition calcium is also used in blood clotting, muscle contraction and nerve function. Find your age on the chart below to see your daily needs for calcium (as well as vitamin D), and see examples of different food sources of calcium.

Age	Calcium (adequate intake)	Vitamin D (adequate intake)
19 – 50	1000 mg	600 IU
Over 50	1200 mg	600 IU
Over 70	1200 mg	800 IU

Product	Serving Size	Calcium (mg)
Milk	1 cup	300
Soy milk (fortified with calcium)	1 cup	300
Orange Juice (fortified with calcium)	1 cup	300
Swiss cheese	1 ounce	270
Cheddar cheese, mozzarella, Monterey jack	1 cubic inch	200
Yogurt	6 oz	200
Sardines, canned	4	200
Canned salmon, with bones	3 oz	200
Tofu	½ cup	130
Almonds	¼ cup	100
Cottage cheese	½ cup	70
Beans (kidney, garbanzo, black-eyed, pinto)	½ cup	50-65
Greens (turnip, collard, beet, kale, spinach)	1 cup	50-100

Pricing Out Protein

While meat is a great source of protein, it also tends to be one of the most expensive sources. By exchanging meat for other sources of protein at some meals each week, you can make your grocery bill go farther. See the list below for cost comparisons of protein-rich foods:

- Lean ground beef—\$4.49/lb
- Chicken breast— \$4.99/lb
- Pork tenderloin—\$5.49/lb
- Whole chicken—1.69/lb
- Salmon—8.49/lb
- Top round roast—\$4.75/lb
- Dried black beans—\$1.09/lb
- Dried pinto beans—\$1.09/lb
- Eggs—\$1.49 per dozen
- Tofu—\$2.49/lb
- Dried lentils—\$1.29/lb
- Plain yogurt—\$1.45/lb
- Canned tuna—\$4.00/lb
- Peanut butter—\$3.39/lb



New Orleans Red Beans (Serves 4)

Adapted from a recipe in "Down Home Healthy Cookin'" by the National Cancer Institute

- ½ lb dry red beans
- 4 cups water
- 1 small onion, diced
- 3 stalks celery, diced
- 2 bay leaves
- ½ green bell pepper, chopped
- 6 cloves garlic, minced
- ¼ cup parsley, chopped
- ½ teaspoon salt
- ½ teaspoon black pepper

1. Pick through dry beans and remove any debris. Soak beans

in double the amount of water needed to cover the beans overnight, or 8-12 hours.

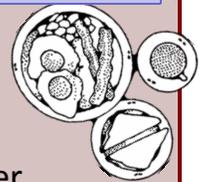
2. When ready to cook, drain beans and place in a large pot with about 1 quart of water. Bring to a boil. Add in the rest of the ingredients. After the pot returns to a boil, reduce to a simmer and cover.
3. Simmer for about 1 hour, stirring occasionally. When beans are tender, it is ready to serve. Try serving over cooked, brown rice. Don't forget to remove the bay leaves before serving!

Protein

Recent research has shed light on the health benefits of a protein rich diet. Higher protein intake can be beneficial for satiety (feeling full), keeping lean muscle mass and maintaining a healthy weight. This is important because as people age, protein intake drops off and carbohydrate consumption increases. People with kidney and liver disease should consult their RD or medical doctor before making dietary adjustments.

Population		Protein per meal Calculated using 20% total calories from protein
Women over 50	Low physical activity	26 grams/meal
	Moderately active: walks 1.5—3 miles a day	33 grams/meal
	Active lifestyle: walks greater than 3 miles a day	35 grams/meal
Men over 50	Low physical activity	36 grams/meal
	Moderately active: walks 1.5—3 miles a day	38 grams/meal
	Active lifestyle: walks greater than 3 miles a day	42 grams/meal

High protein breakfasts The best opportunity for Americans to improve their protein intake is at breakfast. Here're a few ideas for higher protein breakfasts. To get the health benefits of protein, a good goal is to aim for is moderate protein, or about 25 grams at breakfast, lunch and dinner.



1 cup Cheerios, 1 cup milk, 2 scrambled eggs	22 grams protein
Smoothie made with 1/2 cup Greek yogurt, 1 cup milk (cow or soy), 1 cup berries, 1/4 cup chopped almonds or other nuts	26 grams protein
2 scrambled eggs, 1 oz cheese, 1/4 cup black, kidney or pinto beans, wrapped in 1 medium whole grain tortilla	26 grams protein
1 slice whole wheat toast spread with 2 tablespoons peanut butter, 1/2 cup cottage cheese with fruit slices	23 grams protein

Created by Chicken Soup Brigade—Seattle, WA through a grant from AARP Foundation

Master a Marinade

Marinating is a great way to add a punch of flavor to meat or tofu dishes. Marinated meats or veggies can be grilled, roasted or baked. When cooking on the grill, the high heat produces byproducts called “heterocyclic amines” that are harmful to our health. But marinating helps reduce the production of these compounds.

Tofu Marinade

2 tablespoons olive oil
2 tablespoons balsamic vinegar
¼ cup reduced sodium soy sauce
2 tablespoons fresh lemon juice
2 cloves garlic, smashed
A big pinch each of dried basil, marjoram, and thyme

Basic Versatile Marinade

½ cup low-sodium soy sauce
¼ cup olive oil
1 lemon, squeezed
1 clove garlic, crushed

Rice Wine & Ginger Marinade

½ cup rice wine vinegar
1 cup low-sodium soy sauce
2 tbsp fresh ginger, grated
2 tbsp brown sugar

Balsamic Rosemary Marinade

½ cup balsamic vinegar
2 tbsp Dijon mustard
2 cloves garlic, chopped
2 tbsp rosemary, chopped

Directions: Mix ingredients in a large bowl or dish. Place protein into dish for at least 1 hour. Flip at 30-minute mark. If marinating for longer than one hour, place dish in refrigerator. Then grill, roast or bake away!

Marinade Safety

- Never reuse the marinade! Because it has been used with raw meat it may be contaminated. Discard it after marinating.
- Be careful of cross contamination: do not use containers, cutting boards, knives, or other items for vegetables that you used for raw chicken and other meat.
- If you are marinating for any more than an hour make sure to marinate your food in the refrigerator. Don't leave it out on the counter.

Tangy Tzatziki Sauce (Serves 2)

Adapted from a recipe at www.freshjuice.com

- 1 cucumber, peeled
 - ¼ teaspoon salt
 - 1 cup low-fat yogurt
 - 2 tablespoon fresh mint, finely chopped
 - 2 cloves garlic, minced
 - 1 tablespoon extra-virgin olive oil
 - Pepper to taste
1. Finely chop cucumber and place into bowl
 2. Next stir together with yogurt, mint and garlic.
 3. Incorporate olive oil and season with pepper to taste.



Tzatziki goes great on top of Indian food, but also doubles as a delicious sauce over grilled vegetables or meat.



Black Bean and Corn Taco Salad (Serves 2)

- 1 cup canned black beans, rinsed and drained
 - ½ cup frozen corn, thawed
 - 1 tomato, diced
 - ½ avocado, diced
 - 2 tablespoon fresh cilantro
 - 1 tablespoon lemon juice
 - 1 tablespoon taco seasoning (use storebought, or homemade recipe from packet one)
- ½ cup shredded Monterey Jack cheese
 - ½ head Bibb or romaine lettuce, shredded
1. In a small bowl stir together the first seven ingredients (through chili powder).
 2. Serve on top of shredded lettuce.
 3. Top with cheese and salsa.

Cheddar Cauliflower Soup (Serves 8)

Adapted from a recipe in Eating Well Magazine

- 2 tablespoons olive oil
- 2 large leeks, thinly sliced
- 1 medium cauliflower, chopped
- 2 ½ cups low-fat milk, divided
- 2 cups water
- 1 bay leaf
- 1 teaspoon salt
- ½ teaspoon ground pepper
- 3 tablespoons all-purpose flour
- 1 ½ cups shredded cheddar cheese
- 1 tablespoon lemon juice

Heat oil in a large saucepan over medium heat. Add leeks and cook, stirring, until very soft, about 5

minutes. Add cauliflower, 2 cups milk,



water, bay leaf, salt and pepper. Bring to a boil over medium-high heat, stirring often. Reduce heat to a simmer, cover and cook, stirring occasionally, until the cauliflower is soft, about 8 minutes.

Meanwhile, whisk the remaining ½ cup milk and flour in a small bowl. When the cauliflower is soft, remove the bay leaf and stir in the milk mixture. Cook over medium-high heat, stirring, until the soup has thickened slightly, about 2 minutes more. Remove from the heat. Stir in cheese and lemon juice.



Not only is this soup a terrific source of calcium, but it also has a healthy dose of both vitamin A and vitamin C. Vitamin A is great for skin and eye health and vitamin C is an antioxidant that helps to reduce free radicals in the body.



Quinoa* with Tarragon and Edamame (Serves 4)



- 1 tablespoon olive oil
- ½ yellow onion, chopped
- 1 garlic clove, minced
- 1 cup quinoa, well-rinsed
- 2 ¼ cups chicken or vegetable broth
- 1 cup edamame
- 1 medium carrot, diced
- 1 cup button or cremini mushrooms, chopped
- 1 tablespoon tarragon
- ½ teaspoon salt
- ¼ teaspoon black pepper
- Juice of 1 lemon

1. In a large saucepan, heat the oil over medium heat. Add onion and carrot, and sauté until onion is translucent (about 4 minutes).

2. Add garlic and quinoa and cook an additional minute. Add the stock, edamame, mushrooms, and tarragon, bring to boil, then reduce to simmer.
3. Simmer, covered, 12 to 15 minutes or until water is absorbed. Remove from heat and stir in salt, pepper, and lemon juice. Serve immediately.



Quinoa Cooking Directions:

Rinse quinoa thoroughly in a small strainer or by running fresh water over the quinoa in a pot. Drain. Combine 1 cup quinoa and 2 cups water or broth in 1 ½ qt. saucepan; bring to boil. Reduce heat to simmer; cover and cook until all water is absorbed (about 15 minutes).

***Don't have Quinoa?** That's ok! Brown rice is a great substitute and less expensive than quinoa. Use the same proportions but plan on cooking for 45 minutes.

Bulgur Greek Salad (Serves 3)

- 1/2 cup dry bulgur
- 1 medium cucumber diced
- 2 medium tomatoes diced, or 1/2 cup cherry tomatoes sliced in half
- 1/4 onion diced
- 1 15 oz can drained and rinsed chickpeas
- 4 oz crumbled feta cheese
- 1 Tablespoon olive oil
- 1 Tablespoon balsamic vinegar
- 1 teaspoon dried basil
- 1 teaspoon dried oregano
- 1 teaspoon dried thyme



Optional

- 1 - 4 oz can black sliced olives
 - 1/4 cup diced Pepperoncini
1. Cook bulgur according to directions on the package.
 2. Fluff the bulgur and place in refrigerator to cool.
 3. In a large bowl combine cucumber, tomato, onion, and feta cheese.
 4. Add balsamic vinegar, olive oil, and dried herbs. Stir well to combine. Once the bulgur is chilled add into bowl and mix.



Bulgur is a whole grain made from cracked wheat and it is a great source of fiber, vitamins and minerals. It is most commonly found in the popular Middle Eastern dish, tabbouleh, but is versatile and can be used in many recipes. Bulgur is sometimes packaged parboiled, which shortens the cooking time, but can also be found in an uncooked form. Be sure to read the preparation instructions for best cooking outcome.

Tofu Scramble (Serves 3)

Created by Kelsey Sunshine, Chicken Soup Brigade's sous chef



- 1 tablespoon olive oil
 - 2-3 cloves garlic, chopped
 - ¼ cup chopped onion, diced
 - 2-3 mushrooms, sliced
 - 1 package firm tofu, drained & mashed
 - ½ red pepper, sliced
 - 1 tomato, diced
 - 1 green onion, sliced
 - ½ cup grated cheddar or other cheese
 - Salt and pepper to taste
 - 1 tablespoon basil or other fresh herb, chopped (optional)
1. In a non-stick pan heat oil. Sauté onion & garlic until softened, then add mushrooms.
 2. Add tofu when mushrooms are ¾ done. Sauté over medium high heat for about 5 minutes while stirring.

3. Add red peppers, salt and pepper halfway through cooking time.
4. Finish scramble by adding basil and tomato. Mix, sprinkle with cheese and green onion and cover with lid until cheese melts. Yum.

 Tofu is one of the plant foods that is highest in protein. A single ½ cup serving has 10 grams of protein! Most tofu is also fortified with calcium.



Meatloaf Awesomeness (Serves 6)



The Sauce:

- 1 –8 oz can tomato sauce
- 2 tablespoons brown sugar
- 2 tablespoons cider vinegar
- 1/8 teaspoon salt
- Black pepper to taste
- 1 tablespoon Worcestershire sauce
- 2 tablespoons yellow mustard

The Meatloaf:

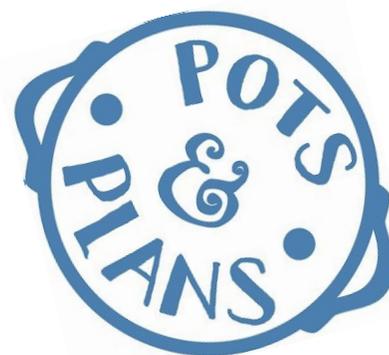
- 1 ½ lbs ground turkey or lean ground beef
- ¾ cup rolled oats
- ½ cup onion, finely diced
- ⅓ cup carrots, finely diced
- ⅓ cup celery, finely diced
- Premade meatloaf sauce, divided
- 1 egg, lightly beaten
- 2 cloves garlic, minced

1. Add all the ingredients for the sauce into a pot. Bring the ingredients to a boil, then remove and set aside.
2. Preheat the oven to 350

degrees.

3. Combine all the ingredients for the meatloaf in a large bowl, adding ½ cup of the premade meatloaf sauce and reserving the rest. Stir well.
4. Firmly pack mixture into an ungreased loaf pan.
5. Spread remaining sauce evenly to coat top, and bake for 50 to 55 minutes or until center shows no pink.
6. Let stand for 5 minutes before slicing.





BASE INGREDIENTS:

- 1 tablespoon vegetable oil
- ¼ cup chopped onion
- 1 cup **VEGGIES** total, chopped, sliced or diced
- ¼ cup **MEAT**, cooked and
- chopped or cubed (optional)
- 3 eggs
- ½ cup milk
- 1-2 tbsp fresh **HERBS**, or 1 teaspoon dried **HERBS**
- Salt and pepper
- ½ cup **CHEESE**, shredded (optional)

YOU CHOOSE:

VEGGIES (pick 2+)

- Broccoli
- Spinach
- Carrots
- Potatoes
- Mushrooms
- Bell peppers
- Asparagus
- Zucchini
- Butternut squash
- Sweet potatoes
- Eggplant
- Leeks
- Kale
- Arugula

HERBS

- Basil
- Oregano
- Thyme
- Marjoram
- Tarragon
- Dill
- Rosemary
- Cilantro/Coriander
- Sage
- Cumin
- Paprika
- Red pepper flakes
- Curry powder
- Italian seasoning
- Nutmeg (¼ tsp limit)
- Chili powder

MEAT (optional)

- Ham
- Sausage
- Chicken
- Beef
- Pork
- Ground beef
- Ground turkey
- Bacon
- Tofu

CHEESE (optional)

- Cheddar
- Swiss
- Mozzarella
- Feta
- Parmesan
- Mexican
- Monterey Jack
- Gruyere

MAKE AN OMELETTE:

1. Heat **ovenproof** pan. Add oil and sauté onion and **VEGGIES** until softened.
2. In a medium bowl, beat eggs with milk and add **HERBS** and salt and pepper.
3. If using **MEAT**, add it to the pan.
4. Pour egg mixture into pan and cook about a minute to let set.
5. Gently lift edges with spatula and tilt to let egg run under and cook through.
6. When almost done, flip and cook until egg is fully set.

MAKE A STRATA:

YOU ALSO NEED:

- 1 cup bread, cubed (stale works best)
 - ½ teaspoon baking powder
1. Preheat oven to 350 degrees.
 2. Heat pan and add oil. Sauté onion and **VEGGIES** until softened.
 3. In a medium bowl, beat eggs with milk and add **HERBS** and salt and pepper.
 3. Add baking powder to eggs and mix.
 4. Spread bread cubes into a greased pan. Add veggie mixture and **MEAT**, if using. Pour egg mixture into pan. Sprinkle with **CHEESE**.
 5. Let pan rest in refrigerator for 30-45 minutes.
 6. Bake for 45—60 minutes or until a knife inserted into the center comes out clean.

Recipe	Calories (cal)	Total Fat (g)	Sat Fat (g)	Total carb (g)	Total Sugar (g)	Protein (g)	Sodium (mg)	Potassium (mg)	Phosphorus (mg)	Cholesterol (mg)
Black Bean and Corn Taco Salad	318	17	6.5	35	5	16	722	988	211	25
Cheddar Cauliflower Soup	188	11	5	14	6	10	484	422	227	26
Meatloaf Awesomeness	311	9	2	35	20	27	661	682	80	100
New Orleans Red Beans	188	3	0	34	1	14	325	679	216	0
Pot Roast	312	9	3	37	15	21	112	735	192	67
Bulgur Greek Salad	259	13	6	28	7	11	433	486	246	34
Quinoa w/ Tarragon and Edamame	252	7	1	36	6	12	346	507	272	0
Tofu Scramble	275	18	6	10	4	20	226	288	141	20