

**Guided Nutrition Program****Bone Health**

1. **Share your WINS** \_\_\_\_\_

2. **Review Previous Session Goals and Food Log**

How did it work for you? Energy level? Cravings?

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3. **Past Sessions – Any questions or concerns?**

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**Handouts**

- ☐ Bone Health & Fractures
- ☐ Calcium & Dairy
- ☐ How to Strengthen our Bones
- ☐ What Contributes to Increased Bone Loss

**Additional Handouts**

- ☐ Bone Broth
- ☐ Shiitake Mushroom & Parsley Omelet

**Exercise**

- ☐ Bone Health Goal Worksheet

**Recommendations for Next Session:**

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# Bone Health & Fractures



Bones are fluid not firm  
Bones are flexible and move all the time  
Bones are constantly broken down and built up

## What makes up our bones?

65% Calcium & Phosphate salts = **Hardness**  
35% Collagen (protein) = **Flexibility**

What is **Osteopenia**? – Condition of low bone density

What is **Osteoporosis**? – Condition of porous (thin) bones

Osteoporosis is not as much the problem as is fractures, particularly, “Fragility Fractures”

What is a **Fragility Fracture**? – When you fall from a standing height and fracture a bone. Many people can fall and not fracture a bone.

- 1984 – US Health Conference decided bone fractures were a health problem and decided to increase calcium intake, however, fracture rates have continued to increase.
- US started with a recommendation of 600 mg/day. Since that did not decrease fractures, they increased requirement to 800 mg, then 1000mg, then 1200mg/day.

While countries where people consume <360 mg/day rarely have fractures

What is more important to prevent fractures? **Collagen = Flexibility**

## Calcium & Dairy

- Dairy contains a lot of calcium, but it is not in a *form* that's easy to digest and absorb
- Dairy is one of the most difficult foods for women - causing many hormonal issues
- Conventional dairy is contaminated with growth hormones, antibiotics, and they are fed GMO corn which causes inflammation in their bodies which all goes into their milk.
- Dairy has been linked to cancer, heart disease, allergies, ear infections, sinus problems, IBS, and lactose intolerance

**The Harvard Nurses' Health Study** - Followed more than 75,000 women for 12 years and showed no protective effect of increased milk consumption on fracture risk. In fact, increased intake of calcium from dairy products was associated with a higher fracture risk.

### ***Bone Density Drugs***

- Our body keeps 99% of the calcium for bones and teeth
- Our body must maintain 1% calcium in our blood (critical to keep the proper pH level)
- Our body will break down bone to replenish the most critical 1% calcium in bloodstream

Bone Density drugs can interfere with that process leading to atrial fibrillation; a serious condition causing a chronic irregular heart rate.

### ***Excess Calcium Supplementation***

- JAMA research study found that taking vitamin D and calcium supplements did not protect against fractures in people over 50. Other studies have indicated increasing daily calcium supplementation may increase your risk of heart disease, kidney stones, gallstones, osteoarthritis, hypothyroidism, obesity and type 2 diabetes.
- Unless calcium supplements are from a whole foods source, the body has a difficult time utilizing them and may deposit calcium where it shouldn't be. For example, they have found that 90% of the plaque buildup in arteries has been calcified which is what hardens the arteries.

### ***Where is the best place to get your Calcium?***

Where the largest boned animals (giraffes, elephants, & cows) do - **Greens**

## How to Strengthen our Bones

### 1. **Eat vegetables (especially leafy greens)**

Greens give you calcium, vitamin K, potassium, and other minerals and nutrients you need to rebuild bone.

### 2. **Eat protein from naturally raised animals and bone-in fish**

Protein helps make collagen for your bones, so they have flexibility

### 3. **Eat whole grains**

Whole grains provide magnesium which is necessary to help deposit the calcium into your bones

### 4. **Eat nuts & seeds**

Nuts & seeds provide trace minerals necessary for formation of bones

### 5. **Use bone broth in your cooking**

Bone broth contains valuable minerals in a form your body can easily absorb and use, including calcium, magnesium, phosphorus, silicon, sulfur chondroitin, glucosamine, and a variety of trace minerals

### 6. **Eat good quality fats**

Quality fats optimize the absorption of vitamins A, D, E & K into your bloodstream which are necessary minerals for healthy bones.

### 7. **Get enough sunlight**

Sunlight is best source of vitamin D which is essential for pulling calcium out of the bone and into the bloodstream to maintain the critical 1% for pH balance.

### 8. **Drink enough water**

Water helps keep the bones hydrated so they are more flexible

### 9. **Exercise – walk, carry, lift**

To strengthen bones, you must work against gravity. You can put on bone mass at any age.

### 10. **Get enough sleep**

Lack of sleep can impact your bone density and risk of osteoporosis.

## What Contributes to Increased Bone Loss



*Avoid or limit the following especially if you already have bone loss*

1. Processed foods including white breads, pasta, rice and chips
2. Foods with gluten especially those containing wheat
3. Sugary foods such as cereals, muffins, cakes and cookies
4. Low-fat foods
5. Coffee and Sodas, especially colas
6. Alcohol
7. Smoking
8. Medications including antacids with aluminum, steroids, acetaminophens, blood pressure medications and diuretics.

## Shiitake Mushroom & Parsley Omelet

3 eggs  
1 1/2 tablespoons heavy cream  
2 tablespoons coconut oil or ghee  
Sea salt, to taste  
Ground black pepper, to taste  
5 medium-sized shiitake mushrooms, sliced thinly  
1/4 cup onion, diced small  
1/4 cup fresh parsley, chopped

In a small bowl, whisk the eggs, cream, salt and pepper.

In a sauté pan over medium-high, heat 1 tablespoon coconut oil or ghee.

Add the mushrooms and onions and season with salt and pepper. Cook, stirring occasionally, until the mushrooms begin to turn golden brown, approximately 2 minutes. Add parsley and cook approximately 1 minute.

Remove from heat and spoon the mushroom mixture onto a plate.

Place the same sauté pan back over medium-high heat and add another tablespoon coconut oil or ghee.

Swirl the pan to distribute the oil and once melted, add the whisked eggs.

As the eggs begin to cook, run your rubber spatula through the omelet while tilting the pan, allowing any uncooked egg to fill the gaps. This whole process should take no longer than 30 seconds.

Remove the eggs from the heat. Spread the mushroom mixture evenly in the middle of the omelet and fold in half.

**\*Mushrooms** are one of the highest foods in calcium per serving; shiitake is the highest

**\*Parsley** is very high in Vit K which promotes bone strength.

## Bone Broth

- 2 pounds (or more) of bones from a healthy source (2-3 full chicken carcasses or 2# fish bones or beef bones, roasted will improve flavor over raw)
- 1-gallon filtered water
- 1 large organic onion
- 2 large organic carrots
- 2 stalks of organic celery, roughly chopped
- 2 tablespoons Apple Cider Vinegar

Place bones in a 5-gallon stock pot and pour water over the bones and add the vinegar. Let sit for 20-30 minutes in the cool water. The acid helps make the nutrients in the bones more available.

Rough chop and add the vegetables (except the parsley and garlic, if using) to the pot. Add any salt, pepper, spices, or herbs, if using.

Bring the broth to a boil. Once it has reached a vigorous boil, reduce to a simmer and simmer until done according to the following:

- Beef broth/stock: 48 hours
- Chicken or poultry broth/stock: 24 hours
- Fish broth: 8 hours

During the first few hours of simmering, you'll need to remove the impurities that float to the surface. A frothy/foamy layer will form and it can be easily scooped off with a big spoon. Throw this part away.

Check it every 20 minutes for the first 2 hours to remove this.

Remove from heat and let cool slightly. Strain using a fine metal strainer to remove all the bits of bone and vegetable. When cool enough, store in a gallon size glass jar in the fridge for up to 5 days, or freeze for later use.

*Adapted from [www.wellnessmama.com](http://www.wellnessmama.com)*

**\*Can do this in a crock pot all day/night**

**\*Can do in pressure cooker or instant pot in 1/3 the time.**

## Bone Health Goal Worksheet

**Goals:****Strategy:**

1.)	1.)
2.)	2.)
3.)	3.)