Get Enough Calcium and Vitamin D!
And Have Strong Bones!

Some slides adapted from University of Nebraska Lincoln (lancaster.unl.edu) and MyPyramid.gov
Project Sponsors

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Why Worry About Calcium?

Calcium…

• Helps control muscle contraction
• Need to build and maintain strong bone throughout life
• Medical complications may occur as bone strength decreases due to lack of calcium – bones compress and naturally break
Bone Mass

- Calcium is deposited and withdrawn from bones daily.
- Half of the adult skeleton is formed during adolescence.
- After 30 years of age, bones are not able to take in as much calcium.
- Bone mass slowly declines after 35 years of age.
- By consuming adequate calcium and vitamin D, especially before age 30, we can keep our bones strong.

Source: [http://www.accessexcellence.org/HHQ/qow/qow06/qow061211.html](http://www.accessexcellence.org/HHQ/qow/qow06/qow061211.html)
Osteoporosis

- Osteoporosis is a disease that weakens bones, causing them to become weak.
- Brittle bones are due to a loss of calcium.
- While it happens often in elderly women, osteoporosis can occur at any age and gender if the diet is inadequate.
- It is preventable!

Simple Prevention Steps

1. Get the recommended amount of calcium and vitamin D
2. Engage in physical activity, including weight-bearing activity. For example:
   - Weight lifting
   - Running/jogging
3. Avoid smoking and excessive alcohol intake
What’s the Recommendation for Calcium?

<table>
<thead>
<tr>
<th>Age</th>
<th>Calcium needed per day (mg)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 to 6 months</td>
<td>200</td>
</tr>
<tr>
<td>7 to 12 months</td>
<td>260</td>
</tr>
<tr>
<td>1 to 3 years</td>
<td>700</td>
</tr>
<tr>
<td>4 to 8 years</td>
<td>1000</td>
</tr>
<tr>
<td>9 to 18 years</td>
<td>1,300</td>
</tr>
<tr>
<td>19 to 50 years</td>
<td>1,000</td>
</tr>
<tr>
<td>Over 50 years</td>
<td>1,200</td>
</tr>
</tbody>
</table>

Food and Supplement Labels

Percent Daily Value is used to show how much calcium is in a food compared to what is recommended, based on 100% (1,000mg)

100% DV for calcium = 1000 milligrams (mg)

Teens 14–18 years need 1300mg which is 130% DV

For this label there is 30% DV of Calcium

How many mg would that be?

Do the math:

300 mg ÷ 1000 mg = 30%
Calcium Sources: Dairy Group

Dairy foods are typically our best sources of calcium.

*MyPlate recommends 3 cups of Dairy per day*

**What Counts as a Cup?**
- 1 cup low-fat or fat-free milk
- 1 cup fortified soy beverage
- 1 cup low-fat or fat-free yogurt
- 1.5 oz natural cheese
- 2 oz. processed cheese
- 2 cups cottage cheese
Calcium Sources:  
**Grains & Protein Foods Groups**

**Grains Group**
- Cereal, calcium-fortified
  Serving size and amount of calcium varies—check label

**Protein Foods Group**
- Baked beans
  1 cup = 140mg (14% DV)
- Salmon, canned, with edible bones
  3 oz. = 180mg (18% DV)
- Sardines, canned, in oil, with edible bones
  3 oz. = 320mg (32% DV)
- Soybeans, cooked
  1 cup = 260mg (26% DV)
- Tofu, firm, with calcium
  ½ cup = 200mg (20mg% DV); check label
Calcium Sources: Fruits & Vegetables Groups

Fruit Group
- Calcium-fortified orange juice and other calcium-fortified beverages
  6 oz. = 200mg to 300mg (20-30% DV, varies — check label)

Vegetable Group
- Broccoli, raw
  1 cup = 90mg (9% DV)
- Collard greens, cooked
  ½ cup = 200mg (20% DV)
- Turnip greens, boiled
  ½ cup = 100mg (10% DV)
- Spinach, cooked
  ½ cup = 120mg (12% DV)
Vitamin D: Why and How Much?

- Helps the body more easily absorb calcium in the digestive tract.
- Promotes bone formation and mineralization.
- Works with calcium to build a stronger more intact bone.

<table>
<thead>
<tr>
<th>Age</th>
<th>Vitamin D needed per day</th>
</tr>
</thead>
<tbody>
<tr>
<td>Up to 70 years old</td>
<td>15 mcg</td>
</tr>
<tr>
<td>70 years and older</td>
<td>20 mcg</td>
</tr>
</tbody>
</table>

You need more Vitamin D as you age to reduce the risk of fractures and other bone injuries.
Good Sources of Vitamin D

- Fortified milk (2.9 mcg per cup)
- Fortified Soymilk (2.7 mcg per cup)
- Fortified Orange Juice (3.4 mcg per cup)
- Cold saltwater fish (Example: salmon, halibut, herring, tuna, oysters and shrimp)
- Fortified cereals: check label!
- Calcium and vitamin/mineral supplements: check label!
- Sunlight: Vitamin D is made in your skin. Try to get 10-15 minutes of sun exposure 2-3 times/week
Are You Lactose-Intolerant?

Some people lack the enzyme lactase needed to digest lactose (milk sugar).

Here are some tips that may help people obtain calcium from dairy products...

• Start with smaller portions
• Eat dairy in combination with meals
• Try dairy foods other than milk:
  – Hard cheeses have less lactose than milk: (ex: cheddar, Swiss, parmesan)
  – Yogurt contains predigested lactose
• Try products like: lactose-reduced milks, soy beverages, fortified almond milk and cheeses
Are You Lactose-Intolerant?

Some people lack the enzyme lactase needed to digest lactose (milk sugar).

Here are some foods they can eat to get enough calcium:

- Eat dairy in combination with meals
- Eat hard cheeses like cheddar, Swiss, or parmesan
- Eat yogurt
- Try products like: Lactaid, fortified soy beverages, fortified orange juice
Don’t Like Milk?

- Try chocolate milk.
- Top baked potatoes with plain yogurt; sprinkle with chives.
- Make instant hot cocoa with milk.
- Serve milk-based desserts (puddings, tapioca, frozen yogurt, custard, ice cream). Limit fat and sugar.
- Enjoy plain or flavored low fat yogurt or make a fruit & yogurt parfait.
- Use flavored yogurt as a fruit salad dressing; experiment with substituting plain yogurt for some or all of the sour cream in vegetable salad dressings.
Eating Calcium at Every Meal

• **Breakfast**
  – Granola bar and 6oz. calcium fortified 100% juice

• **Lunch**
  – Turkey, lettuce, tomato and cheese on whole wheat roll
  – Low-fat chocolate milk

• **Dinner**
  – Grilled chicken, ½ c spinach salad and ¾ c macaroni and cheese

• **Breakfast**
  – Calcium- fortified orange juice 300mg
  – Granola bar 150mg

• **Lunch**
  – Cheese 300mg
  – Chocolate milk 300mg

• **Dinner**
  – Spinach 123mg
  – Mac and cheese 300mg

**Total Calcium:** 1473mg
Keep your bones strong!

• Eat a healthy diet with plenty of foods high in calcium and vitamin D.

• Engage in regular exercise.

• Avoid smoking and alcohol.

Support your bones. They support you!
ACTIVITY:
Are you getting enough calcium?

• Complete the worksheet to see if you are getting enough calcium in your diet.

• If you’re not getting enough, how could you increase your calcium intake to meet the recommended amount?