

The information below may be used as a lesson plan to educate your child(ren). This program is designed for younger children. The purpose of this information is to educate and instill habits that lead to increased physical activity levels and teach valuable nutritional lessons that your child can use throughout their lives.

Best Bones Forever

Let's talk about things we can do to keep our bones healthy.

Can you imagine what your body would look like if you didn't have any bones in your body? Our bones protect our organs inside our body such as our brain and heart, and support our body.

Now that we know why we have bones in our body let's learn a little about what our bones are made of.

- Bone is a living, growing tissue.
- It is made mostly of two materials called **collagen and calcium**.
- **Collagen** is a protein that provides a **soft framework for your bones**. Ex. the end of your nose, your ear, fingernails.
- **Calcium** is a mineral that adds **strength and makes bones hard**.
- The combination of collagen and calcium makes bone strong and flexible enough to hold up under stress.

All together, the bones in your body form your skeleton. Your skeleton is very strong, but also very light. How many pounds do you think your skeleton weighs?

- Your skeleton probably only weighs about 7 – 12 pounds. That's about the weight of a gallon of milk.
- Bones make up about 15% of a person's total body weight.

Do you know how your bones grow?

Even though bones you've seen may have looked all dried up, yours really live and grow inside you.

Let's think of your bones as a "bank account" where you add and remove bone tissue.

- During childhood and teen years new bone is added to the skeleton faster than old bone is removed. Because of this, your bones become larger, heavier and denser.
- For most people, bone is added at a continuous faster pace than it is removed until sometime after age 20.
- After age 30 the opposite happens. Bone is removed quicker than it is added.
- When a person continues to get older and more and more bone is removed, this increased the risk of getting osteoporosis. Osteoporosis is a disease in which the bones become weak and more likely to break.



Now you are probably wondering, if osteoporosis happens to older people, then why should I worry about it at my age?

- Now is the best time in your life to build your bone “Bank Account” to help make sure your bones are as healthy as possible when you do get older.
- You can do this by exercising and eating right.

What are some examples of bone-strengthening exercises? (Something that you do on your feet that works your bones and muscles against gravity.) *Ask your child for examples.*

- Jumping Rope
- Basketball
- Dancing
- Soccer
- Running
- **Anything that produces a force (or is weight-bearing) on the bones will promote bone growth and strength.**

These activities help form new bone tissue. They also make your muscles stronger. When your muscles push and tug against your bones, they make your bones even stronger.

What are some exercises that are not bone-strengthening? *Ask your child for examples.*

- Swimming
- Biking

These are still activities that are good for your health, just be sure to do bone-strengthening exercises too!

Now let’s talk about some things that are Bone Bandits. These are activities or habits that may put you at risk for osteoporosis later in life.

- Soda. You may make this an occasional treat, but choose milk, water or calcium-fortified juice instead.
- Screen Time – this means watching TV, playing video games. Try to limit your screen time to less than 2 hours a day.
- Smoking – The nicotine and toxins in cigarettes damage and destroy the bone-building cells in the body.

What are three things you need to grow and have strong bones?

- Bone-strengthening activities
- Calcium in your diet
- Vitamin D in your diet.

So let’s talk about how we can get calcium through what we eat and drink.

- Calcium can be found in milk and milk products.
- It can also be found in dark green leafy vegetables.
- There are some foods in every food group that contain calcium.
- Low fat and fat-free dairy products are a good way to get calcium without getting a lot of calories.

How many cups of calcium foods do we need each day?

About 3 cups of dairy products a day will give you the calcium you need.

Once we do things to keep our bones strong, we need to protect them. Can you think of ways to protect your bones while doing sports? *Have your child give their answers. Ex. Bike helmets, knee pads, shin guards, baseball chest protector.*

Make sure to fill up your “Bone Bank Account” so you have strong bones when you grow up!