

STAYING HEALTHY

Active Families: The Foundation for a Lifetime of Bone and Joint Health

We know that kids who routinely play sports, ride their bikes, and even just play outside are healthier and happier. We also know that exercise and activity during childhood, along with a nutritious diet, are critical for building strong bones and maintaining a healthy body weight—not just in childhood, but for life.

In fact, the more bone mass created during childhood and adolescence, the greater the chance of preventing osteoporosis (brittle and weak bones) and related fractures later in life. As a child grows, bone is made and then constantly reshaped to keep its function. In the process of normal growth, much more bone is made than removed, allowing the skeleton to grow in size and density. Up to 90 percent of peak bone mass is acquired in girls by age 18 and in boys by age 20, making childhood the absolute best time to invest in bone health through proper nutrition and exercise.

Unfortunately, video games, technology, screen time and busy schedules are resulting in fewer opportunities for exercise in today's children and adolescents.

To emphasize the need for kids to stay healthy and active, the American Academy of Orthopaedic Surgeons (AAOS) and the Pediatric Orthopaedic Society of North America (POSNA) created a new television public service advertisement that humorously features grandparents introducing various outdoor activities to their technology-focused grandson. The video is funny, but the message is serious and effective: Parents, grandparents and families must play a vital role in encouraging healthy, active behaviors.

Obesity and Bone Health

Bone health is also dependent on a healthy weight. Unfortunately, the percentage of children who are overweight or obese has more than doubled over the past 30 years—from 7 percent in 1980 to 18 percent in 2012. A National Center for Health Statistics study found that the risk for obesity increases as a child ages, with obesity diagnosed in 9 percent of children ages 2 to 5 in 2014, compared with 18 percent of children ages 6 to 11, and 21 percent of teens ages 12 to 19.

A child who is overweight may not consistently eat foods rich in vitamin D, calcium and other important nutrients. In addition, the child's weight may prevent him or her from exercising and building bone mass. Obesity also places undue stress on the developing musculoskeletal system, which can impair growth and contribute to serious childhood orthopaedic conditions, such as bowing of the legs (Blount's disease) or a slip in the growth plate of the hip (slipped capital femoral epiphysis). In addition, children who are obese are more likely to experience complications from simple broken bones and routine orthopaedic surgeries.

Get Up, Get Out, and Get Moving!

So how can you start incorporating exercise and activity into your family's busy life? The hardest part is getting started. Slow and steady is the best way to begin to improve general fitness. Most importantly, exercise should be fun!

- Parents and grandparents should model active behavior by joining their children on a bike ride, at a ball game, or for a long walk. Choose new activities, and activities you enjoy, throughout the year.
- Kids should try different sports like soccer, baseball, basketball and football. Exercise may also include activities like dancing, stair climbing, tennis or other racquet sports, skiing, skating, karate, or bowling.
- Ask for help. Learn new sports and activities with support from coaches, teachers, friends and parents. Invite your family and friends to join you to make

it more fun.

- Take plenty of time to get ready. Warm-up exercises get your body ready to be active. Walk, bend and do gentle stretching exercises. Flexibility exercises help avoid injuries.
- Work towards fitness goals gradually, doing a little more each day.
- Plan to be active for at least 30 minutes (preferably 45 minutes) each day. Do it all at once or break it into smaller periods. For example, try 15 minutes of walking, 15 minutes of sprints, and 15 minutes of yoga. Keep a daily activity log of minutes spent on exercise and activity.
- Challenge yourself with new activities or make a goal to only take the stairs for one week. See if that sticks. Then, try another challenge.
- Exercise can help others, too. Rake your yard. Walk your neighbor's dog. Sweep the house. Feel good and make others feel good, too.

Combine Exercise and Activity with a Healthy Diet

Children and adolescents need a diet rich in calcium to help build bone mass, and appropriate levels of vitamins D and C to allow the body to absorb the calcium and create strong connective tissue. A lack of vitamin D may cause rickets—bone weaknesses, bowed legs and other skeletal deformities—and a higher risk for fractures later in life.

Unfortunately, most children and adolescents are not getting enough nutrients. According to a 2015 CDC survey, 22 percent of American teens had no milk—an important source of vitamin D and calcium—during the previous seven days.

Talk with your doctor about your child's specific dietary needs. In general:

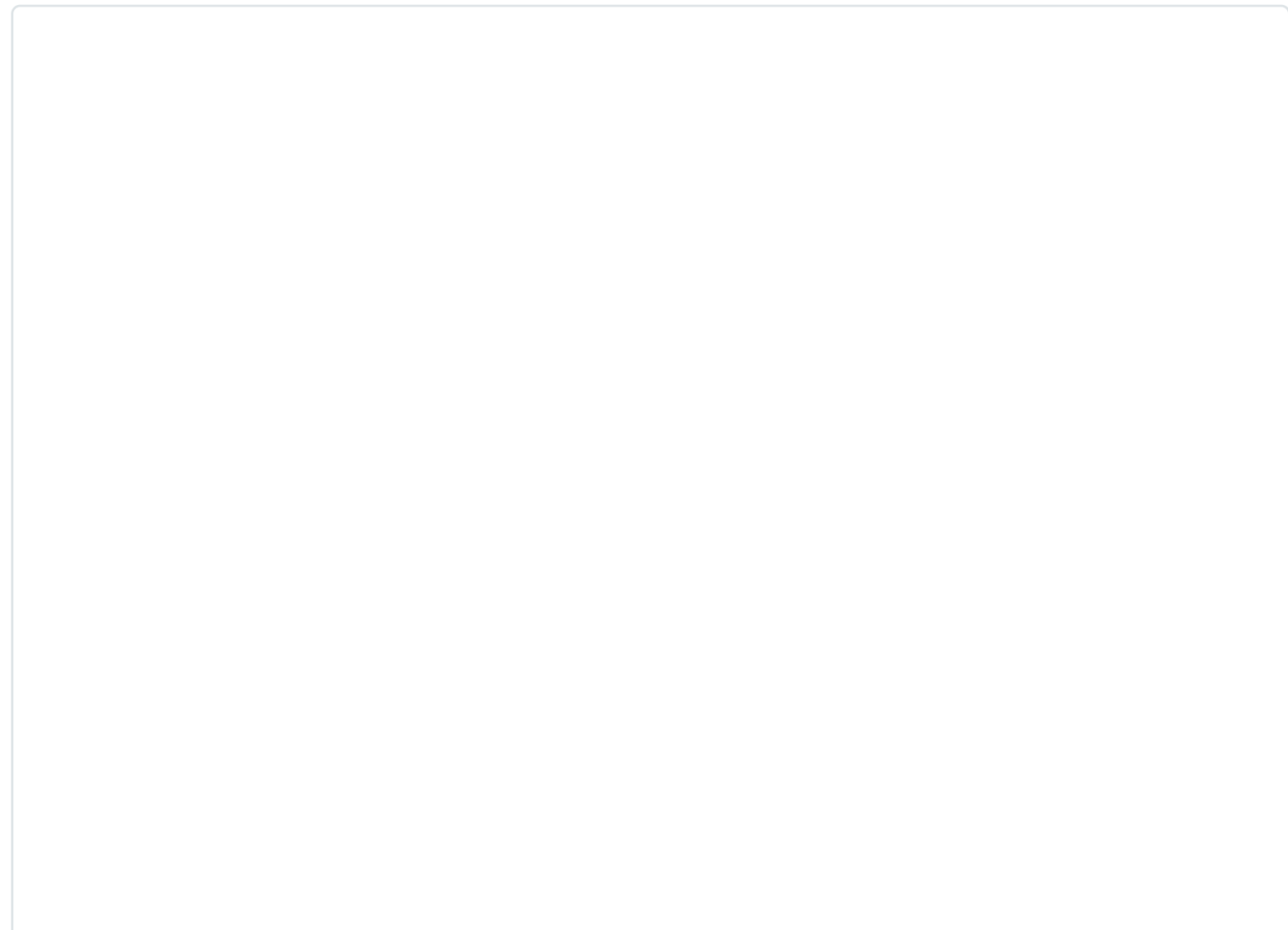
- Kids and young adults, ages 10 to 20 years, need at least 1,300 mg of calcium each day, the equivalent of:
 - One cup of orange juice with added calcium

- Two cups of milk
- One cup of yogurt

- Calcium can also be found in cheese, and green, leafy vegetables, such as spinach and broccoli.
- Avoid sodas and carbonated beverages. Sodas decrease calcium absorption in the intestines and contain empty calories. Milk, calcium-fortified juices and water are better alternatives.
- For children with food allergies or lactose intolerance, a vitamin D supplement may be recommended by your physician or pediatrician.

Help Spread the Word

Share on social media the many and favorite ways that your family chooses to stay active. Be sure to add **#ActiveFamilies** and **#HealthyBonesforLife** to your posts.



Related Resources from AAOS:

[A Nation in Motion](http://www.anationinmotion.org/)(<http://www.anationinmotion.org/>)

[Lazybones Workbook](http://3rhw477yzih424fak2ufyz2w.wpengine.netdna-cdn.com/wp-content/uploads/2015/07/Workbook-G3.pdf)

(<http://3rhw477yzih424fak2ufyz2w.wpengine.netdna-cdn.com/wp-content/uploads/2015/07/Workbook-G3.pdf>)

[Position Statement on Children and Musculoskeletal Health](http://www.aaos.org/uploadedFiles/PreProduction/About/Opinion_Statements/position)

(http://www.aaos.org/uploadedFiles/PreProduction/About/Opinion_Statements/position)

[Position Statement on the Impact of Obesity on Bone and Joint Health](http://www.aaos.org:80/uploadedFiles/PreProduction/About/Opinion_Statements/positi)

(http://www.aaos.org:80/uploadedFiles/PreProduction/About/Opinion_Statements/positi)

[Position Statement on the Need for Daily Physical Activity](http://www.aaos.org/uploadedFiles/PreProduction/About/Opinion_Statements/position)

(http://www.aaos.org/uploadedFiles/PreProduction/About/Opinion_Statements/position)

Related Resources from Other Organizations:

[National Institutes of Health: Kids and Their Bones--A Guide for Parents](https://www.niams.nih.gov/health_info/bone/bone_health/juvenile/default.asp)

(https://www.niams.nih.gov/health_info/bone/bone_health/juvenile/default.asp)

[Pediatric Orthopaedic Society of North America \(POSNA\): OrthoKids](http://orthokids.org/)

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Last Reviewed

January 2017

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