Building Healthy Bones—Physical Activity and Calcium
This month’s topic is about having healthy bones and how calcium and physical activity help us to achieve that goal.

Calcium is a mineral that the body needs for numerous functions, including building and maintaining bones and teeth, blood clotting, the transmission of nerve impulses, and the regulation of the heart's rhythm. Ninety-nine percent of the calcium in the human body is stored in the bones and teeth. The remaining one percent is found in the blood and other tissues. The body gets the calcium it needs by eating foods that contain calcium. Good sources include dairy products and dark leafy greens or dried beans.

Osteoporosis, or "porous bones," is the weakening of bones caused by an imbalance between bone building and bone destruction. People typically lose bone as they age, despite consuming the recommended amount of calcium necessary to maintain optimal bone health. An estimated 10 million Americans - 8 million women and 2 million men - have osteoporosis. Preventing osteoporosis depends on two things: making the strongest, densest bones possible during the first 30 years of life and limiting the amount of bone loss in adulthood.

Physical activity that puts some strain or stress on bones causes the bones to retain and possibly even gain density throughout life. Cells within the bone sense this stress and respond by making the bone stronger and denser. Such "weight-bearing" exercises include walking, dancing, jogging, weightlifting, stair-climbing, racquet sports, and hiking. In addition, physical activity doesn't strengthen all bones, just those that are stressed, so you need a variety of exercises or activities to keep all your bones healthy. Another function of physical activity, probably at least as important as its direct effect on bone mass, is its role in increasing muscle strength and coordination. With greater muscle strength, one can often avoid falls and situations that cause fractures. Making physical activity a habit can help maintain balance and avoid falls.

(Sources: www.nof.org, www.osteo.org)

Club Roll Call: What dairy foods have you eaten today?

Physical Activity Calendars
Collect the October Physical Activity Calendar from each participant. Record each individual's total number of activity minutes on the Get Up and Move! Club Chart.

Have a short discussion to review the Physical Activity Pyramid and reflect on their activity for the past month. Have each individual look closely at his or her calendar to see how the activity matches the advice from the Physical Activity Pyramid.

Reflection Questions:
Did you see an increase of physical activity over the days in October?
What types of physical activities have you been doing?
Are you getting at least 60 minutes of physical activity every day?
Pass out the **November Physical Activity Calendar**.

**Educational Activity**
This month members will participate in numerous “weight-bearing” activities, which help to strengthen bones. Weight-bearing activities include running, walking, skipping, jumping rope, jumping jacks, push-ups, hopping, and hopscotch. In order to allow members to experience a few different types of weight-bearing activities, the activity this month will be a **weight-bearing relay**.

**Recipes/Snacks**
The November snack is **vegetable cheese soup**, and is perfect for cooler weather! One serving of this snack provides youth with 15% of their recommended daily value of calcium.

**Family Activity**
The November family activities are meant to encourage the consumption of calcium-rich dairy products and participation in weight bearing activities. Families can complete the **3-A-Day of Dairy chart** and are challenged to do fifteen minutes of weight-bearing activity. Another activity families can do together is the “**Digging for Calcium**” Scavenger Hunt to learn what the best dietary sources of calcium are.

**Community Activity**
This month’s community activity encourages members to interview their friends and classmates in order to learn about their broken bone history. Members can then visit the school or local library or use the internet to find out more about those bones!

**Ties to 4-H Projects**
In **Dairy Cattle** projects, members can learn about calcium-rich dairy products and dairy animals. Those enrolled in **Dairy Goats** will explore another source of dairy products – goats’ milk! **Dairy Foods** projects will teach members to plan, prepare, and serve food dishes that include high-calcium foods such as cheese, milk, ice cream, and yogurt. Members will also investigate the role of dairy in a nutritious diet. In **Outdoor Meals**, cooking nutritious meals outdoors is explored, as well as participating in hiking and walking, two great weight-bearing activities!

All **Get Up & Move!** materials can be found on the State 4-H website at [http://www.4-h.uiuc.edu/opps/move](http://www.4-h.uiuc.edu/opps/move).