

STRONG BONES

FOR THE YOUNG ATHLETE



SCOTTISH RITE
FOR CHILDREN
SPORTS MEDICINE

WHAT BUILDS STRONG BONES?

Calcium and vitamin D are two essential nutrients that work together and are critical for strong bones.

- **Calcium** plays an essential role in bone development.
- **Vitamin D** is a key nutrient that allows the body to use the calcium.

Eating the right amount of calcium and vitamin D on a daily basis is essential. This is especially important during the teen years because bones are growing at a rapid rate.

DAILY RECOMMENDATIONS FOR BONE DEVELOPMENT

Age in Years	Calcium	Vitamin D
4 – 8	1,000 mg / day	600 IU / day
9 – 13	1,300 mg / day	
14 – 18	1,300 mg / day	



CALCIUM

What are food sources of calcium?

Dairy Sources

- Milk
- Yogurt
- Greek yogurt
- Cheese
- Cottage cheese

Non-Dairy Sources

- Canned salmon
- Calcium-fortified tofu or beverages (orange juice, almond milk)
- Broccoli and leafy greens (kale, bok choy, collard greens)
- Chia and sesame seeds
- Almonds
- White beans
- Figs

Ideas for eating and drinking more calcium:

- Make oatmeal with milk or a calcium-fortified milk substitute
- Make a fruit smoothie with milk or yogurt
- Add cheese to eggs and sandwiches
- Drink a glass of milk or chocolate milk with meals or as an after-practice snack
- Pack string cheese for snacks
- Include a yogurt parfait for breakfast or as an after-dinner snack
- Top a baked potato with steamed broccoli, shredded cheese and/or plain yogurt
- Add cooked calcium-rich greens (bok choy, kale, or collard greens) to meals
- Snack on cooked soybeans or dried figs or even toss them over salads
- Make a breakfast shake with a calcium-fortified beverage and include fruit and greens
- Add chia seeds to oatmeal, yogurt, smoothies and salads

SCOTTISH RITE



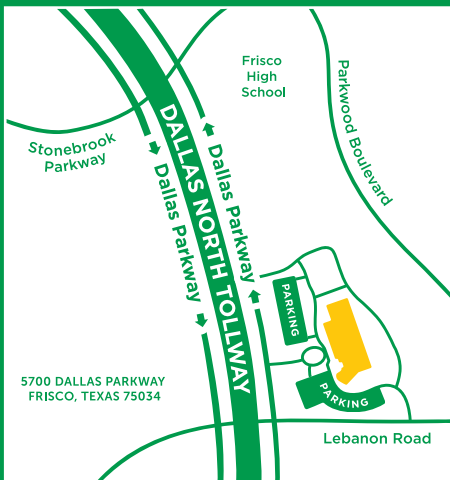
SPORTS MEDICINE

The Center for Excellence in Sports Medicine at Scottish Rite for Children is a comprehensive practice specializing in the treatment of sport-related injuries and conditions in young and growing athletes. Sports Medicine physicians, pediatric orthopedic surgeons, physical therapists, athletic trainers, psychologists and others work side-by-side with athletes, parents and coaches to develop the best game plan for recovery.



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VITAMIN D

What are food sources of vitamin D?

- Egg yolks
 - Salmon
 - Tuna
 - Shrimp
- Fortified foods such as:**
- Milk Substitutes
 - Orange Juice
 - Yogurt
 - Ready to eat Cereal

Ideas for eating more vitamin D:

- Include whole eggs at breakfast, mix in salads or eat hardboiled as a snack
- Drink vitamin D fortified milk or milk substitute
- Include vitamin D fortified orange juice with breakfast or in a smoothie
- Include salmon or grilled tuna with sides, flaked over a hearty salad or made into a sandwich



WHO IS AT RISK OF WEAK BONES?

Adolescence is an important time that lays the foundation for building strong bones.

Those at an increased risk of weak bones and bone injuries include:

- Athletes that are not meeting their daily calorie and nutrient needs for bone development, due to:
 - higher calorie needs related to frequency and duration of training and competition
 - food allergy, intolerance or dislike of dairy products
 - picky eating habits that eliminate green vegetables, seeds and other calcium rich foods listed above
- Female athletes who participate in endurance or high-intensity sports with irregular menstrual cycles
- Athletes in indoor sports with limited exposure to the sun

Those athletes experiencing bone stress injuries may need even more calcium and vitamin D. Speak with your doctor and registered sports dietitian if you have concerns.