

# Optimal Bone Health in Athletes

## Athlete Scenario

*I am an 18-year-old, female, long-distance runner. I read that female runners may have weak and fragile bones compared to other athletes. How can I keep my bones strong and healthy and help prevent injury?*

## Goals for Achieving Optimal Bone Health:

- Obtain adequate calcium and vitamin D to promote optimal bone density and prevent osteoporosis, a condition of weak and fragile bones. Consume calcium-rich foods such as milk, yogurt, cheese, broccoli, and leafy greens.
- Vitamin D is necessary for calcium absorption. Consume vitamin D-rich foods like eggs, fish (e.g. salmon, trout and sardines), mushrooms, and fortified foods (e.g. milk, margarine, orange juice and bread).
- Include dairy-free calcium and vitamin D-fortified beverage options (e.g. soy, almond, coconut and rice milk) in your diet.

## Strategies for Achieving Optimal Bone Health:

- **Snack Ideas for Bone Health**
  - Fruit smoothie made with yogurt and calcium/vitamin D-fortified orange juice
  - Greek yogurt and almonds
  - Hard boiled eggs and string cheese
- **Meal Ideas for Bone Health**
  - Stir-fry with mushrooms, broccoli and sesame seeds
  - Spinach and egg strata made with margarine and Parmesan cheese
  - Salmon salad sandwich and a glass of milk
- **Ideas to Maximize Calcium Absorption**
  - Spread consumption of calcium-rich food throughout the day
  - Consume vitamin D and calcium-rich foods together
  - Besides getting vitamin D in foods, the body also produces it when exposed to sunlight. Only 5 – 30 minutes per day between 10 a.m. and 3 p.m. about twice weekly (before applying sunscreen) is necessary to get adequate amounts. High exposure increases the risk of skin cancer.

Written by SCAN registered dietitians (RDs) to provide nutrition guidance. The key to optimal meal planning is individualization. Contact a SCAN RD for personalized nutrition plans. Access "Find a SCAN RD" at [www.scandpg.org](http://www.scandpg.org) or by phone at 800.249.2875.



## Tips to Take With You

1. Include calcium-rich foods, such as low fat chocolate milk, in your post-exercise meal to maximize recovery and bone health.
2. Include vitamin D-rich foods in your diet and spend short amounts of time out in the sun.
3. Determine if you are meeting your calcium and vitamin D needs by meeting with a sport's RD and/or utilizing the ChooseMyPlate SuperTracker at [www.choosemyplate.gov/](http://www.choosemyplate.gov/) to track your intake and receive feedback

## Contact SCAN

[www.scandpg.org](http://www.scandpg.org)  
800.249.2875