

Nutrition for Stress Fracture Recovery

Optimize bone healing with proper energy, calcium, and vitamin D intake.

ACCESS

Free resource

AUDIENCE

athlete / coach / parent

READ TIME

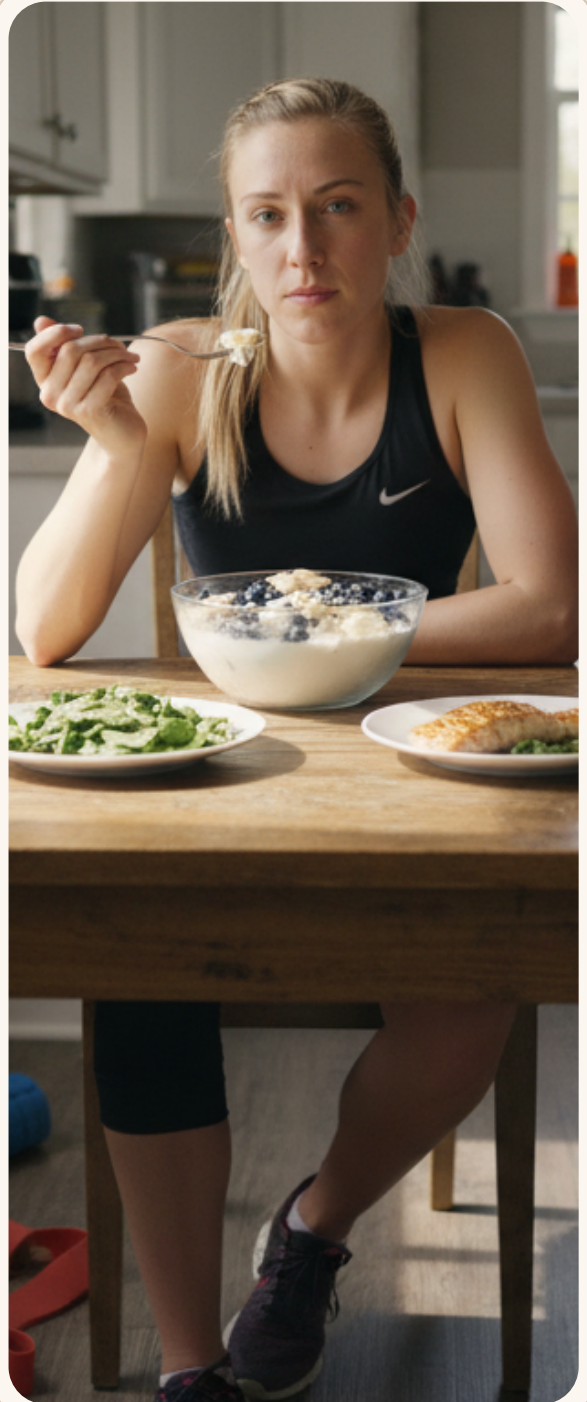
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AUDIENCE

Athlete + Coach + Parent

WHY THIS MATTERS

Optimize bone healing with proper energy, calcium, and vitamin D intake.

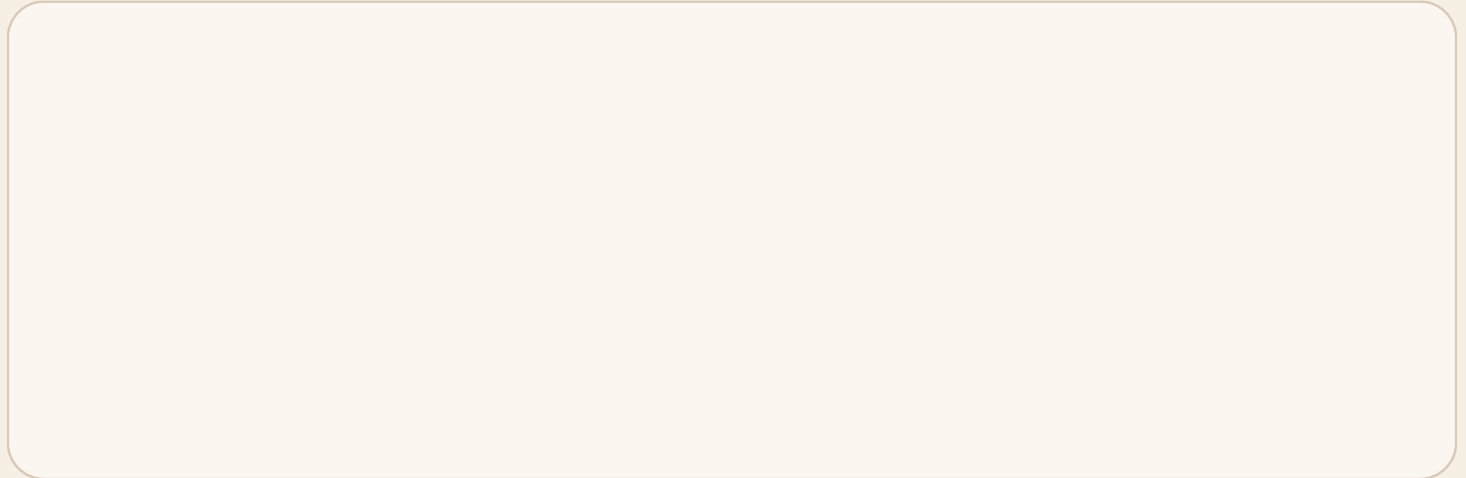


Nutrition for Stress Fracture Recovery

QUICK START

Start here

Optimize bone healing with proper energy, calcium, and vitamin D intake.



FIRST PRINCIPLE

Bone does not heal well in a calorie deficit

- If intake stays low, remodeling slows.
- Athletes often underestimate how much healing still costs.



BUILD THE PLATE

Calcium, vitamin D, protein, and carbs all matter

- Bone repair needs more than one magic nutrient.
- Use dairy or fortified alternatives plus regular protein foods.



FIND THE CAUSE

Ask why the fracture happened in the first place

- Low energy availability is common in adolescent runners.
- Irregular periods, heavy fatigue, or weight loss change the plan.

Energy

Keep meals and snacks regular.

Keep meals and snacks regular. Most injured athletes do better with three real meals plus two or three planned snacks than with trying to "be good" all day and then eating chaotically at night. The bone is healing around the clock, so the fuel has to show up around the clock too.

First rule: do not turn injury into a diet phase

The most common mistake is slashing calories because the athlete is not running full volume.

Tissue repair costs energy.

Immobilization and healing raise protein needs, not lower them.

Restriction during recovery increases the chance that healing drags and bone health stays...

When to think beyond the bone

A stress fracture should trigger a better question than "how fast can I run again?"

Was the athlete under-fueled before the injury?

Were periods irregular or missing?

Was there recent weight loss or food restriction?

Has there been more than one bone-stress issue?

Parent and coach checklist

Keep breakfast, lunch, dinner, and snacks on a schedule.

Put calcium-rich foods in the plan multiple times per day.

Make protein obvious at every meal.

Do not let the athlete self-prescribe a restrictive plan during downtime.

Escalate early if bone stress is recurring, menstrual function is off, or food fear is part of the...

Go deeper next

Screen the bigger under-fueling pattern: RED-S Warning Signs and Prevention

BUILD A SAFER REFERRAL PATH

When to Seek Professional Help

If the athlete also looks iron depleted: Iron Deficiency in Female Runners

Protein

Spread protein-containing foods across the day rather than loading it all at dinner.

Spread protein-containing foods across the day rather than loading it all at dinner. A stress fracture is not the time for one tiny breakfast, one decent dinner, and no recovery snack in between. Think a palm of protein at each meal — eggs, Greek yogurt, milk, chicken, fish, beans, tofu — plus a protein-containing...

QUICK REFERENCE

Key targets to keep in view

Use these as planning anchors when you turn the manual into weekly actions.

PROTEIN

Spread daily

Treat this as a decision anchor, not a trivia stat.

CALCIUM FOODS

Daily

Treat this as a decision anchor, not a trivia stat.

RED FLAG

Low energy

Treat this as a decision anchor, not a trivia stat.

COACH TAKEAWAYS

Use this with athletes

These are the cues worth repeating before the week gets busy.

- ☐ Protect energy: Do not let appetite decide recovery.
- ☐ Feed the bone: Calcium-rich foods, protein, produce, and carbs.
- ☐ Fix the pattern: Treat the fracture cause, not only the fracture site.

WHAT TO DO NEXT

Use it this week

Keep breakfast, lunch, dinner, and snacks on a schedule.

BOTTOM LINE

Bone healing speeds up when the athlete stops trying to recover on too little food.

RELATED TOOL

Recovery calculator

Scale recovery to the rehab phase.

Source topics: Mountjoy M, Ackerman KE, Bailey DM, et al. IOC consensus statement on Relative Energy Deficiency in Sport (REDs): 2023 update. Br J Sports Med. 2023;57(17):1073-1097. • Thomas DT, Erdman KA, Burke LM. Position of the Academy of Nutrition and Dietetics, Dietitians of Canada, and the American College of Sports Medicine: Nutrition and athletic performance. J Acad Nutr Diet. 2016;116(3):501-528. • Clénin GE, Cordes M, Huber A, et al. Iron deficiency in sports: definition, influence on performance and therapy. Swiss Med Wkly. 2015;145:w14196.