**STRONG BONES SUPPORT STRONG PERFORMANCE**

- Stress fractures make up ~15% of athletic injuries. Strengthen bones with a calcium, vitamin D, and protein-rich diet.

**Snack Ideas**
- Cheese cubes with grapes and almonds
- Greek yogurt with trail mix topping

**Meal Ideas**
- Chicken/shrimp stir-fry with mushrooms, broccoli, and sesame seeds
- Spinach and egg omelet with cheese

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<table>
<thead>
<tr>
<th>FOOD SOURCES</th>
<th>CALCIUM</th>
<th>VITAMIN D</th>
<th>HIGH-QUALITY PROTEIN</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 cup cooked broccoli</td>
<td>62 mg</td>
<td></td>
<td>Single-serve Greek yogurt</td>
</tr>
<tr>
<td>1 can of white tuna</td>
<td>140 IU</td>
<td></td>
<td>~13 g</td>
</tr>
<tr>
<td>1 serving of dairy foods (milk, cheese, yogurt)</td>
<td>~300 mg</td>
<td>1 cup of milk</td>
<td>120 IU</td>
</tr>
<tr>
<td>3 oz. chicken breast</td>
<td>21 g</td>
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</tbody>
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<table>
<thead>
<tr>
<th>SPORTS DIETITIANS RECOMMEND</th>
<th>1,000 TO 1,300 mg/day</th>
<th>1,500 TO 2,000* IU/day (RDA= 600 IU/day)</th>
<th>20 TO 30 g/meal**</th>
</tr>
</thead>
</table>

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*For advice on customizing a nutrition plan, consult a sports dietitian.

**To support building/rebuilding of muscle**
HYDRATE
EARLY AND OFTEN

Dehydration can negatively impact performance and cause early fatigue. Follow these tips to stay hydrated and replenish fluids and electrolytes lost from sweat:

- Focus on fluid intake all day, every day, not just around workouts.
- Always carry a water bottle.
- Weigh yourself before and after exercise to know how much fluid to replace.
- Track hydration by checking urine color - the lighter the better hydrated.

BEFORE EXERCISE

- Begin exercise well-hydrated
- Drink 16-20 oz. of water or sports beverage at least four hours before exercise
- Drink 8-12 oz. of water 10-15 min. before exercise

DURING EXERCISE

- Drink water or sports beverage every 15-20 min. during exercise
  - 3-8 oz. of water (2-3 large gulps) for exercise <60 min.
  - 3-8 oz. of sports beverage for exercise >60 min.

AFTER EXERCISE

- Rehydrate
- 16-24 oz. of fluid for every pound lost within 2 hours of exercise
  - Chocolate milk is a great option to help rehydrate and refuel after a workout
BUILD A PERFORMANCE-ENHANCING PLATE

Properly fueling can provide an edge over other athletes who don’t focus on their nutrition.

- Calorie and nutrient needs vary depending upon intensity and phase of training.
- This plate represents a hard training day. On light training days, substitute 1/4 plate of whole grains with 1/4 plate of fruits and vegetables.

WHOLE GRAINS
- Carbohydrates fuel muscles and are the quickest source of energy for athletes.

HEALTHY FATS
- Moderate amounts of healthy fats provide a concentrated energy source and essential fatty acids.
- [nuts, seeds, oil and fatty fish]

FLUIDS
- Stay hydrated by drinking fluids at mealtime and throughout the day.
- [milk, water, 100% fruit juice]

PROTEIN
- Protein foods are essential for building/repairing muscle and helping to support immune function.

FRUITS & VEGGIES
- Many fruits and vegetables provide nutrients that have been linked to reduced oxidative damage from hard training.

For advice on customizing a nutrition plan, consult a sports dietitian.
PRE-WORKOUT NUTRITION

- Eat a combination of foods high in carbs and moderate in protein.
- Focus on foods low in fat and fiber.
- Length and intensity of workouts matter.
- 6 a.m. workout? Fuel well the night before and eat something small in the morning.
- Experiment in practices to figure out what works best.

3-4 HOURS BEFORE EXERCISE

- Turkey and Swiss sandwich, apple and low-fat chocolate milk
- Peanut butter and jelly sandwich with banana slices and low-fat milk
- Low-fat Greek yogurt with berries and small salad with chicken
- Always remember to hydrate with at least 16-20 oz. of fluid

30-60 MINUTES BEFORE EXERCISE

- Sports drink
- Fruit, apple sauce, or fruit snacks
- Small granola bar, pretzels, or graham crackers
<table>
<thead>
<tr>
<th>EXERCISE TIME</th>
<th>TYPE OF EXERCISE</th>
<th>HOW TO FUEL</th>
</tr>
</thead>
</table>
| **<45 MINUTES** | • Batting practice  
• Shoot around (basketball)  
• Lifting | Focus on water for hydration |
| **45-75 MINUTES** | • Cross country workout  
• Stop-and-start sports (soccer, football, field hockey) | Small amounts of carbs throughout activity  
(i.e., 2-3 gulps of sports fluid or 1/2 serving of applesauce every 15-20 min.) |
| **1-2.5 HOURS** | • Long distance cross country race  
• Stop-and-start sports (soccer, football, field hockey)  
• Rowing workouts | 30-60 g carbs/hour  
(i.e., 1-2 handfuls of raisins or 1-2 med banana) |

- Stay well-fueled during workouts with the right mix and timing of carbohydrates, fluids and electrolytes to replace what’s lost during exercise.
- Take small, frequent bites during exercise and always with fluids.
- Experiment with new foods and drinks during training to find what works best for competition.

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Dairy foods like milk, cheese and yogurt are nutrient-rich and a source of high-quality protein that can be beneficial to athletes. Use these tips to find which dairy options work best to help keep dairy in the diet.

**TRY IT**
Opt for lactose-free cow’s milk products.

**SIP IT**
Start small and introduce dairy slowly.

**STIR IT**
Mix milk with other foods to help slow lactose digestion.

**SLICE IT**
Choose natural cheeses (e.g. Cheddar, Swiss).

**SHRED IT**
Add natural cheeses to foods (e.g. Parmesan, mozzarella).

**SPOON IT**
Yogurt’s live and active cultures help digest lactose.
REFUEL muscles with carbohydrates (body weight/2 = grams of carbs).
REPAIR and rebuild muscles with 20-30 grams of high-quality protein.
REHYDRATE with fluids and electrolytes lost during working out.

FUELING STATION: 15-60 MIN. AFTER TRAINING
- Chocolate Milk and Almond Refuel: 20g Protein + 31g Carbs
  1 1/2 cups low-fat chocolate milk
  1/4 cup almonds
- Blueberry Yogurt Parfait: 22g Protein + 41g Carbs
  6 oz. Greek yogurt
  topped with:
  1/4 cup granola
  1 cup blueberries
- Snack Extravaganza: 20g Protein + 70g Carbs
  1 string cheese
  1 cup apple slices
  1/4 cup pretzels
  2 tbsp. peanut butter

TRAINING TABLE MEAL: 3-4 HOURS AFTER TRAINING
- Egg Wrap with Yogurt Parfait: 28g Protein + 40g Carbs
  2 scrambled eggs with:
  1/4 cup Cheddar cheese
  1 whole wheat tortilla
  1/2 cup plain yogurt with 1 cup raspberries
- Fuel Up Stir Fry: 33g Protein + 59g Carbs
  3 oz. chicken breast
  1/8 cup teriyaki sauce
  1 cup brown rice
  1 1/2 cups stir fry vegetables
- Chicken Fiesta Bowl: 40g Protein + 68g Carbs
  1 cup brown rice topped with:
  1/2 cup black beans
  3 oz. chicken breast
  1/8 cup salsa
  1/2 cup lettuce
  1/8 cup shredded Mexican blend cheese

- For 2-a-day workouts, this recovery window is even more important.
- If you have a low appetite after exercising, a liquid food option may be the best place to start.
- Within two hours of working out drink 16-24 oz. of fluid for every pound lost during exercise.
POWER PERFORMANCE WITH PROTEIN

Athletes require more protein than the average person. High-quality protein not only provides energy, it is an essential part of a training diet supporting:

- Strong muscles, bones, ligaments, and tendons
- Muscle recovery
- Moving oxygen to muscles
- Metabolism of other nutrients
- Healthy immune function

Suggested Range: 0.5-0.8 grams of protein/pound body weight/day.

- Aim for 20-30 grams of high-quality protein at each meal and after workouts.
  - Include foods like milk, yogurt, eggs, cheese and lean meats.
- Remember that not all proteins are created equal.
  - Choose sources higher in leucine—which helps to build and repair muscle. Some experts recommend aiming for ~2.5 grams/meal.

1 can white tuna = 41g protein 3.3g leucine
3 oz. chicken breast = 25g protein 1.8g leucine
1 scoop (28 g) whey protein isolate = 24g protein 2.5g leucine
3 large eggs = 19g protein 1.5g leucine
1 single-serving Greek yogurt = 15g protein 1.5g leucine
8 oz. chocolate milk = 8g protein 0.8g leucine

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