

# NUTRITION:

## Athletes and Protein

### “The Building Blocks”

Adequate protein spaced throughout the day is essential for optimal muscle growth in youth athletes, but extra protein does not lead to extra muscle. Muscle is 70% water and only 20% protein.

#### WHAT IS PROTEIN?

Protein is necessary to build and repair muscle and to boost the immune system. Protein will be used as energy if the body does not have enough carbohydrates or fats to use for energy. The need for protein in an athlete is increased, but many athletes over consume protein and under consume calories.

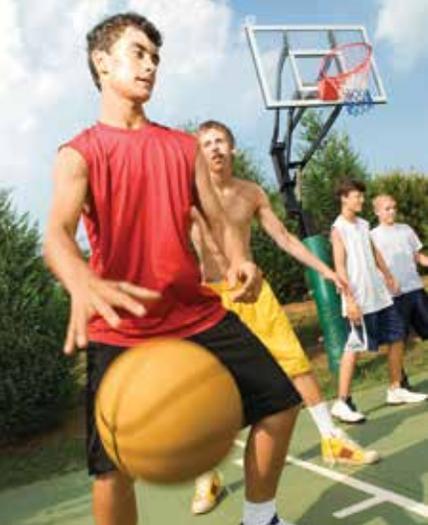
#### WHERE IS PROTEIN FOUND?

Protein is most commonly found in meat, beans, dairy, fish, nuts, soy, and cheese.

PROTEIN PER SERVING:		
TUNA	6 OZ	40 grams
CHICKEN BREAST	4 OZ (roasted)	35 grams
HAMBURGER	4 OZ (broiled)	30 grams
BAKED BEANS	1 cup	14 grams
YOGURT	1 cup	11 grams
TOFU	3.5 oz	11 grams
MILK, 1%	1 cup	8 grams
HUMMUS	1/2 cup	6 grams
EGG	1 large	6 grams
PEANUT BUTTER	1 tablespoon	4.5 grams
ALMONDS	12 nuts	3 grams

#### MAKE HEALTHY PROTEIN CHOICES

- Choose lean meats (example: turkey, fish, sirloin)
- Use egg whites instead of whole eggs
- Choose low fat dairy products such as skim milk, 1% milk, and low fat yogurt
- Avoid fried meats



### HOW MUCH PROTEIN DO I NEED?

The amount of protein needed for exercise depends on many different factors including type of exercise, duration and the individual.

Timing of protein intake is as critical as the amount; studies have shown that proper recovery will enhance an athlete's performance goals and immune system. Athletes should intake a moderate amount of protein spaced evenly at every meal and throughout the day at snacks and prior to bedtime, not just before and after exercise.

### CALCULATING PROTEIN NEEDS (FOR ATHLETES):

0.5-0.8 grams of protein per pound of body weight. The lower limit is needed for endurance athletes and the higher the limit is needed for strength/power athletes. Children and teens may need additional protein during active stages of growth.

*\*The higher limit is needed for strength athletes.*

<b>BEFORE EXERCISE</b>	A moderate amount of protein can be eaten with carbohydrates 2 to 4 hours before workout. The amount of protein will depend on what the athlete can tolerate. If the athlete eats adequate amounts of carbohydrates, protein during exercise may not be required.
<b>AFTER EXERCISE</b>	Protein should be included in the recovery after a workout, but only a moderate amount. A 4:1 – 2:1 carbohydrate/protein ratio should be consumed within 30 minutes after exercise. Timing is critical; studies have shown that proper recovery will enhance an athlete's immune system.

### ABOUT PROTEIN POWDER AND BARS

Eating protein from a natural source is always recommended. If food safety or convenience becomes an issue, bars and supplements are a great alternative. Supplements are a great way to increase recovery, but it is important to make appropriate choices.

#### Protein bar guide

- Avoid bars that contain protein only.
- Choose bars that have 2:1 - 4:1 carbohydrate/protein ratio.

#### Meal replacement drinks

- Choose drinks that have a 2:1 - 4:1 carbohydrate/protein ratio (e.g., low fat chocolate milk, instant breakfast, or commercial recovery products).

### THE VEGETARIAN

It is sometimes difficult for vegetarians to get adequate amounts of protein. If you are concerned you are not getting enough protein, meet with a sports dietitian to get proper guidance.

For more information, call 832-22-SPORT (77678) or visit [texaschildrens.org/sportsmed](http://texaschildrens.org/sportsmed)

