

# **PROTEIN for SOCCER PLAYERS**

**Overview:**

The benefits of protein have been known to athletes since ancient Greece, as it is derived from the Greek word meaning "of prime importance". Today, we have science to support the benefits and the need for more protein for active individuals over sedentary individuals. Let's take a look at the many jobs of protein, as well as the different requirements, sources, types and how we can use protein to enhance health and performance.

**Protein plays a key role in many areas of our health:**

Hormones → Enzymes → Antibodies (immune system) → Transport nutrients (iron) → Fluid & Electrolyte balance → Acid-Base balance (pH buffer) → Body structures (cells, tissues). Protein is vital to many functions in the human body, however more is not better. We do not store protein like we do carbohydrates & fat, so over & above our protein needs it will either be burned for energy (i.e. low calorie intake) or converted to fat (i.e. high calorie intake). Check out the chart below to determine your total daily protein needs, training volume & intensity.

| <b>Endurance Athletes &amp; Intermittent Team Sports</b>  |                               |
|---|-------------------------------|
| <b>Training</b>   | <b>Protein Target (daily)</b> |
| General Fitness   | 0.8 -1.0 gm/kg*               |
| Moderate intensity, High volume, lean tissue maintenance (triathletes, distance runners)  | 1.0 – 1.6 gm/kg               |
| Teens, new athletes, muscle growth/building, calorie restriction/weight loss  | 1.4 – 2.0 gm/kg               |
| Intermittent high intensity (sprints, soccer, basketball, hockey, cycling - hills)  | 1.4 - 1.7 gm/kg               |
| <b>Strength/Power</b>   |                               |
| <b>Training</b>   | <b>Protein Target (daily)</b> |
| Moderate intensity, lean tissue maintenance   | 1.0 – 1.6 gm/kg               |
| High intensity, High volume, Weight Loss/cutting  | 1.6 - 2.0 gm/kg               |
| Teens, new athletes, muscle growth/building, calorie restriction/weight loss  | 1.6 – 2.0 gm/kg               |
| <p><i>Adapted and modified from International Society of Sports Nutrition position stand: protein and exercise Journal of the International Society of Sports Nutrition 2007, 4:8 Campbell B, et al.</i></p> <p>*Take body weight (lbs) divide by 2.2 = kg body weight. Example: 175 lb ÷ 2.2 = 79 kg, 79 kg x 1.6-2.0 gm protein = 126-158 gm/day protein.</p> |                               |

The best whole food sources of protein are low in saturated fat & have a high biological value (BV), thus allowing the body to efficiently use all the essential amino acids needed & support heart health. Excellent animal sources include skinless chicken, lean beef, fish, eggs & low fat dairy (casein & whey). Whey protein has the highest BV of all protein sources. Lower in BV, yet excellent vegetarian sources include beans, nuts, seeds, quinoa & soy protein.

| Protein Source             | Protein amount (gm) |
|----------------------------|---------------------|
| FRS Healthy Protein (whey) | 25 gm               |
| 1 cup 1% Milk              | 8 gm                |
| 6 oz Greek Yogurt          | 15 gm               |
| 3.5 oz Lean meat (cooked)  | 25 gm               |
| 1 Egg                      | 6 gm                |
| 1 c Quinoa (cooked)        | 8 gm                |
| 1 oz Almonds               | 6 gm                |

Whey is a very powerful muscle builder, rich in branched chain amino acids (leucine, isoleucine, valine), immune enhancing ingredients, like immunoglobins & lactoferrin & well proven to stimulate protein building/repair in the muscle during recovery. In addition, whey is a fast absorbing protein compared to soy (medium absorbing) & casein (slow absorbing). This makes casein a great protein source before bed/night time. Ideally, the body prefers the total daily protein amount (110 gm/day) to be divided into smaller frequent doses (10-40 gm) throughout the day. This allows the body to get the “most bang for its protein buck”. Another benefit of this strategy is allowing the protein to team up with carbohydrates resulting in a slower rise in blood sugars at rest (ideal metabolism) and higher rise in blood sugars after exercise (ideal recovery). We will discuss protein timing for health & performance in our next article, stay tuned.