

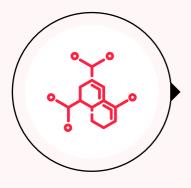


Yes,

Most people think protein is all about muscles... or tissue synthesis.

But, protein supplementation aids in numerous other physiological functions, as well. These functions are also part of the recovery process for athletes and high level fitness enthusiasts.

#### Here are a few:



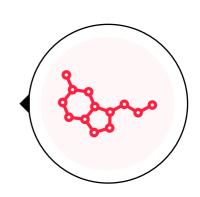
## **ENZYMATIC FUNCTION**

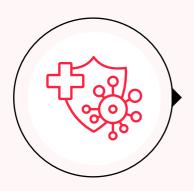
Proteins act as enzymes, which are biological catalysts that speed up chemical reactions in the body. For example, amylase, lipase, and protease break down carbs, fats, and proteins during digestion.

# **HORMONE PRODUCTION**

Many hormones are protein-based (peptide hormones). For example:

- Insulin (regulates blood sugar)
- Glucagon
- Growth hormone
- Leptin and ghrelin (control hunger and satiety)



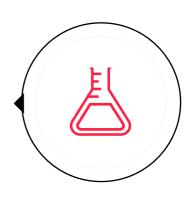


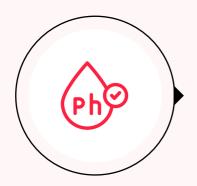
## **IMMUNE FUNCTION**

Proteins are essential in forming antibodies (immunoglobulins). They help your body recognize and neutralize pathogens like bacteria and viruses.

## **FLUID BALANCE**

Albumin and globulin, two plasma proteins, help maintain oncotic pressure and keep fluids in your blood vessels. It assists in the prevention of edema (swelling) and helps balance hydration.



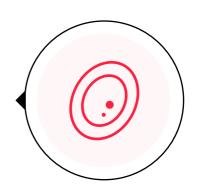


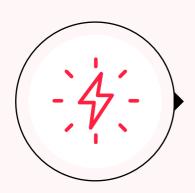
#### PH BALANCE

Proteins act as buffers to help regulate the body's pH levels. Hemoglobin, for example, helps manage pH in blood by binding hydrogen ions.

## TRANSPORTATION AND STORAGE

Proteins like hemoglobin carry oxygen. Others like lipoproteins transport fats, and transferrin carries iron. Ferritin stores iron in cells.



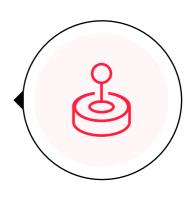


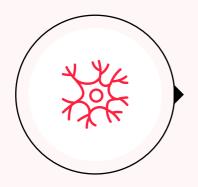
#### **ENERGY SOURCE** (when needed)

Although not the body's preferred fuel, protein can be converted into glucose through gluconeogenesis, especially during fasting, intense exercise or carbohydrate restriction.

## **CELL SIGNALING AND STRUCTURE**

Receptors on cell membranes are made of protein and are crucial for cell communication and signaling. Structural proteins like actin, myosin, collagen and keratin help form skin, bones, connective tissues, and hair.





### **NEUROTRANSMITTER SYNTHESIS**

Many neurotransmitters are made from amino acids. For example:

Tryptophan → serotonin, Tyrosine → dopamine/norepinephrine.



Athletes and high level fitness enthusiasts understand this thoroughly.

It's exactly why 100% of all athletes supplement their optimal nutrition plans with protein powders as well as other super premium supplements to aid in their recovery process.

It's also why **QUALITY PROTEIN POWDERS** are so important to this population.

And, as mentioned in the past it's WHY we include both whey concentrate and isolate in our protein powders.

When it comes to protein, there's so much more metabolic activity going on than just muscle recovery.



