

# WHAT IS PROTEIN

Protein is **incredibly important**, and without it our body composition and health greatly suffer as a result.

**Proteins are an essential nutrient** and can be broken down into **20 building blocks known as amino acids**. Out of these 20 amino acids, **9 are considered to be essential as the body** cannot synthesize its own, meaning we must obtain these from animal and plant sources. The other **11 aminos can be synthesized by the body**, making them non-essential.



# PROTEIN QUALITY

When considering a protein source, one of the most popular methods is to classify the food by its **biological value (BV)**.

The **biological value of a protein is based on its quantity of the essential amino acids**. So a food with a high BV (also known as a complete protein) **contains all 9 essential aminos**. This is commonly seen in animal and dairy products.

## COMPLETE PROTEINS



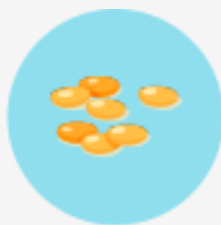
*Eggs*



*Poultry*



*Milk*



*Soybeans*



*Beef*



*Quinoa*

## INCOMPLETE PROTEINS



*Cereal*



*Legumes*

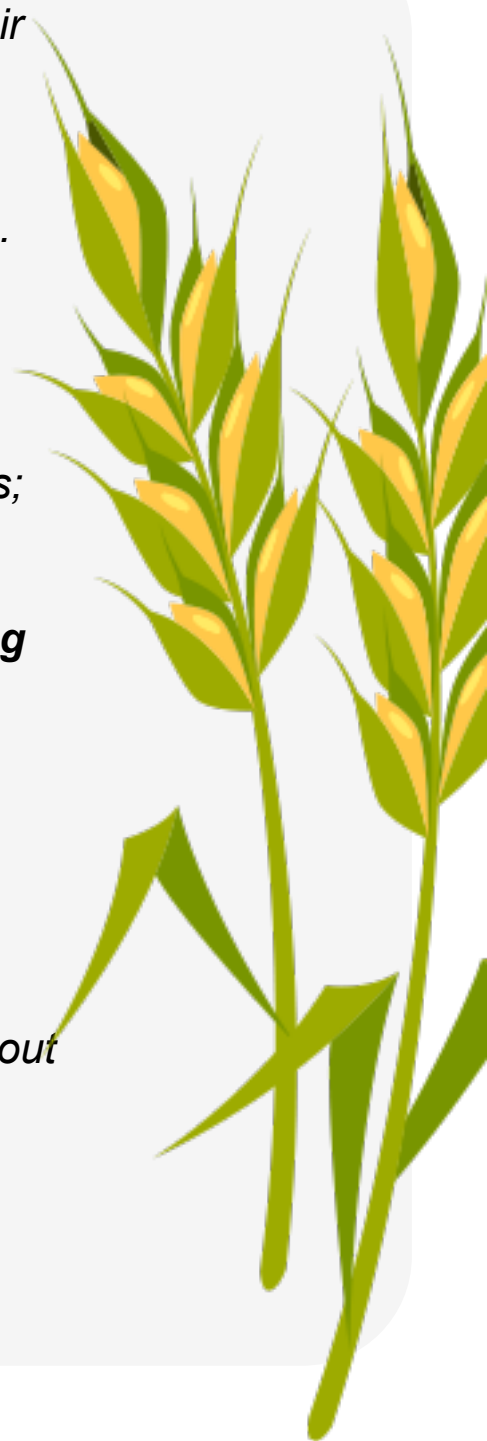


*Grains*

# THE ROLE OF PROTEIN

When we do consume sufficient amounts of high quality and complete proteins, it has a whole host of benefits.

- *Proteins provide building materials – **amino acids** – for growth and repair of body tissues.*
- *Proteins form **vital parts of most body structures**, such as skin, nails, hair, membranes, muscles, teeth, bones, organs, ligaments and tendons.*
- *Proteins **facilitate numerous chemical reactions** in the body; all enzymes are proteins.*
- *Some proteins **act as chemical messengers**, regulating body processes; not all hormones are proteins.*
- *Proteins assist the body in maintaining its resistance to disease by **acting against foreign disease-causing substances**.*
- *Proteins **help regulate the quantity of fluids** in body compartments.*
- *Proteins **act as buffers**, to maintain the normal acid and base concentrations in body fluids.*
- *Proteins **move the required nutrients and other substances** into and out of cells and around the body.*
- *Protein can be used to **provide calories (4 calories per gram)** to help meet the body's energy needs.*



# HOW MUCH PROTEIN DO WE NEED

The debate still continues on how much protein we need daily, but there appears to be a general agreement that active individuals need a higher intake than sedentary people.



## THE AVERAGE INTAKE

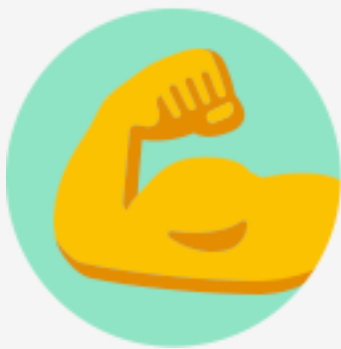
*For a healthy person of a healthy weight who is mainly sedentary and is not seeking changes in body composition – **then an intake of 0.4 – 0.6 grams of protein per pound bodyweight is sufficient.***



## WHEN LOSING BODY FAT

*Having a high protein intake during a calorie deficit is also important, as it is very anabolic, meaning we are **more likely to preserve lean body tissue in the process.***

# HOW MUCH PROTEIN DO WE NEED



## WHEN BUILDING MUSCLE

*The studies that look at **muscle mass and protein intake** tend to vary from **0.8-1.2+ gram per pound bodyweight**, so it's safe to say a balanced approach would be most beneficial, so around **1g per pound bodyweight** is highly effective.*

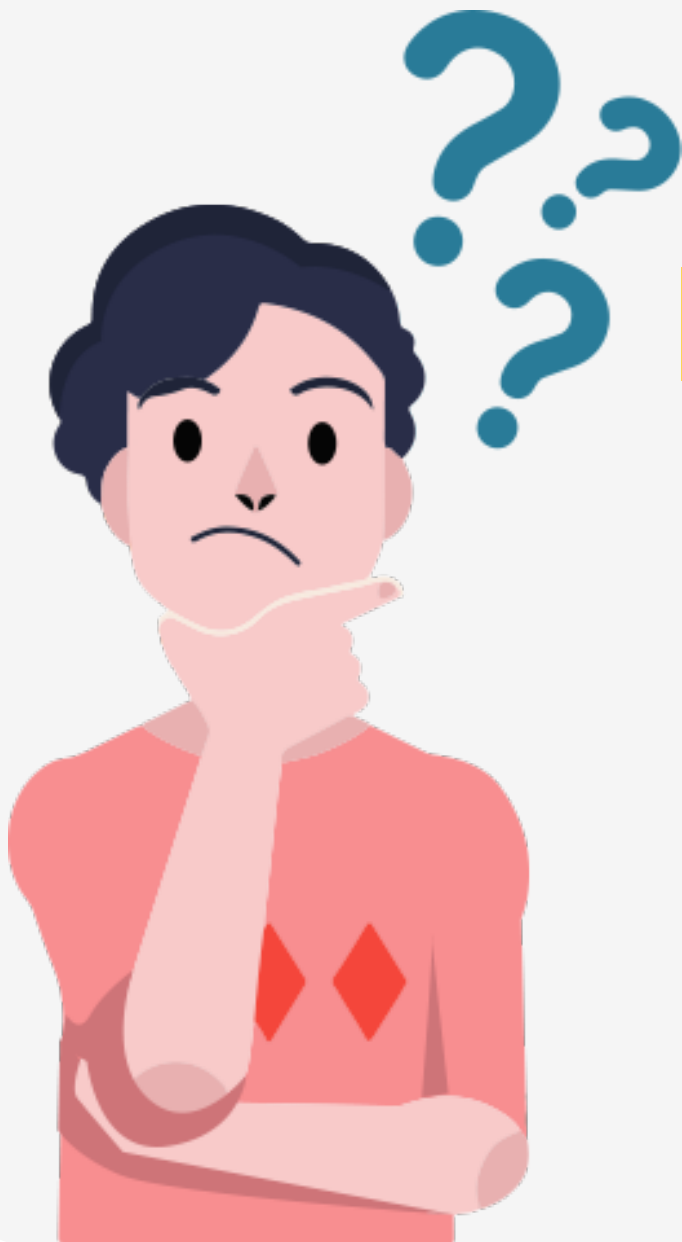


## ELDERLY

*The research shows a **daily intake of 0.45-0.6 gram per pound bodyweight**. Finally, those recovering from injuries may also benefit from a higher protein diet.*

# DANGERS OF A HIGH PROTEIN DIET

Many people will try and tell us that a high protein diet is bad for us, and that it is linked to cardiovascular disease, dehydration, calcium loss and damaged liver and kidney function. The question that must be asked is – show us the accurate research.



## HERE'S WHAT YOU NEED TO KNOW

*There is **no link** to protein causing increased **risk of coronary heart disease**.*

*There is **no link** to protein causing **liver or kidney damage** in healthy subjects.*

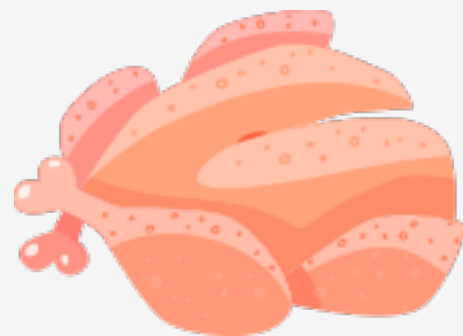
*Recent studies show a **positive relationship** between protein intake and bone health.*

# PROTEIN SOURCES

## ANIMAL PROTEIN SOURCES

1g edible protein per 100g in weight

- *Bluefin Tuna* - **29.92g**
- *Chicken Dark Meat* - **28.99g**
- *Turkey White Meat* - **28.48g**
- *Cooked Salmon* - 25.56g
- *Lamb Cooked* - **24.52g**
- *Duck* - **23.48g**
- *Pork Chop* - **21.91g**
- *Chicken White Meat* - **16.79g**



# PROTEIN SOURCES

## PLANT & DAIRY PROTEIN SOURCES

1g edible protein per 100g in weight



- *Pumpkin Seeds - 32.47g*
- *Peanut Butter - 25.09g*
- *Cheddar Cheese - 24.90g*
- *Peanuts - 23.68g*
- *Almonds - 22.09g*
- *Tofu - 17.19g*
- *Fried Eggs - 15.03g*
- *Cottage Cheese - 12.93g*
- *Lentils - 9.50g*
- *Lima Beans - 7.80g*