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THE **ULTIMATE GUIDE** TO PROTEIN

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WELCOME

Welcome to the guide! This document is your go-to resource for everything you need to know about these fundamental components of life.

Proteins are the workhorses of our bodies, playing vital roles in virtually every biological process. From maintaining the structure of our cells to facilitating chemical reactions and powering our muscles, proteins are truly the building blocks of life. If you have done a consultation with me, you have heard me talk about the importance of protein!

I created this guide to help my weight loss patients achieve their goals, but anyone can benefit from the info presented in this guide.

Together, we'll unravel the mysteries of protein synthesis, the importance of digestion and absorption, and how protein interacts with other nutrients to optimize your overall well-being.

Let's dive in and discover the wonders of protein together!

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UNDERSTANDING PROTEIN AND IT'S IMPORTANCE

Proteins are the fundamental building blocks of life. They play an essential role in the structure, function, and regulation of our bodies. From the strength of our muscles to the intricate processes happening within our cells, proteins are involved in almost every aspect of our existence. In this chapter, we will delve into the fascinating world of proteins, exploring their composition, functions, and significance in our daily lives.

Proteins are large, complex molecules composed of smaller units called amino acids. These amino acids are joined together in a specific sequence, forming a long chain known as a polypeptide.

The sequence of amino acids determines the unique structure and function of each protein.

Proteins are the workhorses of life, carrying out countless vital functions in our bodies. From providing structure and support to enabling chemical reactions and facilitating communication between cells, proteins are indispensable.

Understanding the importance and role of proteins sets the foundation for exploring their impact on human health, nutrition, and fitness, which we will delve into in the next few chapters.



WHAT DOES PROTEIN DO INSIDE THE BODY?

Proteins are not merely passive components of our bodies; they are dynamic and highly versatile molecules that perform a wide range of essential functions. Here are just some of the ways protein affects our bodies on a deeper level:

Enzymes: Proteins function as enzymes, catalyzing chemical reactions necessary for metabolism, digestion, and other vital processes. They facilitate the breakdown of complex molecules into simpler ones, aid in the synthesis of new substances, and regulate metabolic pathways.

Transport and Signaling: Proteins are involved in cellular transport, allowing molecules to move in and out of cells. Channels and transporters, specialized proteins embedded in cell membranes, regulate the passage of ions and nutrients. Signaling proteins, such as receptors, receive chemical signals and initiate specific cellular responses.

Structural Support: Proteins provide structure and support to cells, tissues, and organs. Actin and myosin, for example, are contractile proteins responsible for muscle movement. Keratin is a protein that strengthens hair and nails. Structural proteins contribute to the integrity and stability of various biological structures.

Hormones and Cell Regulation: Some proteins serve as hormones, acting as chemical messengers to regulate bodily functions. Insulin, for instance, helps regulate blood sugar levels. Additionally, proteins are involved in cell cycle regulation, DNA replication, and gene expression, ensuring proper growth, development, and maintenance of the body.

PROTEIN HEALTH BENEFITS

As we explained on the previous page, there are quite a few ways protein affects the body on a cellular level. It's good to know how something that seems so insignificant to most, can affect so much of our bodies which can generally be seen on a more physical level in the following ways:

MUSCLE DEVELOPMENT

Protein is essential for muscle development, repair, and maintenance. It supplies amino acids for muscle synthesis, aiding growth after exercise-induced tears. A protein-rich diet preserves muscle mass during weight loss and aging, preventing muscle wasting. Combined with resistance exercise, it enhances strength and functionality.

WEIGHT MANAGEMENT

Protein has a satiating effect, meaning it helps us feel full and satisfied after a meal. This can be particularly beneficial for weight management and preventing overeating. Furthermore, a higher protein intake has been associated with increased thermogenesis (calorie burning) and improved metabolic rate, further supporting weight loss efforts.

BLOOD SUGAR LEVELS

Protein can help regulate blood sugar levels, particularly when consumed in conjunction with carbohydrates. When carbohydrates are paired with protein in a meal, they are digested more slowly, leading to a more gradual and controlled release of glucose into the bloodstream. This can help prevent sharp spikes in blood sugar levels and promote better glycemic control.

BONE HEALTH

Protein is a vital component of bone structure and can contribute to maintaining bone health. Collagen, a protein abundant in our bones, provides the framework for bone strength and integrity. Additionally, research suggests that a higher protein intake is associated with increased bone mineral density and reduced risk of fractures, particularly in older adults.

IMMUNE FUNCTION

Proteins are integral to a robust immune system. Antibodies, a type of protein, help identify and neutralize foreign invaders such as bacteria and viruses, protecting us from infections. Protein also contributes to the production of immune cells and signalling molecules involved in immune responses.

SKIN, HAIR & NAIL HEALTH

Protein plays a vital role in supporting skin, hair, and nail health by providing the building blocks for collagen and keratin, which contribute to their strength and structure. Additionally, protein aids in wound healing, acts as an antioxidant defense for the skin, and ensures the growth and repair of these tissues.



MUSCLE BUILDING WITH PROTEIN

Whether you're a man or a woman looking to improve your physique or overall well-being, understanding the relationship between protein and muscle growth is essential.

When we engage in physical activity, our muscles experience microscopic damage. This damage is normal and necessary for muscle growth. However, for our muscles to repair and grow stronger, they require an adequate supply of amino acids from protein sources. This is where the importance of consuming enough protein comes into play.

To optimize protein intake for muscle building and recovery, consider the following suggestions:

Timing of Protein Intake

Distribute protein intake evenly throughout the day, including high-quality protein sources in each meal and snack. Consuming protein before and after exercise can be particularly beneficial for stimulating muscle protein synthesis and promoting recovery.

Protein Quality

Focus on consuming high-quality protein sources that provide all essential amino acids. Animal-based proteins, such as lean meats, poultry, fish, eggs, and dairy products, are excellent sources. Plant-based sources like legumes, soy products, quinoa, and hemp seeds can also contribute to meeting protein needs.

Leucine-Rich Foods

Leucine, an essential amino acid, plays a crucial role in stimulating muscle protein synthesis. Include leucine-rich foods such as Greek yogurt, cottage cheese, chicken, and fish in your diet.

Protein Supplementation

Consider protein supplements, such as whey, casein, or plant-based protein powders, to enhance protein intake and convenience. These can be particularly useful when it's challenging to meet protein needs through whole foods alone.

PROTEIN MYTHS AND MISCONCEPTIONS

Protein is a widely discussed macronutrient, yet it is also surrounded by numerous misconceptions and myths. In this chapter, we will debunk common protein myths and clarify misunderstandings related to protein intake and its impact on health. By addressing these myths, we can foster a better understanding of protein's role in the body and make informed choices about our diets.

MYTH 01

High Protein Diets Damage Kidneys

One prevalent myth suggests that high protein diets can cause kidney damage. However, this claim is not supported by scientific evidence. Healthy individuals with normal kidney function can safely consume high protein diets without adverse effects on their kidneys. It is important to note that individuals with pre-existing kidney disease should consult their healthcare provider for personalized dietary recommendations.

Excessive Protein Leads to Muscle Gain

While protein is crucial for muscle growth, the notion that consuming excessive amounts of protein leads to more muscle gain is not accurate. The body has a limit to how much protein it can effectively utilize for muscle synthesis. Consuming protein beyond what the body needs does not result in additional muscle growth.

MYTH 02

MYTH 03

Protein Supplements Are Essential

While protein supplements can be convenient for meeting protein needs, they are not essential for athletes or individuals engaged in regular exercise. A well-balanced diet that includes protein-rich whole foods can provide sufficient protein for most individuals. Supplements should be considered as a supplement to a healthy diet rather than a replacement for whole foods.

Protein Causes Weight Gain

MYTH
04

Protein alone does not inherently cause weight gain. Like any macronutrient, protein contributes calories to the diet. However, protein has a higher thermic effect of food (TEF) compared to carbohydrates and fats. This means that the body expends more energy to digest and process protein. Additionally, protein's satiating effect can help reduce overall calorie intake, making it a beneficial component of a weight management plan.



HOW MUCH PROTEIN DO YOU NEED?

Understanding protein requirements is essential for maintaining optimal health and supporting specific goals, such as muscle building or weight management. Protein needs vary depending on factors like age, sex, activity level, and goals. When it comes to calculating your protein needs, it involves considering your unique circumstances. While individual variations exist, a general guideline for estimating protein requirements is as follows:



Sedentary Individuals: For those with minimal physical activity, a daily protein intake of around 0.8 grams per kilogram of body weight (or 0.36 grams per pound) is often sufficient to meet basic needs.



Active Individuals: For moderately active individuals, aiming for a protein intake of 1.2 to 1.6 grams per kilogram of body weight (or 0.55 to 0.73 grams per pound) is typically recommended.



Athletes and Strength Trainers: Individuals engaging in intense physical activity or strength training may benefit from a protein intake of 1.6 to 2.2 grams per kilogram of body weight (or 0.73 to 1 gram per pound) to support muscle repair and growth.

For Example:

If you are someone who does strength training and weighs 70 kilograms (154 pounds), a protein intake of 112 to 154 grams per day would fall within the recommended range. It's also important to distribute protein intake evenly throughout the day, rather than consuming it all in one meal, to optimize muscle protein synthesis.

THE BEST PROTEIN SOURCES

ANIMAL-BASED

EGGS



13g

TURKEY



29g

CHICKEN



31g

PRAWNS



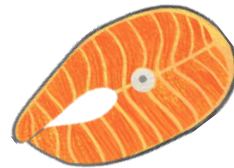
20g

TUNA



26g

SALMON



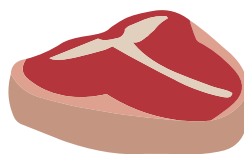
22g

PORK



19g

BEEF



26g

WHEY PROTEIN



76g

COWS MILK



3g

GREEK YOGHURT



10g

CHEESE



20g

***All amounts displayed are amount of protein per 100g of the food item weight**

PROTEIN SUPPLEMENTS 101

Protein powders can be beneficial for several reasons as they can offer a convenient and efficient way to increase protein intake, especially for individuals with busy lifestyles or limited access to whole food protein sources. Protein powders provide a concentrated and easily digestible form of protein, making them ideal for post-workout recovery and muscle building. Here are some alternatives to different types of protein powder on the market:

Whey Protein

Whey protein is a protein powder derived from milk during the cheese-making process. It is available in various forms, such as whey protein concentrate and whey protein isolate, with different protein concentrations. Whey protein is popular among athletes, fitness enthusiasts, and individuals looking to support muscle growth, recovery, and overall protein intake. It is suitable for those without dairy allergies or sensitivities.

■ Benefits

Whey protein is a protein powder derived from milk during the cheese-making process. It is available in various forms, such as whey protein concentrate and whey protein isolate, with different protein concentrations. Whey protein is popular among athletes, fitness enthusiasts, and individuals looking to support muscle growth, recovery, and overall protein intake. It is suitable for those without dairy allergies or sensitivities.

Casein Protein

Casein protein is another protein powder derived from milk. It differs from whey protein in terms of digestion and absorption rates. Casein forms a gel-like substance in the stomach, resulting in slower digestion and a sustained release of amino acids. Casein protein is commonly used by individuals who want a prolonged-release protein source, such as those looking to support muscle recovery during sleep or extended periods without food. It is suitable for individuals without dairy allergies or sensitivities.

■ Benefits

Casein protein provides a slow and steady supply of amino acids, promoting muscle protein synthesis over an extended period. It supports muscle recovery, reduces muscle breakdown, and helps maintain a positive protein balance during periods of fasting or when a steady protein supply is needed.

Pea Protein

Pea protein is a protein powder derived from yellow split peas. It is a plant-based protein source. Pea protein is an excellent choice for vegetarians, vegans, individuals with lactose intolerance, or those with allergies or sensitivities to dairy, soy, or gluten. Make sure you stick to organic to avoid pesticide exposure.

■ Benefits

Pea protein is easily digestible and provides a good balance of amino acids, although it is relatively low in the essential amino acid methionine. It supports muscle growth and recovery, is low in allergens, and can be combined with other plant-based protein sources to enhance its amino acid profile.

Egg White Protein

Egg white protein is derived from the whites of chicken eggs, where the yolk is removed, and the remaining liquid whites are pasteurized and dried into a fine powder. This process preserves the high-quality protein while eliminating fat and cholesterol, resulting in a clean, pure source of nutrition.

■ Benefits

Egg white protein is a complete, lactose-free protein that's easy to digest and rich in amino acids—especially leucine, which supports muscle repair and growth. It's an excellent option for building lean muscle, improving recovery, and maintaining satiety in weight management plans.

Rice Protein

Rice protein is a protein powder derived from brown rice. Rice protein is suitable for individuals with allergies or sensitivities to dairy, soy, or gluten, or those following a vegan or vegetarian diet.

■ Benefits

While rice protein is not considered a complete protein on its own, it can be combined with other plant-based protein sources to create a more balanced amino acid profile. It supports muscle growth and provides a hypoallergenic alternative for individuals with dietary restrictions.

Hemp Protein

Hemp protein is a protein powder derived from hemp seeds.

Who it's for: Hemp protein is suitable for vegetarians, vegans, and individuals looking for a plant-based protein source.

■ Benefits

Hemp protein is a complete plant-based protein, containing all essential amino acids. It also provides additional nutrients like omega-3 fatty acids and fiber. Hemp protein supports muscle growth and recovery while offering the potential benefits of omega-3 fatty acids and other nutrients found in hemp seeds.



PROTEIN AND MEAL PLANNING

Incorporating protein into meals and snacks is essential for maintaining a well-rounded and nutritious diet. Protein supports various bodily functions, including muscle growth, repair, and overall health. In this chapter, we will explore practical tips for meal planning to ensure adequate protein intake throughout the day.

