Healthier Lifestyles - with Coach Linda

www.coachlindajohnson.com

Protein and your Muscles

RECOMMENDED AMOUNT - The recommended amount of protein is 25-30 gr per meal or snack with a total of 100+ gr per day. You could have 3 meals and 1 snack with about 25 gr protein at each one and that would equal approximately 100 gr in a day. If you are having just 3 meals a day, then try for 30 gr per meal or more. Approximately 50 gr of protein at a meal is a good maximum amount of protein for your body to use at one time. It is best to not go more than 4 hours between meals and snacks during the day to keep from using your muscle for fuel.

Why eat so much protein? You will be more satisfied for a longer time with your meal or snack if you have a good amount of protein in it. Protein is the most satiating macronutrient, which is how to be content with your amount of food that can thereby help you to not feel like overeating. To help this along, consider eating most of your protein in your meal first. The sooner you feel satisfied with your meal, the easier it will be to know that you have had enough, which helps with good portion control, weight loss and weight maintenance.

Why else do you need so much protein? Some of the main things your body uses protein for are your immune system, brain function, eyesight and the constant replacing and repairing of muscle tissue. If you are actively exercising to strengthen and build muscle, then your body will be needing more protein to do that. Also know that your body changes as you age and doesn't use protein as efficiently as it did when you were growing up and as a young adult in your twenties.

To activate the growth of new muscle you will need a certain amount of the essential amino acid, leucine, along with other amino acids. To get 2.5 to 3 gr of leucine at a meal, you'll be needing approximately 25-30 gr of protein depending on the source of the protein. Your body needs to get to that amount of leucine at one time to activate muscle growth.

Why is muscle so important? Your metabolism will be better with more muscle. You'll have more places for the carbohydrates that you eat to be used with more muscle. You'll be better able to take care of yourself as you get older if you have more muscle for strength, stability, a healthy immune system, and good brain function. Plus, you will look and feel more fit, energetic and be able to do more activities with more muscle.

Can you just make more muscle by eating more protein? You do have to have the protein available for your body to be able to make more muscle, but you also need to be stressing the muscles that you have so that they will know to grow stronger. That is done through strength training, also known as resistance training. This type of exercise is a must for growing stronger muscles along with the right amount of protein to accomplish your goal.

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SOURCES OF PROTEIN - There are two main sources of protein: **animal protein** and **plant protein**.

Animal protein includes meat from beef, poultry, and fish. Also eggs, dairy & dairy products, whey protein powder and any other protein from an animal source. **These sources do not have carbohydrates, except the small amounts in dairy sources.**

Plant protein includes beans & legumes, lentils, quinoa, grains, nuts & seeds, soy, plant protein powder and any other protein from a plant source. **These sources contain some carbohydrates.**

TYPES OF PROTEIN: COMPLETE VS. INCOMPLETE

Complete proteins contain adequate amounts of each of the nine essential amino acids which are necessary in the human diet. These amino acids are not made in the body so it is essential that we get them in our diet and they are **needed for muscle maintenance and growth**.

Animal sources are complete proteins, except collagen, it is incomplete.

Some plant sources are also complete proteins such as amaranth, blue-green algae (like spirulina), buckwheat, chia seeds, edamame (young soybeans), hemp seeds, miso, nutritional yeast, pistachio nuts, tempeh, tofu and quinoa.

Know that these plant sources do not contain as much leucine per gram of protein as the animal sources do. Also each of these plant sources contain some carbohydrates along with the protein. The complete proteins which contain very little to no carbohydrates are the ones from animal sources. These are the ones to choose if you do not want to have the extra fuel that comes from those carbs. Also the animal sources will have a higher amount of leucine per gram of protein so you won't have to have as much protein to get in your needed leucine.

Incomplete proteins are missing one or more of the essential amino acids, therefore they are not good sources for your muscle maintenance and growth. Most plant sources are incomplete though they can be combined with other plant sources to provide a complete protein source such as whole grains with beans, nuts or seeds. Also beans with nuts or seeds. Again, these would be plant based complete proteins when combined so they would have extra fuel from the carbohydrates and not as much leucine per gram of protein.

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EXAMPLES OF PROTEIN WITH THE NEEDED LEUCINE - To get the 2.5 to 3 gr of leucine needed for muscle growth in your complete protein you will be having about 25-30 gr of protein, though not every source of protein will have that much leucine in 25-30 grams of protein. Therefore some protein sources will serve that purpose better than others.

4-5 oz of **chicken, fish, or beef** has about 30 grams of protein and will give you about 2.5 grams of leucine.

5 **eggs** have about 30 grams of protein along with 25 grams of fat and will give you about 2.5 grams of leucine.

1 cup of **cottage cheese** has about 24 grams of protein and will give you about 2.5 grams of leucine.

1 cup of **Greek yogurt** has about 25 grams of protein and will give you about 2.5 grams of leucine.

4 oz of **cheddar cheese** has about 28 grams of protein along with 36 grams of fat and will give you about 2.7 grams of leucine. (Note: this is too much fat to use as a total protein source, but rather know the amounts so you can combine a smaller amount of it with another good source of protein and leucine)

4 oz of **mozzarella cheese** has about 32 grams of protein along with 19 grams of fat and will give you about 2.7 grams of leucine.

5 Tablespoons of **THM Pristine Whey Protein** powder has 25 grams of protein and will give you about 2.5 grams of leucine.

3 Tablespoons of **THM Optimized Plant Protein** powder has 16 grams of protein with the bio-equivalent* of 48 grams of protein and will give you 3 grams of leucine.

1 scant Tablespoon of **THM Essential Amino Acids** (EAA) has the bio-equivalent* of 90 grams of protein and will give you 3 grams of leucine.

*bio-equivalent means that you get all the benefits that would occur if you had consumed a certain number of grams of protein (depending upon the EAA formula).

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USES OF CERTAIN PROTEINS - **THM Pristine Whey Protein** powder is a great source of protein for all your protein needs including feeling fuller longer with your meals and for muscle building if you have 25 grams of it at a time or use it in combination with other protein sources that also have leucine. Examples like a ½ cup of Greek yogurt combined with 2 ½ Tablespoons of Strawberry Whey Protein powder will give you about 25 grams of protein with 2.5 grams of leucine and you'll enjoy it because it tastes so yummy!

THM Optimized Plant Protein powder is another great source of protein for all your protein needs including feeling fuller longer with your meals and for muscle growth and repair. Because it is optimized, it means that it has the added amino acids, including leucine so that you can get the needed 3 gr of leucine in a serving of this plant protein. This could also be combined with other sources of protein to create the amount of leucine you are looking for.

THM Essential Amino Acids powder is not considered a protein but rather the building blocks that make up protein. It is good for all your protein needs. A good time to use it is before, during or right after exercising because it goes quickly and easily right into your bloodstream ready for your body to start using it, and it does contain all of the 9 essential amino acids, including 3 gr of leucine which is needed for muscle building and repair.

A partial serving can also be used as a supplement to increase the amount of protein containing leucine in your meal or snack. Occasionally a full serving can be used as your protein source for a lighter meal or snack. It is still best to get your main protein for meals from a whole foods protein source with all the other nutrients included in the whole food sources. It is recommended to not have more than 2-3 servings per day as a maximum amount.

THM Integral Collagen is a dairy free protein source that contains Collagen types 1 & 3 which help with skin, hair & nails as well as joint health & bone strength. It is not high in the amino acid leucine, which is needed for muscle growth, so do not count on it as part of your protein to give you the needed leucine for muscle growth and repair. It is a great addition to your daily protein for its other benefits.

THE IMPORTANCE OF ALL OTHER PROTEINS - Know that proteins from whole food sources have benefits for the many functions proteins are used for in your body including feeling full and satisfied with your food longer and thus helping with appetite control. Also know that whole food sources of protein contain additional nutrients that your body needs so be sure to get many of your protein needs through these sources.