



COMPLETE PROTEIN

● RAW ● ORGANIC ● VEGAN ● BIOFERMENTED

Miessence Complete Protein powder is an easily digestible, extremely high protein, low carbohydrate, optimally balanced amino acid profile, superfood. Just one 25 gram serving provides almost 2/3 of the daily Essential Amino Acid requirement for a 70kg person!

- Certified Organic
- Sprouted and Biofermented
- Raw
- Plant-based
- Vegan
- Gluten free
- Highly digestible
- Complete amino acid profile from complementary sources of grain, legume and seed, making up for the deficiencies of the limiting amino acid from each source.
- Hypoallergenic and suitable for people with intolerances to soy, dairy, wheat and eggs.
- Suitable for elite athletes & body builders, weight loss dieters, breastfeeding mothers, children, and the elderly.
- Natural sweet and nutty taste, easily dissolvable, suitable for sweet and savoury foods.

NO GLUTEN / WHEAT / EGG / SOY / DAIRY / WHEY PROTEIN
ARTIFICIAL FLAVOURS / SWEETENERS / PRESERVATIVES



● INGREDIENTS:

Organic biofermented pea protein, organic sprouted brown rice protein, organic sacha inchi protein, non gmo xanthan gum, luo han fruit concentrate.

● SERVING SIZE: 25G

● SERVING PER PACKAGE: 30

● DIRECTIONS:

Add 25g (approx 2 heaped tablespoons) into a shaker jar or blender with 250ml of cold water. Shake vigorously until smooth and frothy. One 25g serving of Complete Protein Powder provides 19.7g of complete protein and 2/3 of the daily Essential Amino Acid requirement for a 70kg person!



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● SERVING SUGGESTIONS

Miessence Complete Protein blends well with **water, juice**, any **milk** of choice (we don't recommend soy, but that's another story) and **yoghurt**, or it can be added to your **smoothie**.

It can also be mixed into your homemade **energy bars**, balls, muffins, **pancakes**, **desserts**, and baked goods and stirred into **hot cereals** after cooking.

While you can add this powder to a variety of recipes, **raw food** enthusiasts will want to avoid cooking or heating it in order to preserve its nutritional value.

● PACKAGING:

Packed in kraft paper standup pouches bags, each with a resealable ziplock. The lining serves as a very effective barrier to light, oxygen, odours, flavours, moisture, and bacteria.

● ENVIRONMENTALLY SUSTAINABLE PROTEIN

Relying on **animal sources** as the primary protein intake imposes an **enormous cost** to the **environment** in terms of energy and water consumption, carbon dioxide production and pollution.

Animal proteins are **expensive** for our wallets, and **costly** for **our planet**.

Increasing the amount of quality plant proteins in our diet while reducing animal proteins benefits our health and our planet.



● IMPORTANCE OF PROTEIN

Protein is a vital **macronutrient** – essential for the **sustenance of life**, and next to water, makes up the largest portion of our body weight. The liver manufactures about 80% of these amino acids, but the remaining 20% of such amino acids must be supplied directly by diet, and these amino acids are referred to as the essential amino acids. Proteins are broken down in the stomach during digestion into amino acids, including the essential amino acids that cannot be biosynthesised by the body itself. **Amino acids** are the building blocks of our bones, muscles and tissue. It is important to note that, unlike fat and carbohydrates that can be stored in the body and utilised as required, **protein cannot be stored**; so it is vital to consume the appropriate amount of protein on a **daily basis**.

Amino acids are found in animal sources such as meats, milk, fish and eggs, as well as in plant sources such as grains, legumes, fruits, nuts and seeds. Vegetarians and vegans can get enough essential amino acids by eating a variety of plant proteins.

The consequences of **inadequate protein** intake includes **muscle loss**, decreased metabolic rate, **decreased immunity**, impaired wound healing, and **loss** of **skin elasticity**.

Choosing a diet rich in selected plant proteins eliminates the risks of saturated fats found in animal protein, allergic reactions and lactose intolerance due to whey protein and digestive difficulty with soy protein.



COMPLETE PROTEIN

● HOW MUCH PROTEIN DO WE NEED?

The amount of protein you need in your diet depends on your gender, weight, age and health. The recommended requirement is between 800mg/kg – 1800mg/kg depending on activity levels (intense resistance and endurance athletes need 1300-1800mg/kg).

As a rough guide, the recommended dietary intake (RDI) for protein (measured in grams per kilogram of bodyweight) is 0.8g/kg. So, a 70kg person needs 56g of protein (0.8 x 70) per day.

The human body can't store protein and will excrete any excess. Therefore, the most effective way of using the daily protein requirement is to eat small amounts at every meal. Using the example of the 70 kg person above, this would require that they eat approximately 18g of protein at three meals each day.

● ONE 25G SERVING OF MIESSENCE COMPLETE PROTEIN POWDER PROVIDES 19.7G OF COMPLETE PROTEIN

This is the equivalent to:

- 3-4 eggs
- 2½ cups skim milk
- 200 g (7 oz) cottage cheese
- 75 g (2.6 oz) cooked lean beef
- 110 g (4 oz) cooked chicken
- 90 g (3.2 oz) grilled fish

The following table shows the amino acid requirements of adults as recommended by the World Health Organization:

AMINO ACID REQUIREMENTS OF ADULTS

Amino Acid	mg/kg per day
Histidine	10
Isoleucine	20
Leucine	39
Lysine	30
Methionine	10
Cystine	4
Methionine & Cysteine	15
Phenylalanine & tyrosine	25
Threonine	15
Tryptphan	4
Valine	26

World Health Organization, Protein and Amino Acid Requirements in Human Nutrition http://whqlibdoc.who.int/trs/WHO_TRS_935_eng.pdf, p. 245



COMPLETE PROTEIN

● PROTEIN QUALITY AND LIMITING AMINO ACIDS

Protein quality is dependent on having all the essential amino acids in the proper proportion. If one or more essential amino acids are not present in the required amounts, the protein is considered incomplete. Our body can only utilise protein at the level of the lowest (limiting) amino acid, thereby reducing the absorption of all the other amino acids present.

Plant protein sources are generally incomplete sources of protein, because one or more of the essential amino acids is deficient. So, even though none of the individual ingredients in our protein powder is a complete protein, by carefully combining them in a specific ratio we have been able to make up for the deficiencies of each ingredient and create a plant sourced protein powder that has a complete amino acid profile!

The following table lists the optimal profile of the essential amino acids, which comprises a complete protein, as recommended by the Institute of Medicine's Food and Nutrition Board:

ESSENTIAL AMINO ACID MG/G OF PROTEIN

<i>Amino Acid</i>	<i>mg/g protein</i>
Tryptophan	7
Threonine	27
Isoleucine	25
Leucine	55
Lysine	51
Methionine+Cystine	25
Phenylalanine+Tyrosine	47
Valine	32
Histidine	18



http://en.wikipedia.org/wiki/Complete_protein#cite_ref-2

COMPLETE PROTEIN PROFILE FOR A 50 GRAM PROTEIN/2000 CALORIE DIET - FDA LABEL REQUIREMENT

<i>Essential Amino Acid</i>	<i>Needed per g of Protein</i>	<i>Needed for 50g of Protein</i>
Tryptophan	7mg/.007g	.35g
Threonine	27mg/.027g	1.35g
Isoleucine	25mg/.025g	1.25g
Leucine	55mg/.055g	2.76g
Lysine	51mg/.051g	2.56g
Methionine+Cystine	25mg/.025g	1.25g
Phenylalanine+Tyrosine	47mg/.047g	2.36g
Valine	32mg/.032g	1.60g
Histidine	18mg/.018g	.90g

<http://therightrak.com/Protein.aspx>

Our bodies use amino acids in a specific ratio to each other. If we don't get enough of one of them to match with the others, they can only be utilised at the level of the lowest (limiting) one. These are called limiting amino acids, because if our diet is deficient in one of them, this will limit the usefulness of the others, even if they are eaten in large quantities. So, the net protein utilization of eating only one protein source (rice, for instance) is affected by the limiting amino acid content of that source. Our protein powder has a complete amino acid profile from complementary sources of grain, legume and seed, making up for the deficiencies of the limiting amino acid from each source.

<i>Amino Acid</i>	<i>Limited Source</i>	<i>Abundant Source</i>
Lysine	Sacha Inchi, Rice	Pea
Methionine/Cysteine	Pea,	Rice, Sacha Inchi
Tryptophan		Sacha Inchi

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● BRANCHED CHAIN AMINO ACIDS (BCAAS)

The essential branched chain amino acids (BCAA's) include leucine, isoleucine, and valine are of special importance for athletes because they are metabolized in the muscle, rather than in the liver. (1). This makes them of particular importance to athletes or exercise enthusiasts. BCAA's have been shown to reduce fatigue in both anaerobic and endurance sports. Leucine may be the most critical BCAA because of its anti-catabolic properties and vital role in protein synthesis (2).

Together, the BCAAs make up 40% of the daily requirement for essential amino acids in humans. Despite its plant-based origin, our protein powder is a great source of BCAAs, comprising almost 43% of the essential amino acids.

● BODYBUILDING AND MUSCLE RECOVERY

Muscles are structures made mostly from protein. Intense physical training or simply every day activities cause muscle to breakdown. Athletes who seek to build muscle mass as a means of sculpting their body rely upon protein before and after training sessions as an integral part of the muscle rebuilding process. The body uses dietary proteins to provide the amino acids for rebuilding muscle mass. For optimal recovery from workouts it is recommended to consume protein within an hour post-workout. (3) The easiest way to do this is via a high protein shake or smoothie.

● THERMIC EFFECT OF PROTEIN

Proteins have a "thermic" effect, meaning that they create heat in the body through the process of digestion. Since proteins take a lot of energy to digest, you burn more calories after eating a meal high in protein. Up to 30 percent of protein's calories get burned through its digestion (4), so building a weight loss strategy around lean sources of protein makes nutritional sense.

● BLOOD SUGAR AND FAT STORAGE

Blood sugar will spike in response to carbohydrate-based meals (white rice, white bread or sweets) causing the pancreas to secrete the hormone insulin that facilitates the storage of circulating nutrients as fat. (5) This can also lead to a drastic drop in blood sugar which manifests as fatigue. Including protein with every meal helps to regulate this blood sugar and insulin effect to potentially prevent body fat storage.

PROTEIN POWDER VS PROTEIN FOODS - ADVANTAGES OF PROTEIN POWDER:

- **Cost effective.**
- **A complete and balanced protein source.**
- **A low-calorie, low carb, sugar-free way to satisfy a sweet craving.**
- **Very convenient, requiring little to no cleanup.**
- **Requires no refrigeration or heating.**
- **Higher biological value than real foods.**
- **A protein shake is easier on the stomach before bed.**



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WHEN TO TAKE PROTEIN POWDER

Always make sure you are supplementing, not replacing, whole food sources and meals. In general, no more than 2-3 protein shakes per day when you're working out. The most effective times for drinking a protein shake is first thing in the morning, and immediately following your workout.

First Thing In The Morning.

Upon waking, your body is in fasting condition. Without protein, the body will break down muscles for energy. Having a high-protein breakfast prevents muscle breakdown before it starts.

Pre Workout.

Many athletes like to drink protein shakes before their workout, which can be beneficial in ensuring that you have adequate nutrition and energy for the body while you exercise; however, this is not as important as protein in the morning and after your workout. It should also be noted that exercise is rarely recommended directly after eating, at least 1 hour should pass after having a protein shake.

Post Workout.

After exercise, your muscles are more highly susceptible to nutrient absorption. They are like sponges waiting to be fed! A protein shake, combined with some fruit juice or fresh or frozen fruit (simple carbohydrates) will immediately shuttle nutrients into the muscle cells, aiding in the repair and recovery of the muscles. Carbs help replenish glycogen. Protein rebuilds muscle tissue and improves hydration.

Between Meals.

A protein shake in between meals is one of the healthiest ways to suppress your appetite. It's often the snacks we choose that undo all the hard work of eating healthily, so when the munchies hit, shake up a protein drink instead of a muffin or a bag of chips. Your body will thank you later.

Before Bed.

If you don't put protein into your body before you go to bed, your body will run out of protein about 2 am. Once your body digests all of its available protein, your body shuts down and starts storing fat cells. The sugar in your blood still needs protein to keep you going, so it starts consuming the only protein source available, your own muscle mass. Basically, you are storing fat and eating muscle. By drinking a high protein smoothie just before you go to bed, the added protein will support muscle growth for up to 4 to 5 hours.



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INGREDIENT INFORMATION

ORGANIC SACHA INCHI PROTEIN

The legendary Sacha Inchi (pronounced sah-cha inch-ee) is one of nature's most amazing and nutritious foods. Sacha Inchi, also called the "Inca peanut," grows in the Amazon Rainforest and the high Andes Mountains of Peru. It has been part of the Inca diet for 3000 years. The Sacha Inchi plant, *Plukenetia volubilis*, is a rainforest vine, with star-shaped seed pods, meaning that Inca Peanuts are technically seeds, not nuts. However, our Sacha Inchi seeds do have a unique, mild, nutty taste that many compare to that of a dark roasted peanut with a slight woody flavor. Tribes dating back to the Incas have used sacha inchi to maintain good health and well-being. The sacha inchi plant grows sustainably in the Peruvian Amazon Rainforest and its modern rediscovery now provides income for indigenous tribes and contributes to the preservation of the Amazon rainforest because it prevents the endangered fertile land on which it grows from being razed and used for less sustainable crops. Sacha inchi plants will flower five months after being planted, bearing fruits after another three months and continue to thrive for over 10 years, providing a sustainable source of income for the people of the Amazon.

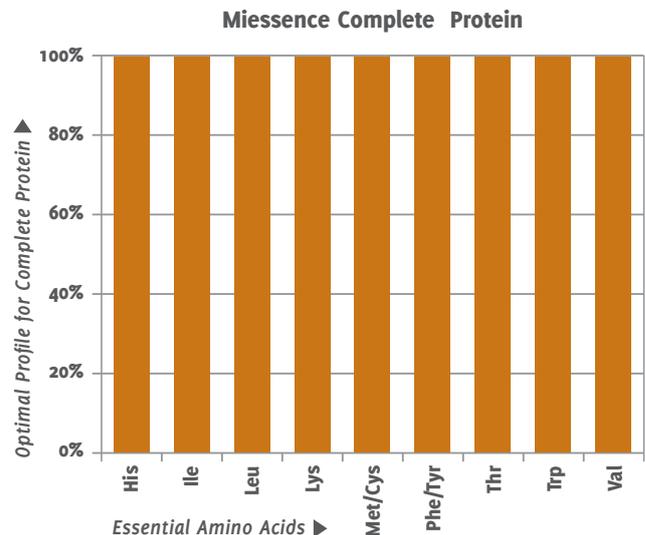
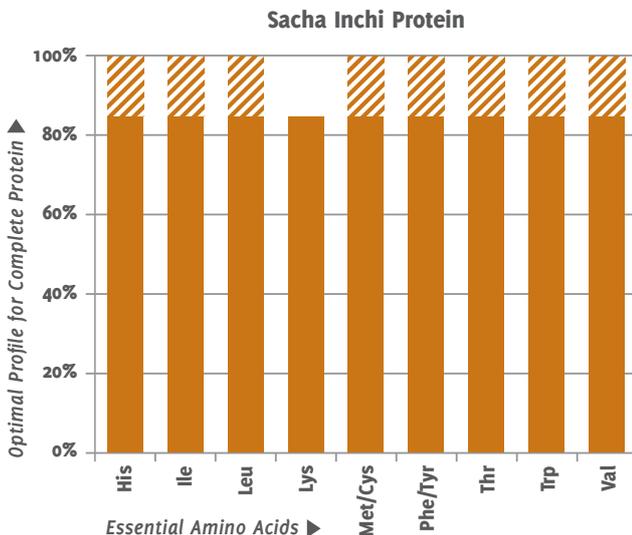
Sacha Inchi Protein Powder is the de-fatted nut once it has been cold-pressed to produce the seed oil. The dried sacha inchi seed powder amazingly contains one of the most highly digestible, low-irritant, high quality proteins sources known. So you absorb the nutrients quickly and easily - with maximum absorption. It is naturally extracted without high temperature processing, deodorizing, preservatives or additives. Sacha Inchi is totally formulated and balanced by nature - that's why it's so highly (99%) digestible and easy to take.



BENEFITS OF SACHA INCHI PROTEIN POWDER

- **Highly digestible (98 out of 100 on the Protein Efficiency Ratio)**
- **60% protein**
- **High in Vitamin A and calcium to help support healthy eyes, skin, teeth and bones.**
- **High in tryptophan, which help promote a positive mood.**
- **Sustainably harvested & Raw**

LIMITING ESSENTIAL AMINO ACIDS COMPARISON CHARTS



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INGREDIENT INFORMATION

ORGANIC SPROUTED BROWN RICE PROTEIN

The only organic, raw protein source from whole brown rice, our rice protein is enzymatically extracted from multiple layers of the sprouted whole grain versus the more typical rice protein which is hexane-extracted from just the bran layer.

Our proprietary chemical-free extraction process uses organic enzymes to produce a superior protein. It is manufactured via a proprietary low-heat process to avoid protein denaturation, which can alter the chemical profile and thus decrease its efficacy.

Our rice protein is extracted from the entire, raw grain including the bran, at low temperatures thereby preserving complete protein quality.

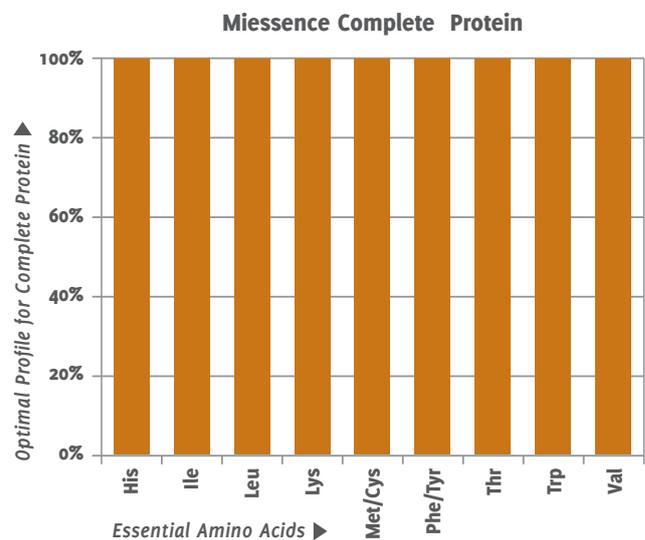
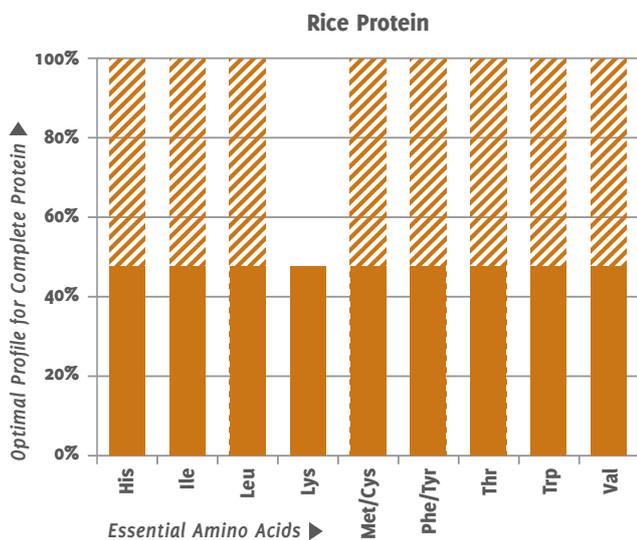
Also known as germination, sprouting increases key nutrients; particularly B vitamins, and essential amino acids often lacking in grains. The natural bio-fermentation process used is a controlled method which neutralises the plants natural defence enzymes, phytates. And increases the whole grains natural nutrients availability, absorption and digestion.

Once sprouted, the grains amino acid profile (protein) is at its peak. Organic enzymes are then added, and the natural proteins are isolated to form this high protein concentrate (80%).



- **80% pure protein**
- **Hypo-allergenic**
- **98% correlation rate to mother's milk**
- **98.2% digestion efficiency rating (Whey is 98.1)**
- **Protein Digestibility Corrected Amino Acid Score (PDCAAS) of 1, it provides essential amino acids and digestibility similar to that of whey and casein.**

LIMITING ESSENTIAL AMINO ACIDS COMPARISON CHARTS



COMPLETE PROTEIN

ORGANIC PEA PROTEIN

Peas are one of the best examples of a legume which is not only high in protein (approximately 90%) but composed of protein which is highly digestible, allowing for maximum absorbability. With a 98% digestion rate the nutrients in our pea protein are transmitted more rapidly through the bloodstream and utilized much more quickly by the muscles and organs. Pea protein does not require complicated extraction. The peas are dried naturally and ground to a flour, then it is hydrated, after which the starch and fibre are separated, followed by coagulation of the protein itself. After purification, a multi-stage dryer is then used to dry the protein and prepare it for consumption.

Pea protein is said to be one of the most perfect proteins for human consumption. Its benefits over both animal and other legume proteins include:

- Easily digestible.
- Allergen free.
- Ideal amino acid profile for sports.

Whey and soy protein can be difficult for some to digest, and soy, whey, and egg protein supplements can produce allergic reactions in some, the potential of which can increase with repeated use.

However, pea (*pisum sativum*) has been found to be one of the most digestible sources of protein available and has been shown to produce the least allergic reactions.

For athletes, pea protein contains an ideal combination of essential amino acids for sports performance:

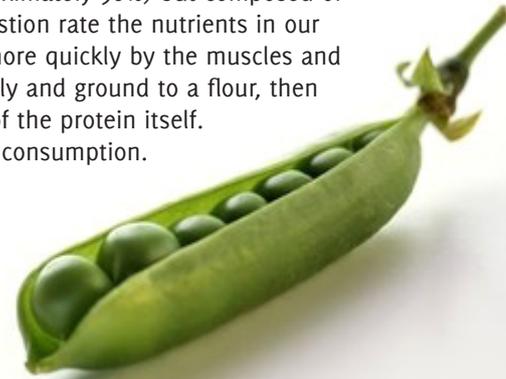
- Lysine - balanced nitrogen levels in muscles.
- Arginine - promotes muscle metabolism and a healthy heart.
- Glutamine - helps restore nitrogen balance after a heavy workout.
- Leucine, isoleucine and valine - branched-chain amino acids help maintain tissues during exercise.

High Iron Content. Iron is an integral part of human physiology and is required for the transportation of oxygen throughout the body as well as regulation of cell growth and differentiation. Plant-based foods provide a source of non-heme iron for the body to absorb. Combining this product with citric acids (lemon/lime/orange juice) or lactic acid (found in InLiveN, FastTract or yoghurt) will optimise the absorption of the iron content.

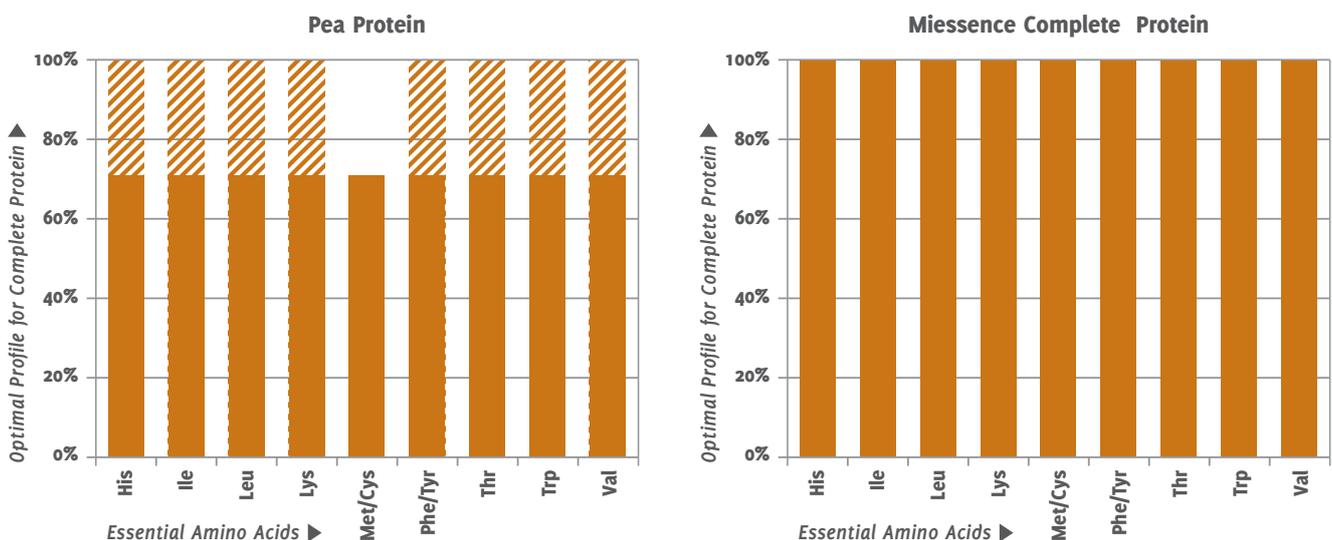
In unrestricted diets, iron absorption can also be enhanced when consumed with animal-based protein. Iron absorption can be inhibited when consumed with coffee, tea or foods rich in calcium.

Weight Loss Benefits. Pea protein works effectively to regulate the appetite and encourage weight loss via ghrelin regulation. Ghrelin is a substance secreted by the stomach which signals the brain to stimulate the sensation of hunger.

In general, ghrelin levels tend to rise within a certain period of time after consumption of a meal in anticipation of the next meal. Pea protein slows this process, thus delaying the gastric emptying, lowering ghrelin levels, and sustaining satiety for longer periods of time.



LIMITING ESSENTIAL AMINO ACIDS COMPARISON CHARTS



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● PROPERTIES OF THE ESSENTIAL AMINO ACIDS

Essential Amino Acids (EAAs) cannot be synthesised by the body and must be ingested via food and supplementation. EAAs are responsible for some crucial functions in the body, as can be seen below, and whilst they can all be found in vegetable sources, careful attention must be paid to ensure that proper levels are consumed in a strict vegetarian diet.

Isoleucine

Promotes muscle recovery, regulates blood-sugar levels and stimulates Human Growth Hormone release. Helps in the formation of haemoglobin and is involved in the formation of blood clotting, the body's defence against infection.

Leucine

Regulates blood-sugar levels, growth and repair of muscle, skin, and bone. May be one of the strongest natural anabolic (building) agents and potentiates Human Growth Hormone, helps wound healing, regulates energy, and assists in preventing muscle tissue breakdown.

Lysine

Lysine is the precursor of carnitine, the molecule responsible for converting fatty acids into energy and helping to lower cholesterol. Lysine allows for better absorption of calcium and so may help prevent osteoporosis and plays an important role in the formation of collagen—the building block of connective tissue such as bones, cartilage, skin, tendons. It supports the normal growth and development of children and plays a role in the maintenance of a healthy immune system. Insufficient lysine can lead to fatigue, nausea, dizziness, loss of appetite, agitation, bloodshot eyes, slow growth, anemia, and reproductive disorders. It promotes the production of antibodies, hormones and enzymes. It may prevent or at least treat the onset of cold sores (herpes type 1). May also be helpful in fighting some cases of genital herpes.

Methionine

Assists in the breakdown and use of fats, yielding a higher testosterone rate. Assists digestion and has anti-oxidant properties. Reduces fat and protects the kidney, aids in lowering cholesterol, natural chelating agent for heavy metals. Aids in producing beautiful skin.

Phenylalanine

Elevates the mood by stimulating the nerve system. Increases levels of epinephrine, nor-epinephrine, and dopamine, important neurotransmitters needed by the nervous system. It helps the absorption of UV rays in sunlight, giving a higher rate of Vitamin D. Improves memory and mental alertness. Acts as an antidepressant, helps suppress appetite, increases libido.

Threonine

Found in skeletal muscle, heart, and nerve tissue in the central nervous system. Is involved in liver functioning, fat metabolism, and in immune system maintenance by helping in the production of antibodies and promoting growth and activity of the thymus.

Tryptophan

Tryptophan is required on a daily basis for the production of serotonin, a neurotransmitter in the brain associated with mood and social functioning. It is also the precursor (needed to produce other elements) for Niacin or vitamin B3, required for energy metabolism—essentially, converting the food you eat into fuel your body can use for everyday functions!

Tyrosine

Acts in regulation of emotional behaviour. Important in eventual synthesis of thyroxine, thus aiding in prevention of hypothyroidism. Has important role in stimulating and modifying brain activity, helps control drug resistant depression and anxiety.

Valine

Has a stimulating effect and is needed for muscle metabolism, repair and growth of tissue and maintaining the nitrogen balance in the body. Since it is a branched-chain amino acid, it can be used as an energy source in the muscles, and preserves the use of glucose.

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● NON-ESSENTIAL, BUT IMPORTANT, AMINO ACIDS

Glutamine

Helps prevent fatigue during training sessions, enhance muscle growth, boost recovery and suppress desire for sweets. Helps improve brain function, alleviates fatigue, aids in ulcer healing time, acts as a mood elevator, may serve as brain stimulant. Glutamine is the preferred food of the cells of the small intestine. Glutamine is particularly useful when it comes to maintaining the structure of the intestine and has even been shown to repair damage done after chemotherapy and radiation.

Aspartic acid

Facilitates the use of carbohydrates as an energy source for the body. Thus, it helps maintain stamina and fight off fatigue. Aspartic acid also aids in the excretion of toxins such as ammonia from the body.

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