

# Amino Complex

## L-Leucine Rich Branched-Chain and Essential Amino Acid Powder



**DESIGNS  
FOR SPORT™**

This information is provided for the use of physicians and other licensed health care practitioners only. This information is intended for physicians and other licensed health care providers to use as a basis for determining whether or not to recommend these products to their patients. This medical and scientific information is not for use by consumers. The dietary supplement products offered by Designs for Sport are not intended for use by consumers as a mean to cure, treat, prevent, diagnose, or mitigate any disease or other medical condition.

### THE DESIGNS FOR SPORT DIFFERENCE

Designs for Sport's Amino Complex is a free-form, essential amino acid formula, including 2.5g leucine per serving, in two delicious flavored powders: fruit punch and natural orange. Amino acids in their free form are immediately available for absorption and can be used metabolically more readily and rapidly compared with amino acids that must be liberated from dietary protein.

Amino acids are best known for their role as the building blocks of proteins, but they're also the raw material needed to synthesize various neurotransmitters (such as dopamine and serotonin), hormones, enzymes, and immune system antibodies, and they serve as critical factors in cellular energy generation. Amino acids do much more than simply build muscle; they are involved in virtually all cellular processes.

The human body synthesizes 11 of the 20 amino acids required by the body; the others must be supplied through food or supplementation. The nine amino acids the body does not produce internally are called "essential" amino acids (EAAs) because they are essential for humans to obtain them from the diet or from dietary supplements. Failure to obtain enough of even one of these amino acids may result in compromised structure or function of the proteins that require it. Unlike fat and starch, the human body does not store excess amino acids for later use. Therefore, amino acids must be consumed daily; otherwise, inadequate protein intake may cause the body to breakdown or catabolize its healthy tissue — such as skeletal muscle — to obtain the critical amino acids it requires for proper functioning.

Amino Complex provides all nine EAAs, including tryptophan, which is essential for the production of serotonin and melatonin. This formula also contains the conditionally-essential amino acid, arginine, which plays an important role in wound healing, immune function, and cell division. This may be especially beneficial for individuals with a compromised digestive function, those recovering from physical trauma, and those with difficulty consuming adequate amounts of complete protein. This formula contains optimal doses of the Branched-Chain amino acid, leucine, considered the most anabolic amino acid (promoting growth and metabolic activity), which is particularly applicable for athletes and individuals looking to build lean muscle mass.\*

### Why Alpha-Ketoglutarate and Vitamin B6?

Alpha-ketoglutarate is a compound involved in the generation of energy inside cells. Providing this, along with the free-form essential amino acids in Amino Complex, may help promote stamina and healthy energy levels.\* Vitamin B6 is required for many reactions that convert amino acids into their end products, for example, tyrosine into dopamine. Synthesis of collagen — the main structural protein in the body — requires B6. Coffee and alcohol consumption may interfere with vitamin B6 metabolism, and many common medications may impair absorption of vitamin B6.

### EAA VS BCAA

For years the ingestion of branched-chain amino acids claimed to support an anabolic response and protein synthesis. Updated research uncovers why BCAA's alone are not enough to support protein synthesis as explained below:

*"Consumption of BCAAs alone (i.e., without the other EAAs) can only increase muscle protein synthesis in the post-absorptive state by increasing the efficiency of recycling of EAAs from protein breakdown back into protein synthesis, as opposed to either being released in to plasma or oxidized. This is because all 9 EAAs (as well as 11 NEAAs) are required to produce muscle protein, and EAAs cannot be produced in the body. If only 3 EAAs are consumed, as is the case with consumption of BCAAs, then protein breakdown is the only source of the remaining EAAs required as precursors for muscle protein synthesis. It is therefore theoretically impossible for consumption of only BCAAs to create an anabolic state in which muscle protein synthesis exceeds muscle protein breakdown."* <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5568273/>

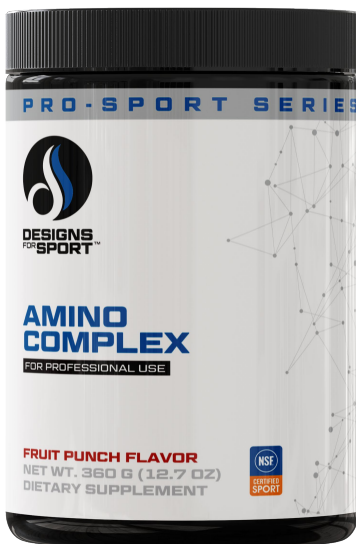
## Essential (BCAA\*\*)

Histidine	Arginine*
Isoleucine**	Cysteine*
Leucine**	Glutamine*
Lysine	Glycine*
Methionine	Proline*
Phenylalanine	Tyrosine*
Threonine	Alanine
Tryptophan	Asparagine
Valine**	Aspartate
	Glutamate
	Serine

## Non-Essential (Conditionally Essential\*)

## SUPPORTS:

- Total daily essential amino acid and/or protein intake
- Muscle protein synthesis
- Maintenance and or addition of lean body mass
- Athletes and clients on vegan or heavy plant-based diets who desire additional amino acid support
- Healthy mood chemical formation and metabolism

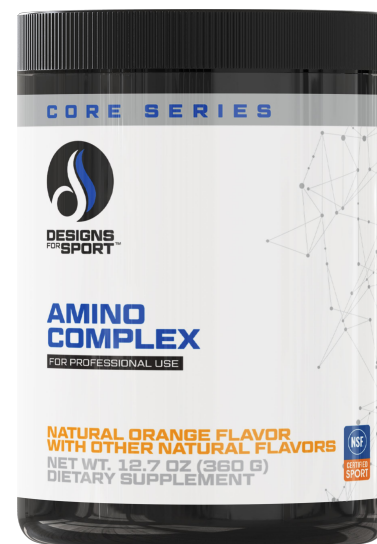


### Supplement Facts

Serving Size 12 grams (approx. one scoop)  
Servings Per Container 30

Amount Per Serving		% Daily Value
Calories	20	
Total Carbohydrate	5 g	1%**
Dietary Fiber	less than 1 g	<4%
Vitamin B-6 (as Pyridoxal-5-Phosphate)	20 mg	1176%
L-Leucine	2.5 g	*
L-Phenylalanine	715 mg	*
L-Valine	615 mg	*
L-Histidine	590 mg	*
L-Lysine	525 mg	*
L-Arginine	525 mg	*
L-Isoleucine	525 mg	*
Alpha-Ketoglutarate	470 mg	*
L-Methionine	435 mg	*
L-Threonine	385 mg	*
L-Tryptophan	120 mg	*

\*\*Percent Daily Values are based on a 2,000 calorie diet.  
\*Daily Value not established.



### Supplement Facts

Serving Size 12 grams (approx. one scoop)  
Servings Per Container 30

Amount Per Serving		% Daily Value
Calories	20	
Total Carbohydrate	5 g	1%**
Dietary Fiber	less than 1 g	<4%
Vitamin B-6 (as Pyridoxal-5-Phosphate)	20 mg	1176%
L-Leucine	2.5 g	*
L-Phenylalanine	715 mg	*
L-Valine	615 mg	*
L-Histidine	590 mg	*
L-Lysine	525 mg	*
L-Arginine	525 mg	*
L-Isoleucine	525 mg	*
Alpha-Ketoglutarate	470 mg	*
L-Methionine	435 mg	*
L-Threonine	385 mg	*
L-Tryptophan	120 mg	*

\*\*Percent Daily Values are based on a 2,000 calorie diet.  
\*Daily Value not established.



## HOW TO TAKE:

Mix 12 grams (approximately one scoop) in 8 to 10 ounces of water per day, or as directed by your health-care practitioner. More aggressive dosing may be warranted in cases in which a significant addition of muscle mass is desired or in confirmed amino acid deficiency states.