Healing From the Inside Out: Amino Acids

FACT

Amino acids are used in every cell of your body. They build the proteins you need to survive. Many amino acids have a role in building and repairing body tissues, which is important during wound healing.

THE BUILDING BLOCKS OF PROTEIN

The body obtains amino acids from proteins found in food, especially meat, dairy products, and legumes. It is important to eat a healthful diet that provides a variety of amino acids each day while healing.

BIOSYNTHESIS

When we consume protein in the diet, the protein in the gastrointestinal tract is broken down into individual amino acids and then put back together again as new protein. This complex biological process is called protein biosynthesis.

TYPES OF AMINO ACIDS

The human body can synthesize (break down and reconfigure) most amino acids. However, the body cannot synthesize nine of the amino acids—these must come from foods.

When your body is healing or under stress from a disease or chronic condition, the demand for certain amino acids may increase. Studies have looked closely at arginine and glutamine, two amino acids that are known for their role in wound healing.

HAVE A CHAT

Ask your healthcare team if amino acid supplementation is the right choice for you. If it is, look for arginine, glutamine, and HMB on supplement labels. Powdered drink mixes are a convenient way to fit in a supplement.

ARGININE

Arginine is important to the wound healing process, helping to increase blood flow and oxygen to the wound. This results in increased collagen formation and reduced inflammation.

GLUTAMINE

Glutamine has many functions, including:

- Simulating collagen production
- Regulating nitrogen metabolism
- Supporting the immune system

HMB

HMB stands for beta-hydroxy-beta-methylbutyrate. HMB comes from the amino acid leucine. It helps to reduce inflammation and protect your muscles from damage. HMB works to keep the body's muscle cell walls strong in order to protect the muscle from stress-related damage.

Based on information from:

Williams JZ, Abumrad N, Barbul A. Effect of a specialized amino acid mixture on human collagen deposition. *Ann Surg.* 2002;236(3):369-375.

Deutz NE, Bauer JM, Barazzoni R, et al. Protein intake and exercise for optimal muscle function with aging: recommendations from the ESPEN Expert Group. *Clin Nutr.* 2014;33(6):929-936. doi:10.1016/j.clnu.2014.04.007.