Protein In Musculoskeletal Healing

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- Protein appears to be as important as total calories in the healing process.
- Much of the human body is constructed of protein.
- Collagen represents 6% of total body weight.
- Amino acids are the basic building blocks of collagen, elastin, proteoglycan core proteins, fibronectin and lamina all key components of musculoskeletal tissues.
- Amino acids also make up receptors, transport proteins and enzymes.

Protein depletion appears to delay wound healing by:

- Prolonging the inflammatory phase.
- Inhibiting fibroblast, collagen and proteoglycan synthesis.
- Inhibiting wound remodeling.
- Will decrease the tensile strength of wounds.

Summary:

- One of the metabolic responses after and injury or surgery is a net loss in body protein.
- The duration of protein loss is 3 to 6 weeks when protein intakes are usual (0.8 g/kg/d).
- Thus it is important to ensure adequate protein intake during times of stress or injury.
- An injured patient requires more protein than a no-injured patient because of the metabolic activity associated with wound healing.
- Non-injured state adults require- 0.8 g/kg body weight per day.
- Elderly- 1-1.2 g/ kg body weight.
- 1.5 g/ kg body weight.

Foods Rich in Protein:

- Skim milk
- Egg whites
- Skinless poultry white meat
- Fish and shellfish
- Lean beef and pork cuts
- Protein powders (whey, soy, casein mixtures)
- Strict vegetarians can increase soy products, legumes, yeast and blue-green algae intake.
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