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REPORT

The Wonders Of Whey
Restoring Youthful Anabolic
Metabolism at the Cellular Level

A decline in protein synthesis is an unmistakable indication of aging. As muscle mass diminishes, muscle strength begins its downfall. But a strong body needs not bend to the ravages of aging. According to a new study, it may now be possible to enhance and even partially reverse the decline in protein synthesis that comes with age.

As we age total muscle mass begins to decline, leading to a reduction in muscle strength. This degeneration of muscle mass affects performance and lowers physical activity. This catabolic process also results in decreased bone density, obesity, impaired glucose metabolism and a less than optimal quality of life. While nutrients such as chromium and conjugated linoleic acid (CLA) can help maintain muscle mass, a new study suggests that amino acids alone can stimulate muscle protein anabolism in elderly people whose muscle mass is reduced.



The importance of stimulating cellular protein synthesis cannot be overstated. Aging causes a decline in protein synthesis that inevitably leads to disability and death. Huge amounts of research dollars have been spent investigating the role protein synthesis plays in the development of disease and aging. In the May 1998 issue of the *Journal of Clinical Investigation*, scientists found that administering amino acid mixtures increased net muscle protein synthesis by increasing amino acid transport into muscle cells. This increased amino acid delivery to the cells stimulated muscle protein synthesis in elderly people. According to the study, amino acid administration results in a net protein deposition and the restoration of youthful anabolic metabolism at the cellular level.

The scientists concluded the report by stating there is a dietary basis to explain the loss of muscle mass that occurs with aging. They also determined that the lack of amino acids is more likely the problem, rather than the inability of cells to utilize amino acids once ingested. An anabolic response achieved with amino acid therapy indicates that muscle mass could be preserved or restored in the elderly if adequate protein or amino acids were ingested.

In response to this study, Life Extension examined protein supplements that could be reasonably ingested in order to increase dietary intake of critical amino acids. Then we spoke with Will Brink, a renowned expert on enhancing anabolic metabolism, on ways to increase critical amino acid intake.

-The Editors

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