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## **Ornithine alpha-ketoglutarate: could it be a new therapeutic option for sarcopenia?**

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### Abstract

Our current knowledge on the causes of sarcopenia is still fragmentary. One of the most evident candidates to explain muscle loss in elderly includes imbalance in protein turnover, i.e. decreased muscle protein synthesis rate, notably in the post-prandial state. Nutritional strategies such as leucine supplementation, use of fast digested proteins or a pulse protein intake have been shown to enhance the synthesis rate of muscle proteins in older individuals. Ornithine alpha-ketoglutarate (OKG) is a precursor of amino acids such as glutamine, arginine and proline, and increases the secretion of anabolic hormones, i.e. insulin and growth hormone. A beneficial anabolic action of OKG has been demonstrated in several pathological conditions associated with muscle loss. Therefore, OKG may be of a potential interest to modulate muscle protein metabolism and to maintain muscle mass during aging.