WHAT IS HMB?

ß-Hydroxy ß-methylbutyrate (HMB) is a metabolite of the essential branch chain amino acid leucine, claimed to decrease muscle protein breakdown associated with exercise, increasing muscle mass and strength development associated with resistance training. HMB is also claimed to reduce muscle damage/soreness, enhancing recovery. Much of the initial research on HMB focused on animals, assessing the effect on carcass mass and quality, immune function, morbidity and mortality, colostral milk fat content, growth rates, safety and toxicity. Despite unconvincing results in animal research, HMB supplementation was applied to humans in the mid 1990’s under the presumption that it may enhance gains in muscle size and strength while reducing muscle damage and soreness associated with resistance training and possibly enhance aerobic capacity.

HOW DO I TAKE HMB?

HMB has a relatively short half-life in the blood and as such is typically prescribed in divided doses of 1 gram, 3 times a day. As such, issues of compliance may need to be considered when contemplating HMB prescription. Doses of HMB in excess of 3 grams per day have been proven to be ineffective.

ARE THERE ANY RISKS IN TAKING HMB?

Short term HMB supplementation appears to be safe, with daily doses equivalent to ~6 g per day (76 mg•kg-1) having no impact on indices of hepatic, renal or immune function. No studies on the safety of long term HMB supplementation have been undertaken although acute large doses appear to be free of side effects, as does an intake of 3 grams per day.

SUMMARY

The potential for HMB supplementation to enhance strength training adaptations appears to be small in previously untrained individuals and negligible in resistance trained athletes. Given that the protein synthetic response is much more sensitive to nutrition interventions than protein breakdown, the resistance trained athlete is advised to focus on proven strategies such as post-exercise ingestion of high biological value proteins rich in leucine to maximize adaptation to the resistance training stimulus.

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