BONE & MUSCULOSKELETAL HEALTH

Muscle Repair+

CLINICALLY SHOWN TO ACCELERATE MUSCLE REPAIR AND REGENERATION AFTER EXERCISE‡

Muscle Repair+ is a clinically studied, patent-pending combination of niacinamide (vitamin B_3, 714 mg) and pyridoxine (vitamin B_6, 19 mg) that accelerates muscle cell repair, recovery and regeneration after exercise.‡

Clinically shown to enhance muscle cell repair from exercise‡

Supports cellular recovery from exercise-induced muscle damage‡

Clinically shown to enhance muscle stem cell activity‡

WHO IS THIS SUPPLEMENT FOR?

- Active adults and athletes seeking support for muscle repair and recovery after exercise.‡

MECHANISMS OF ACTION

Muscle stem cells, also known as satellite cells, are responsible for initiating muscle fiber repair and regeneration after damage. Damage to muscle fibers is a normal occurrence after strenuous exercise, unaccustomed physical activity or eccentric muscle contractions, such as weightlifting, running downhill, and jumping. After sustaining these types of stress, muscle stem cells are activated and begin to proliferate and differentiate into new muscle fibers. This myogenic repair program enables the regeneration of muscle fibers, an important aspect of recovery and adaptations to training. Muscle Repair+ supports this regenerative process with a patent-pending combination of niacinamide (vitamin B_3, 714 mg) and pyridoxine (vitamin B_6, 19 mg) (Figure 1).[1,2] This combination was identified in a high-content screen of 50,000 compounds and plant extracts on human myogenic progenitors. The study found that these nutrients synergistically stimulated muscle stem cell proliferation and differentiation via casein kinase 1 (CK1)-mediated cytoplasmic β-catenin activation and AKT signaling. Oral administration of the synergistic ratio promoted the proliferation of muscle stem cells and facilitated the repair of muscle fibers in both young and aged model organisms well as in primary myogenic cells obtained from human donors.[1‡]

Supplement Facts

2 capsules daily.

Two (size 0) capsules contains:

Niacin (as niacinamide)	714 mg
Vitamin B_6 (as pyridoxine HCl)	19 mg

Other ingredients: vegetarian capsule (cellulose, water), microcrystalline cellulose

WARNING: If you are pregnant, feeding a baby your breastmilk, taking any medication, or have any health condition, consult your healthcare practitioner before use. Discontinue use and consult your healthcare practitioner if any adverse reactions occur.

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NON GMO

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RESEARCH HIGHLIGHTS

The clinical efficacy of this combination was evaluated in a randomized, double blind, placebo-controlled trial of 42 healthy men between 18-50 years of age, who received the combination of niacinamide (714 mg) and pyridoxine (19 mg) in Muscle Repair+ or placebo for 8 days following eccentric exercise-induced muscle damage, which was induced by eccentric contractions of the vastus lateralis muscle combined with neuromuscular electrical stimulation. Analysis of muscle biopsies revealed substantial increases in the number of activated muscle stem cells, the number of proliferating and differentiating cells, and cells undergoing late-stage differentiation compared to the placebo group (Figure 2). **Niacinamide/B_6 increased the proportion of actively regenerating muscle fibers by 37%, increasing muscle fiber recovery rate compared to placebo**. Supplementation was well tolerated and effectively increased blood concentrations of both nutrients.‡

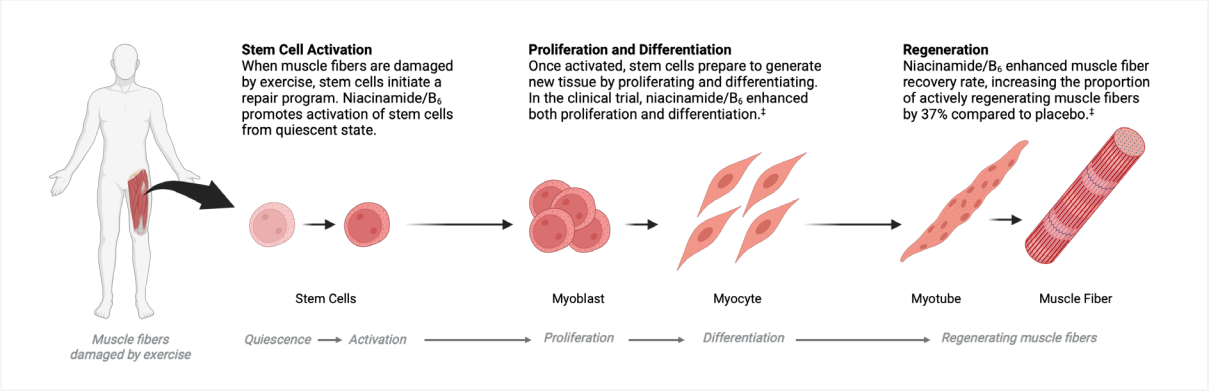

Figure 1. In a clinical trial, niacinamide + vitamin B_6 supplementation enhanced skeletal muscle repair following acute muscle damage. *When muscles fibers are damaged by exercise, stem cells initiate a repair program. The patent-pending blend of niacinamide (714 mg) and vitamin B_6 (19 mg) increases the number of activated stem cells that drive muscle repair.*[2] *Image created in BioRender and adapted from Nguyen et al.*[3‡]

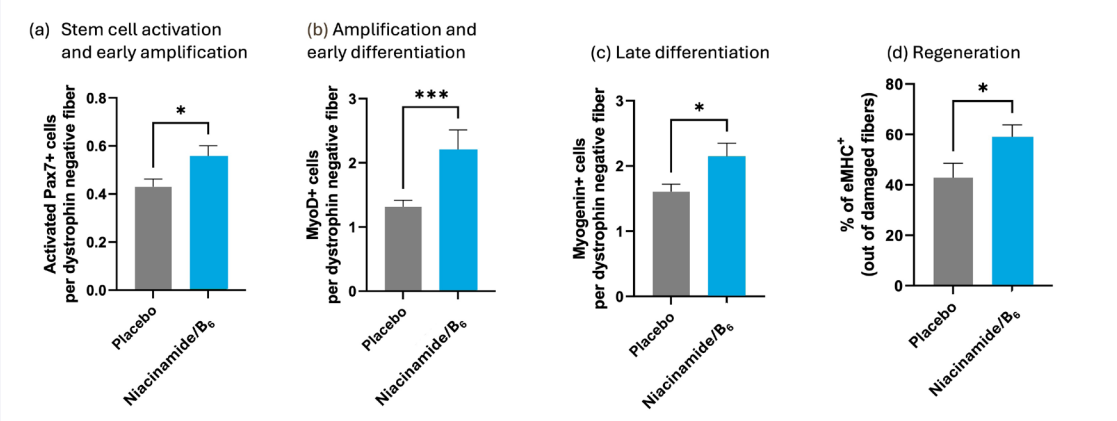

Figure 2. *The niacinamide/vitamin B_6 blend in Muscle Repair+ enhanced multiple steps of muscle cell regenerative response in a clinical trial. Analysis of muscle biopsies revealed a 29% greater number of activated and early amplifying muscle stem cells, which express the Pax7 marker (a), a 67% increase in the number of proliferating and early differentiating (MyoD positive) cells (b) and a 34% increase in cells undergoing late-stage differentiation (myogenin positive) cells (c) compared to the placebo group. By supporting this repair program, niacinamide/B_6 supplementation enhanced the proportion of actively regenerating myofibers (d), indicated by a 37% increase in embryonic myosin (eMHC), a marker of newly formed fibers undergoing maturation.*[2‡]

REFERENCES

1. Ancel S, Michaud J, Migliavacca E, et al. J Clin Invest. 2024 Nov 12;134(24):e163648.
2. Højfeldt G, Michaud J, Damgaard A, et al. medRxiv 2025.03.24.25323226; doi: https://doi.org/10.1101/2025.03.24.25323226
3. Nguyen JH, et al. Front Cell Dev Biol. 2019 Oct 29;7:254.

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