

















PALMITOYLETHANOLAMIDE

The growth of the older population has created an increasing need for **age-related solutions for pain relief**. In parallel, those following an active lifestyle are also looking for effective solutions for **exercise recovery**.

Palmitoylethanolamide (PEA) could offer a promising solution in both instances as it helps with rejuvenation and rehabilitation due to its analgesic and neuroprotective qualities.

PEA is an endogenous fatty acid produced naturally in the body in response to injury and stress, however, in very small amounts. Therefore, **supplementation may be required** for the aging and active population alike.

Bio-gen Extracts manufactures **high-quality**, **micronized PEA**, ideal for use in a variety of end product applications.

These statements have not been evaluated by the FDA. This product is not intended to diagnose, treat, cure or prevent any disease.



PALMITOYLETHANOLAMIDE

PEA is naturally found in protein rich foods such as egg yolks, peanuts, and some plants.

Since PEA is **naturally hydrophobic**, its application is limited to a few delivery formats. To address this, Bio-gen Extracts has developed a micronized form of PEA – REGENATE™ with improved bioavailability & functionality, making it ideal for use in a variety of end product formats.



Recommended Daily Intake: 300-1200mg²

Pre-clinical and clinical studies have established PEA's protective actions in multiple therapeutic areas like pain states and muscle damage.1

JOINT & MUSCLE HEALTH



· A randomized, double-blind study of 74 healthy adults receiving 350 mg of PEA daily for two weeks showed improvements in VAS (visual analog scale) pain compared to baseline values.1

EXERCISE RECOVERY 💸

- · A study with 28 healthy patients found that PEA may allow individuals to exercise at a higher intensity for longer. PEA supplementation reduced myoglobin and blood lactate concentrations at 1 and 3 hours post-exercise and increased protein kinase B phosphorylation immediately following exercise.²
- · In an analysis of 12 human studies, PEA supplements reduced chronic and neuropathic pain intensity without serious adverse effects.3
- · In a pivotal trial of over 600 people, PEA (300 or 600 mg/day) strongly reduced sciatic pain, with higher dose having a more beneficial effect. PEA reduced pain intensity by over 50% in just three weeks.



RESEARCH

JOINT & MUSCLE HEALTH

EXERCISE RECOVERY

SLEEP QUALITY

SLEEP QUALITY (z²

- · PEA reduces the activity of Fatty acid amide hydrolase that breaks down natural cannabinoid anandamide. This increases the levels of calming anandamide in your body, hence promoting relaxation.4
- · A study involving 103 adults over eight weeks indicated that the participants fell asleep three times faster compared to the placebo.⁵

REFERENCES:

- Healthy Males—A Double-Blind, Randomized, Placebo-Controlled Study -
- SelfDecode, 9-Sep-2021