designs for health® Australia

# PEA Supreme 300

Palmidrol is an analgesic that helps relieve pain


1 Vegetarian Hard Capsule

## OVERVIEW

> Contains Palmidrol from Levagen®+ a fatty acid amide
> LipiSperse® technology to significantly enhance water solubility and bioavailability/absorption
> Palmidrol is an analgesic that helps to relieve pain

### Active Ingredients (per vegetarian hard capsule)

| | |
|---|---|
| Palmidrol (Palmitoylethanolamide (PEA)) from Levagen®+ | 300 mg |
| Quercetin dihydrate | 30 mg |

| | |
|---|---|
| **Pack Size** | 42 |
| **Servings Per Pack** | 21 – 42 |

### Excipients

Calcium hydrogen phosphate dihydrate
PEG-35 castor oil
Microcrystalline cellulose
Lecithin
Colloidal anhydrous silica
dl-alpha-tocopheryl acetate
Magnesium stearate
Hypromellose
Medium chain triglycerides
Purified water
Lime oil coldpressed
Silicon dioxide
Olive oil

### Directions for Use

Adults: Take 1-2 capsules daily, or as directed by your health professional.

### Allergen Information

No added: soy, dairy or nuts.

### Prescribing Considerations

**Contraindications:**

Contraindicated in individuals hypersensitive to quercetin.[1]

Quercetin may modulate enhance the activity of digoxin, paclitaxel, pioglitazone and medications metabolised by CYP3A4 hepatic enzymes when used concomitantly.[1]

Quercetin may reduce the effectiveness antibiotic medications with concomitant use.[1]

**Warnings:**

Adults only. The medicine may interact with other prescription analgesic medicines, please consult your healthcare professional before use. Not to be used for more than 21 consecutive days. If symptoms persist, talk to your healthcare professional.

Designed and packed in Australia from imported ingredients.

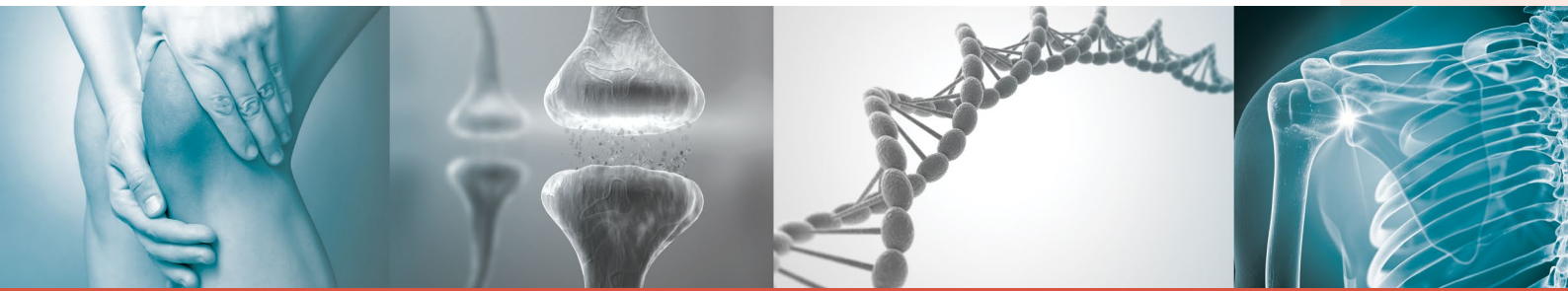
No Added Soy

No Added Dairy

No Added Nuts

No Artificial Flavours or Colours

No Added Preservatives



## EDUCATION

Chronic pain is defined as the persistent presence of mild to severe pain for at least 3-6 months beyond the usual duration that healing is generally expected following an illness or injury.[2] It is highly prevalent, affecting at least 19-24% of Australians aged over 45, (particularly females and older individuals), and 38-43% of people worldwide, with significant adverse influences on the quality of life and productivity of affected individuals.[2,3] Chronic pain is complex in regards to its' aetiology, pathophysiology and mechanistic classification, and consequently, its effective therapeutic management / treatment without the occurrence of side effects is an ongoing clinical challenge.[4,5]

### LipiSperse® Technology

Enabling the therapeutic potential of Levagen®+ Palmidrol (Palmitoylethanolamide [PEA]) requires enhanced absorption due to the suboptimal water-soluble properties of this lipid group.[6,7] LipiSperse®, a mixture of surfactants, polar lipids and solvents, is a novel delivery system scientifically formulated to increase the dispersion of lipophilic agents in aqueous environments. By preventing agglomeration in the gastrointestinal tract, LipiSperse® increases the surface area of PEA resulting in enhanced absorption and significantly increased plasma PEA concentrations compared with standard PEA formulations.[6]

### Palmidrol (PEA)

PEA, an endogenous acyl ethanonolamide, is a saturated fatty acid derived from palmitic acid that is synthesized within the lipid bilayer of cell membranes in various body tissues as required in response to stress, injury or pain.[5,6,8,9] Elevated levels of PEA have been observed systemically and locally in chronic pain conditions and during tissue injury and inflammation processes.[5,6]

PEA's significant analgesic properties are attributed to several direct and indirect underlying mechanisms. Specifically, PEA downregulates mast cell activation and degranulation and subsequent pro-inflammatory enzyme activity (COX, eNOS, and iNOS); activates the nuclear peroxisome proliferator activated receptor-a (PPAR-α) and G-protein coupling receptors; and indirectly activates CB1 and CB2 cannabinoid or transient receptor potential vanilloid receptor type 1 (TRPV1) channels.[3,4,6-8] The effect of PEA on multiple pain pathways underlies its beneficial effect on relieving pain and mild neuralgia pain.

### Quercetin

As a potent antioxidant and anti-inflammatory, quercetin has been shown to work synergistically to potentiate the pharmacological effects of PEA.[4,8,10]

### Mild Pain Relief

The beneficial impact of PEA for reducing mild pain symptoms has been clearly demonstrated in a number of clinical trials, with such efficacy observed to be consistent independent of age, gender or aetio-pathological causes of pain.[4,5,7,9]

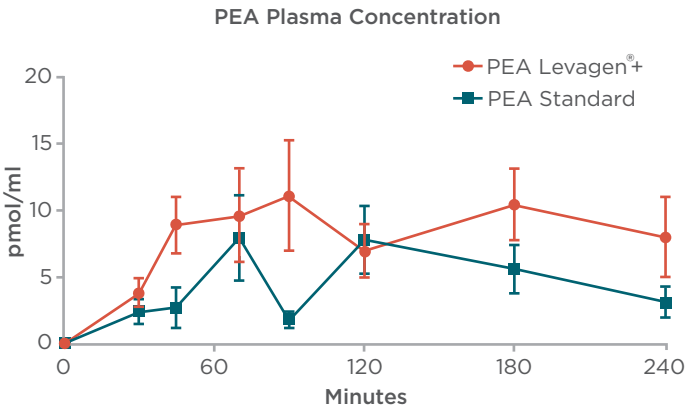



Figure 2: Plasma concentration time curves for PEA after a single 300 mg dose of the two different PEA preparations. Concentrations are expressed in pmol/mL ± SE. nÅ=14 per group.

Levagen®+ LipiSperse®

*References supplied on request.*