**Antioxidants** Clinical trials show antioxidant therapy is an effective treatment for chronic pain; Vitamin E reduces neuropathic pain; Vitamin C can lower morphine consumption after surgery; Coenzyme Q10 relieves statin-induced myopathy.28,29,30,31,32

**Vitamin D** Deficiency often presents clinically as muscle or bone pain.23,24,25

**Lipoic Acid** Very effective treatment for neuropathic pain.26,27

**Vitamin B1, B2, B6, B12** These produce a dose dependent decrease in various kinds of pain (heat, pressure, chemical); Increases sensitivity to pain meds; Their effect is likely mediated through serotonergic neurotransmitters.19,20,21,22

**Choline** Activates specific receptors in brain and spine that lower acute pain.17,18

**Oleic Acid** This fatty acid is a precursor of oleamide, an analgesic that affects neurotransmitters such as dopamine, serotonin, acetylcholine and GABA (gamma amino butyric acid), all of which play a role in pain signaling.4,5

**Carnitine** Deficiency of this amino acid may manifest as muscle weakness, pain (myalgia) or neuropathy. Supplementation reduces several types of chronic pain.6,7,8

**Magnesium** Lowers pain by blocking NMDA receptors in spinal cord; Effective in reducing post-operative pain.9,10,11

**Cysteine** Reduces pain caused by systemic inflammation due to its potent antioxidant properties.1,2

**Inositol** In animal studies, treatment with inositol induces antinociception (pain reduction).3,17

**Carnitine** Deficiency of this amino acid may manifest as muscle weakness, pain (myalgia) or neuropathy. Supplementation reduces several types of chronic pain.6,7,8

**Minerals** is a cofactor for the potent antioxidant superoxide dismutase, which fights free radicals, a known source of pain. Copper supplementation can relieve arthritic pain. Treatment with Selenium improves muscle pain in deficient patients. Research suggests both Zinc and Calcium play a role in the transmission of pain signals through nerves.12,13,14,15,16

**Inositol** In animal studies, treatment with inositol induces antinociception (pain reduction).3,17

**Oleic Acid** This fatty acid is a precursor of oleamide, an analgesic that affects neurotransmitters such as dopamine, serotonin, acetylcholine and GABA (gamma amino butyric acid), all of which play a role in pain signaling.4,5
REFERENCES


