

CELLNERGY WELLNESS POWER CREAM

Compiled By:
Dr. Sewite M. Negash Ph.D, NIH,
LifePharm Scientific Advisory Board Member

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ABSTRACT

Musculoskeletal health is critical for human function, enabling mobility, dexterity and the ability to work and actively participate in all aspects of life. According to the World Health Organization²⁰, a third of the world's population suffers from musculoskeletal conditions such as painful joints (arthritis) and back pain. Chronic pain, limitations in mobility, and the associated difficulties in daily life can lead to a decreased quality of life. LifePharm's Cellnergy Wellness Power Cream in conjunction with LifePharm's Cellnergy Wellness Device offers a unique solution designed to reduce joint discomfort and promote cartilage regeneration.

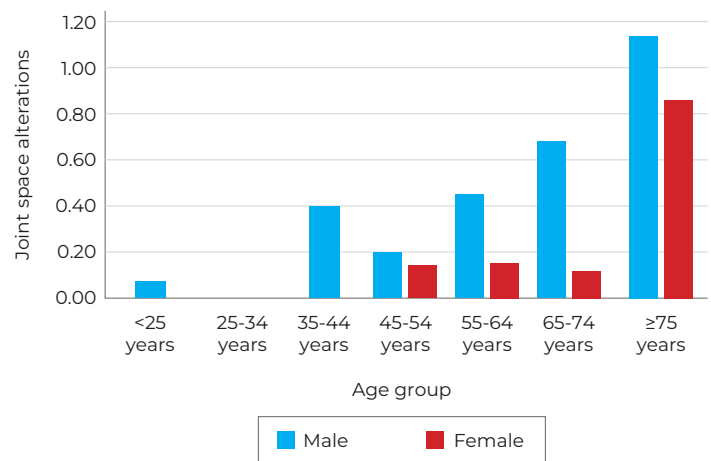
INTRODUCTION

Joint degenerative disorder develops as joints wear down, losing their ability to cushion bones, allowing bones to rub against each other and causing chronic discomfort. It is the result of normal everyday wear-and-tear, and this deterioration can be exacerbated by overuse or injuries.² Due to the lack of blood vessels, nerves, lymphatic vessels and the restriction of the Extracellular Matrix (ECM) on cartilage cells, the self-healing ability of articular cartilage after injury is very limited.⁸ The body can rely on two powerful healing mechanisms that can repair damaged cartilage:

1. Stem cells with optimal tissue regeneration potential¹
2. Fully functioning anti-oxidant and anti-inflammatory systems¹

However, during aging, stem cells decline in their regenerative potential and their ability to give rise to differentiated cells in the tissue, leading to joint deterioration. LifePharm's Cellnergy Wellness Power Cream in conjunction with LifePharm's Cellnergy Wellness Device offers a unique approach to providing the stimuli needed to promote cartilage regeneration.

JOINT SPACE ALTERATIONS PER AGE GROUP²²



CELLNERGY WELLNESS POWER CREAM

The Cellnergy Wellness Power Cream contains a unique proprietary blend of ingredients designed to re-activate stem cells and restore natural collagen levels. It pairs the healing ThermalWave Technology with a unique blend of compounds, including bioactive growth factors, offering immediate relief from joint aches as well as long-term collagen and cartilage restoration.

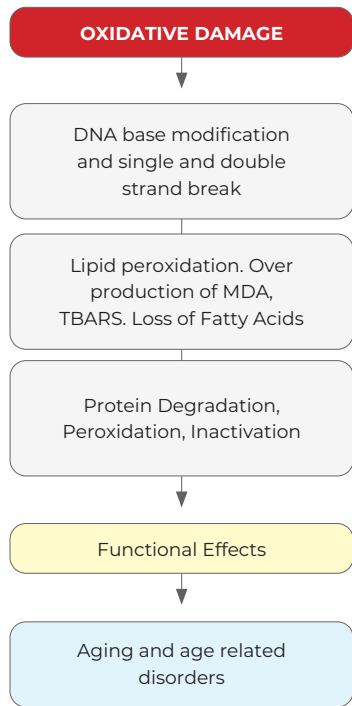
ThermalWave Technology

A critical component of the Cellnergy Wellness Power Cream is tourmaline, which emits far-infrared electromagnetic wave (4-14µm wavelengths), which match the absorption spectrum of human body hence getting absorbed by and increasing the temperature of human tissue.¹¹ This property, in turn, speeds blood flow, improves microcirculation and enhances immunity, critical components of cartilage regeneration and healing.

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REDUCTION OF INFLAMMATION AND OXIDATIVE STRESS FOR PAIN REDUCTION



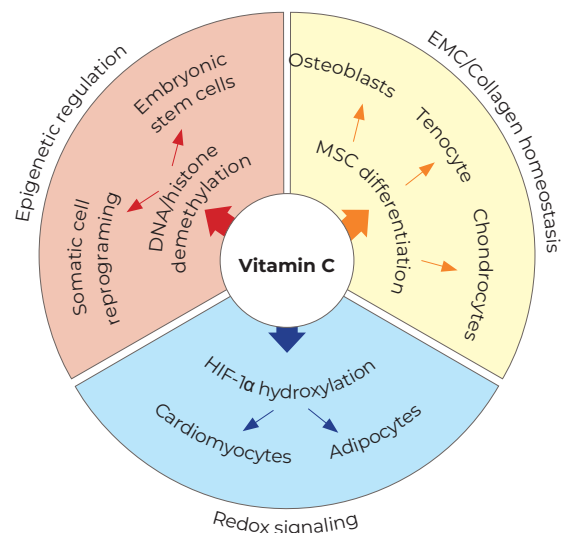
Oxidative stress, the result of an imbalance between the production of reactive oxygen species and their elimination by physiological protective mechanisms, which can lead to chronic inflammation and, consequently, many chronic diseases.¹⁰ Chronic joint inflammatory disorders such as osteoarthritis and rheumatoid arthritis have in common an upsurge of inflammation, and oxidative stress, resulting in progressive damage and disabling symptoms. The roles of the ingredients in Cellnergy Wellness Power Cream with well-established anti-oxidant properties are described below.

- **Arnica:** Arnica has traditionally been used in treating numerous medical conditions, including inflammation and pain. It inhibits both pro-inflammatory mediators and oxidative stress and activates cellular antioxidant pathways, thereby preventing further tissue damage.¹⁷
- **Hemp Seed Oil:** Hemp seed oil is an activator of the endocannabinoid system, a major signaling network, which plays a key pro-homeostatic role through the maintenance of a balanced inflammatory and cellular redox state.¹² Components of hemp seed oil have also been shown to reduce inflammation and relieve symptoms of inflammatory conditions, such as rheumatoid arthritis.
- **Vitamin C:** Vitamin C with its antioxidant and anti-inflammatory properties similarly provides protection against oxidative stress-induced cellular damage by scavenging reactive oxygen species and by protecting joint cartilage.³

INCREASED COLLAGEN PRODUCTION AND CARTILAGE RESTORATION

Most degenerative disorders of the joint involve dramatic changes to Extracellular Matrix (ECM), a large network of proteins and other molecules that surround, support, and give structure to cells and tissues in the body. Collagen is a key component of the ECM protein, and its synthesis is modulated by both Vitamins A and C.^{2,7} Local (topical) and systemic supplementation with vitamin A has been shown to increase dermal collagen deposition²¹ and has been found to be due to fibroblast differentiation and enhanced collagen synthesis.⁹

- **Vitamin C:** Vitamin C is involved in all phases of tissue repair and regeneration due to the role it plays in collagen formation and its antioxidant properties.³ Additionally, Vitamin C enables cells to generate and maintain healthy tissues, in particular those rich in collagens such as the skin, bones, and cartilage. In addition to regulating ECM/collagen homeostasis, vitamin C also plays a key role in the differentiation of mesenchymal stem cells towards osteoblasts, chondrocytes, and tendons.⁸
- **Hyaluronic Acid:** Hyaluronic acid is another critical component of the ECM. It is considered one of the key players in the tissue regeneration process. It has been shown to modulate inflammation, cellular migration, and angiogenesis (i.e., formation of new blood vessels and improved circulation), which are the main phases of wound healing.¹⁴ Exogenous hyaluronic acid can enhance chondrocyte synthesis of endogenous hyaluronic acid and proteoglycans, prevent the degradation of cartilage and promote its regeneration.¹⁵



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MAINTENANCE OF STEM CELLS TO SUPPORT HEALTHY CARTILAGE

There are many types of stem cells, and all share the characteristics of being able to self-renew and to differentiate into multiple cell lineages.¹³ These special properties are useful for restoring the functions of a variety of tissues. However, as stem cells age, they become dormant and lose their self-renewal and regenerative potential⁴ leading to tissue degeneration with age. The inclusion of bioactive growth factors, which consist of a patented formula OPT9, a blend of Phyto Embryonic State Extract (PESE) that contains Fibroblast Growth Factor (FGF-2) and a proprietary blend of marine and plant proteins, gives the Cellnergy Wellness Power Cream an ability to activate stem cells and regenerate cartilage.

CELLNERGY WELLNESS DEVICE

Cellnergy's advanced technology is a noninvasive terahertz and red-light wavelength generator device that is safe and natural, which stimulates the body with natural frequencies to help improve health and wellbeing.¹⁶ It activates physiological processes to help reduce inflammation, improve circulation, and promote relaxation.⁶ The device uses:

- **Terahertz Waves (THz):** Which penetrate deep into the bone marrow and vibrate at the same frequency as healthy cells to help stimulate cellular regeneration for accelerated tissue repair and overall vitality.⁶
- **630 nm Red Light Therapy:** Which penetrates the skin deeper than all light colors to boost Cellular Energy (ATP), helps support increased collagen production, increased blood circulation, accelerated healing, and reduced inflammation, fine lines, and wrinkles.¹⁹
- **Heat Therapy:** Which delivers controlled heat to targeted areas to help enhance blood flow, nutrient delivery to cells, elimination of toxins, alleviates pain, reduces muscle tension, and promotes relaxation.

SUMMARY

LifePharm's Cellnergy Wellness Power Cream and LifePharm's Cellnergy Wellness Device are two interventions, which work synergistically to offer immediate relief from joint discomfort and long-term benefits through the activation and renewal of stem cell activation, collagen restoration and cartilage regeneration.

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