



## **LifeWave® Explained: Explanations. Terms. Definitions.**

**How do the patches work if nothing enters the body?** An organic crystal is embedded in the patch. This crystal reflects specific wavelengths of light back in the body. These light waves tap into the body's natural flow of energy and ability to heal itself. For example, with the X39 patch, the brain is signaled to produce GHK-Cu, which promotes healing by activating collagen and repairing genes, particularly those genes responsible for regenerating pluripotent stem cells.

This process is based on two main principles. The first principle is **acupuncture**. LifeWave patches have all the benefits of acupuncture without the necessity of using needles. The second principle is **light frequency**. It has been known for thousands of years that specific frequencies of light cause specific changes in the body. For example, when you go out into the sun, your body automatically produces Vitamin D even though there is no Vitamin D coming from the sun. It is the specific frequency of light waves from the sun which stimulates our bodies to produce Vitamin D.

LifeWave patches work on the same principle. Once the patches are applied to a specific point on the body, the patch will start stimulating that point with a similar effect to that produced by using a needle. The patches use light to gently stimulate the acupuncture points which are connected to the body's **meridian system**, a network of channels or pathways. In Chinese Medicine philosophy the meridian system is thought of as the superhighway of energy (chi) flowing throughout the body. These meridians have various functions in the body, both physical and emotional.

**What is inside the patches?** LifeWave patches contain a combination of amino acids, water, stabilized oxygen, and natural organic compounds. They are made of 100% natural ingredients. They contain no chemicals or synthetic substances. They activate immediately once they touch the skin or are placed within three inches of the body. They can be effective when placed on clothing worn on the body. The LifeWave patches are non-transdermal, meaning that nothing is being transferred from the patch into the body.

**AHK-Cu** is a tripeptide that binds with copper. It is made up of three amino acids, alanine, histidine and lysine. It is referred to as the 'sister' to GHK-Cu. Its benefits include promoting lean muscle mass, bone density, cognitive functions, skin health, and nail and hair growth. AHK is activated by the X49 patch.

**Antioxidants** are molecules that protect the body from damage caused by oxidants or free radicals. They do this by neutralizing these reactive molecules, preventing them from causing oxidative stress, which can lead to cell damage, aging and various diseases. Glutathione is referred to as the "master antioxidant" because it is a potent antioxidant involved in detoxification. Other top antioxidants include CoQ10, Vitamins E, C, A and Selenium.

**Beta-Oxidation** is a metabolic process that produces more energy when fatty acids are broken down in the mitochondria of cells to generate energy for cellular functions. This

process involves the sequential removal of two-carbon units from the fatty acid chain in the form of acetyl-CoA, which can then enter the citric acid cycle (Krebs cycle) to produce ATP. Beta-oxidation is crucial for energy production, especially during periods of fasting, prolonged exercise or when carbohydrate stores are low. It allows the body to utilize stored fat as a major energy source. Overall, beta-oxidation is a vital process in energy metabolism, converting stored fatty acids into usable energy for cellular functions.

**Carnosine** is a naturally occurring dipeptide, composed of two amino acids: beta-alanine and histidine. It is found primarily in muscle tissues and the brains of humans and animals. It is highly concentrated in muscle and brain tissues. Carnosine not only provides antioxidant and anti-aging properties, but also plays several important roles in cellular function, overall health and performance. Carnosine supports healthy immune responses, muscle function, exercise performance and improved brain and eye health. Carnosine's ability to prevent glycation may have protective effects for individuals with diabetes. Carnosine levels in the body have been shown to decline as a byproduct of the aging process. Carnosine is activated by the **Y-Age Carnosine patch**.

**Collagen** is a structural protein that is abundant in the human body and plays a critical role in maintaining the strength, elasticity and integrity of various tissues. It is the primary component of connective tissues, including skin, bones, tendons, ligaments, cartilage and blood vessels. Collagen is often referred to as the 'scaffolding' that holds the body together.

**Detoxification** is the physiological or medicinal process of removing toxic substances from the body. The body naturally detoxifies itself through various systems including the liver, kidneys, skin and lungs, which process and eliminate waste and toxins. Various practices are aimed at supporting or enhancing the body's ability to eliminate toxins, such as eating a nutrient-rich diet, fasting, taking certain herbal supplements and colon cleansing.

**Epithalamin** is a peptide derived from the pineal gland, specifically from the epithalamus region of the brain. It influences the production of melatonin, the hormone responsible for regulating the body's circadian rhythms and sleep-wake cycles. Research has shown its effects on aging, immune system regulation, and oxidative stress. This peptide is activated by the **Alavida** patch.

**Glutathione** is a tripeptide composed of three amino acids: cysteine, glutamine, and glycine. Glutathione is a powerful antioxidant produced by the body. It plays a crucial role in maintaining cellular health, protecting cells from oxidative stress and supporting the immune system. It is recognized as the body's 'master antioxidant' because it's widely involved in so many biological processes and functions. In fact, glutathione is involved in virtually every aspect of health, including heart health, brain health, nerve function, and even sleep. Glutathione assists in detoxification and is the body's greatest source of immune support. Glutathione is activated by the **Y-Age Glutathione** patch.

**GHK-Cu** is a tripeptide made up of three amino acids: glycine, histidine and lysine. It occurs naturally in human plasma. GHK-Cu promotes wound healing, attraction of immune cells, antioxidant and anti-inflammatory effects, stimulation of collagen and glycosaminoglycan synthesis in skin fibroblasts, and promotion of blood vessel growth. It can modulate the expression of many genes, generally reversing gene expression to a

healthier state. GHK-Cu impacts a gene known as SOX2 which influences stem cell behavior by increasing their proliferation rate. GHK-Cu is activated by the **X39** patch.

**Herxheimer Effect** (Herx Reaction) is a temporary worsening of symptoms that can occur when the body rapidly detoxifies or when there is a sudden die-off of harmful microorganisms, such as bacteria, fungi or parasites. Die-off can cause many unpleasant symptoms that make it challenging to stick with a treatment protocol, but these are typically temporary and signal that you're on an effective healing path.

**Melatonin** is a hormone which is naturally produced by the pineal gland in the brain. It plays a key role in regulating the body's circadian rhythm, or sleep-wake cycle. Melatonin is activated by the Silent Nights patch.

**Mitochondria** are referred to as the 'powerhouses' of the cell because they generate most of the cell's supply of adenosine triphosphate (ATP). The key functions of mitochondria are energy production, metabolic regulation and maintaining cellular health.

**Oxidants**, also known as reactive oxygen species (ROS) or free radicals, are highly reactive molecules that contain oxygen and have the potential to cause damage to the cells and tissues of the body. These molecules have an unpaired electron, which makes them unstable and prone to interacting with other molecules, leading to a chain reaction of damage in biological systems.

**Peptide** is a short chain of amino acids linked together by peptide bonds. Peptides are the building blocks of proteins, but they are typically smaller in size compared to full proteins. The simplest peptide, a dipeptide, consists of two amino acids. Tripeptide has a chain of three amino acids. Larger chains of amino acids are referred to as polypeptides. Short peptides play a role in cellular signaling regulating various biological processes such as hormonal activity, immune responses and cell-to-cell communication.

**Photobiomodulation** is light therapy that utilizes non-ionizing forms of light sources (electromagnetic energy) to trigger changes within cellular structures. Mitochondria are particularly receptive to this process. The human body emits mostly infrared radiation or light.

**PhotoTherapy** is light therapy. We know that specific light frequencies cause specific changes within the body. LifeWave technology is an advanced form of phototherapy utilizing a non-transdermal patch delivery system that is composed of crystals made from organic materials. When exposed to body heat the patch emits specific wave lengths of light which activate particular nerve and skin points on the body. The patches begin to work immediately upon placement. LifeWave's patented technology is unique because it is the only phototherapy product that uses human body heat as its power source.

**Pluripotent Stem Cells** have the ability to differentiate into nearly all the cell types in the body. They can become cells of tissues such as muscle, blood, nerves, skin, etc. They can be used to generate any tissue type needed for repair.

**Retracing** is a concept primarily incorporated in the philosophies underlying holistic healing practices. It refers to the process of re-experiencing or a worsening of old symptoms before experiencing improvement or healing. Retracing is a natural function of all bodies. These symptoms can be physical, psychological or emotional and are thought to be part of the body's natural process of recovery.

**Royal jelly** (a.k.a. Bee milk) is a creamy white substance secreted by worker bees that is used to feed the queen bee. It is composed of water, proteins, sugars, fats, vitamins, minerals, amino acids, enzymes and antioxidants. It plays a crucial role in the development of the queen bee. It is responsible for the fact that the queen bee grows larger, lives longer (2-5 years) and is fertile while worker bees are sterile and have shorter life spans (approximately 6 weeks). Royal jelly peptides have many additional health benefits: anti-inflammatory, antibacterial, anti-hypertensive, anti-oxidative, anti-aging, neuroprotective, wound healing, and immune modulation. Royal jelly is activated by the **Y-Age Aeonpatch**.

**Superoxide dismutases** (SOD) are a group of enzymes that play a crucial role in protecting the body from oxidative stress by neutralizing superoxide radicals. These constitute a very important antioxidant defense against oxidative stress in the body. Increases in SOD can effectively reduce cellular oxidative stress, lipid metabolism, inflammation, and oxidation.

**Telomeres** are protective caps located at the ends of chromosomes. Their primary function is to protect the ends of chromosomes from deteriorating or from fusing with neighboring chromosomes, ensuring that the genetic information remains intact during cell division. When telomeres become too short, the cell can no longer divide properly, leading to a state of cellular senescence (a state where the cell stops dividing) or apoptosis (programmed cell death). These are natural mechanisms to prevent damaged or abnormal cells from proliferating. Studies support a link between biological age (telomere length) and longevity. Tests exist that can measure your biological age versus your actual chronological age.