

# **LIFEWAVE SCIENTIFIC STUDY BY MEANS OF AN NM4 GAUGE**

## **AUTHORS**

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## **SUMMARY**

This work verifies the effects of the application of the LifeWave devices by means of an instrument of the latest generation Mod. NM4 which measures the neuromuscular potentials, in a non-invasive manner, both before and after the use of the devices themselves, on a sample of over 100 subjects.

## **PRESENTATION**

The purpose of this scientific study is that of demonstrating the efficacy and effect of the IceWave Devices (LifeWave pain patches) with scientifically proven data and values, under varying degrees of pain, inflammation, contracture and muscular tension, availing itself of both subjective (patient) data, as well as more objective findings supplied by way of use of the new-generation muscular potential gauging device called NM4.

## **MATERIALS**

- 1 – LifeWave patches (IceWave)
- 2 – NM4 Gauge

## **WHAT ARE LIFEWAVE PATCHES?**

LifeWave patches consist of a hypoallergenic adhesive that can not be affected by body impurities and fat.

They contain a mix of amino acids, water, sugars, oxygen and organic substances, applied to a polyester layer and sealed in a polymer covering.

Nanotechnology (nano = 1 millionth of a millimeter) allows one to work with extreme precision and compounding at the atomic level.

Consequently, the LifeWave patches are compounded from tetrahedric silica quartz nanocrystals that are assembled and positioned with extreme precision in an amino acid solution.

When they receive the infrared from the body, containing the information relating to the condition of the organ to which the acupuncture point is connected, the crystals vibrate and consequently bring about the rotation of the amino acids.

This rotation sends a wave to the body which operates on the meridians freeing the bio-energy flow of the concerned meridian and connected organ, realigning the frequencies to the original healthy state.

Hence, the LifeWave device is adhesive and hypoallergenic and, as such, it is applied to specific points of the body, just like an ordinary adhesive bandage.

All LifeWave patches are produced at plants registered with the FDA, Food and Drug Administration, which meet the requirements of the GMPs (Good Manufacturing Practices, which is to say that their manufacture is guaranteed) and the QSR (Quality System Regulation, which is to say that they are certified in accordance with a quality system comparable to our ISO 13485).

The LifeWave products do not contain magnets, batteries, copper or harmful metals. The patches are not a transdermal infusion system, which is to say that they do not transmit any chemical component to the human body.

Hence, this innovative technology uses *nano-structured biomolecular crystals* (orthomolecular organic structures), made up of a mix of amino acids, water, oxygen and organic elements, set on a substrate of polyester, and sealed in a polymer shell that guarantees impermeability.

All the active components are contained in the CFR (Code of Federal Regulations) Title 21 listing of substances generally recognized as safe as allowed by the Food and Drug Administration.

The *nano-structured biomolecular crystals* passively interact with the human body, sending specific instructions to it, through the acupuncture points. A modulation of the electron flow and of the thermomagnetic frequency is induced, for the purpose of increasing particular biological reactions, which are naturally present in the human body.

In other words, the LifeWave patches use the wide-range infrared radiation, emitted by the human body, as an energy source that activates the nanocrystals inside the same and makes them operate as, non chemical, molecular antennae and information transmission centers.

## **PRINCIPLE AND THEORY**

The concept that information may be conveyed to the human body, in the form of electromagnetic waves is commonly accepted. It has been known for thousands of years that specific light frequencies (among which, infrared rays) can cause precise changes in the human body. When we are exposed to sunlight, a light frequency makes our body produce vitamins of the D-group. Another light frequency, such as ultraviolet rays, will, as an effect, cause the body to produce melanin, the chemical substance that gives us a tan.

Both the light we see, and the sounds we hear, are solely differing parts of the electromagnetic spectrum. It has been scientifically proven that other parts of the electromagnetic spectrum also possess beneficial biological effects.

Moreover, there is a principle of physics according to which the energy of the atom proton, associated with the human thermomagnetic field, is able to interact with passive orthomolecular organic materials. The condition being that these materials are placed parallel to the *plane of rotation*. This position, on the basis of the principles of electrodynamics, induces a flow of electrons.

It is known that electric currents, known as biocurrents, circulate continuously in the human body. The nerves carry electric impulses to all parts of the organism, from and to the brain, however it is not as well known that the proteins are natural semiconductors and, therefore, they transmit electric impulses.

The mechanism that controls chemical reactions in cells is represented by the electromagnetic oscillations, or rather frequencies, of the atoms of the involved substances.

In a way, one could say that all the biological processes are controlled by a *chemical code* that, in turn, is controlled by a *frequency code*.

Moreover, every type of cell has its own characteristic resonance frequency.

The key to succeed in modulating the flow of electrons, so that biologically important processes are activated, is the development of a distribution system able to supply specific electric frequencies that favor appreciable effects.

That which was essentially done by David Schmidt, the inventor of the LifeWave patch, was to use the electronic and magnetic characteristics of the human body that, as a cellular radio, transmits specific bioelectric signals from the patches to the body itself.

In a way, the natural substances present in the LifeWave patches operate as transmitters of precise electric frequencies when they come into contact with the body's magnetic field. On a practical level, the LifeWave patches are a technology that makes a group of biologically important electric frequencies, present in various parts of the electromagnetic spectrum, available to the human body. These frequencies are achieved by way of selection of the substances present in the patches, their nano-structure and the information process they are subjected to. The bioelectric frequencies are associated in resonance with small subcellular components, such as membrane receptors and the enzymes present in other organs. The various types of LifeWave patches activate specific organs, with different sets of bioelectric frequencies.

In theory, the LifeWave device can be applied to any point of the body where one wishes to induce a beneficial reaction. However, interestingly enough, the most effective application points seem to correspond to the acupuncture system points. This correlation should not arouse surprise as these are typically points of high electric conduction.

## **NM4 GAUGE – DEVICE DESCRIPTION**

### **PRINCIPLES OF OPERATION**

The NM4 device is a device for the measurement of neuromuscular potential. It has 4 measurement channels with dual input that, by way of two measurement and one reference electrodes, allow the elimination of noise and external interference.

## METHOD OF APPLICATION

Electromyography (EMG) is the recording of the electric activity of the muscles. Superficial EMG uses surface electrodes for recording, instead of needle electrodes, and it is therefore a non-invasive detection technique.

The electric activity of the muscles is due to the fact that a nervous stimulus along an alpha motor neuron releases acetylcholine in the motor plates that the ramifications of the motor nerve form with the muscular fibers of the motor unit (MU) that are innervated by the same. The acetylcholine combines with the postsynaptic membrane of the muscular fibers modifying their permeability to ions. Consequently, one has an ionic movement that causes a change in the potential of the postsynaptic membrane of the muscular fibers, or rather a depolarization that then propagates to the motor plate in both directions along the muscular fibers bringing about the contraction of the muscular fibers.

The extension of the action potential of a single fiber depends on the diameter of the fiber, the distance between the fiber and the electrode (it decreases as the distance between the detection electrodes and the fiber increases), etc.

The values generally range from a few microvolts to tens of millivolts.

As instead regards the harmonic component, the values range between a few Hertz and approximately 200 Hertz. With the increase in muscular effort, the spectrum of frequencies moves towards the lower frequencies (this as the speed of the action potentials decreases) and the amplitude increases correspondingly.

The environment in which we live is continuously subject to electromagnetic interference. Moreover, the system, with the other connected electrical devices, contributes to add its own noise. Both the human body and the electrodes of the EMG devices, and the like, channel this interference and create disturbances that must be isolated from the detected signal. The well-tested method of differential amplification is used for this purpose.

## DATA AND RELATED ANALYSES

The data of a casual sampling of 39 patients taken among the total of **117** subjects are shown below.

Patient	Age	Gender	Physical Problem - Painful Area	Pain Perception	Pain Following Application	NM4 Detection - Before	NM4 Detection - After
A.C.	50	M	RIGHT CERVICAL	5	0	30 MIN. MAX. 219	37 MIN. MAX. 317
Considerations:							
A.M.	53	M	LUMBAR R/L	7	4	MIN. 48 L MAX. 427 L MIN. 40 R MAX. 188 L	MIN. 43 MAX. 252 MIN. 42 MAX. 82
Considerations: Much more ample range of motion							
Arc.IMP.	63	M	R LUMBAR	7	0	MIN. 164 in thorax MAX. 808 in thorax	MIN. 138 MAX. 529
Considerations: Much more ample range of motion							
Ant.San.	46	F	L5/S1 DISCAL HERNIA	10	5		
IL.PEN.	56	F	LEFT SHOULDER	6	3	MIN. 66 MAX. 130	MIN. 64 MAX. 169
Considerations: Greatly prolonged and much more ample range of movement							
Mar.San.	76	F	R KNEE L KNEE	10 10	0 0		
M.LION.	58	F	MUSCULAR TENSION TRAPEZIUS	4	0	MIN. 60 L MAX. 73 L MIN. 42 R MAX. 54 R MIN. 54 in motion MAX. 489 In motion	MIN. 62 MAX. 89 MIN. 51 MAX. 60 MIN. 66 MAX. 1255
Considerations: Much more ample range of motion with zero pain. The patient is able to make the entire movement (1255) without pain.							
Cin.Tom.	45	F	R SCAPULA	9	3	MIN. 69 at rest MAX. 85 at rest MIN. 86 In motion MAX. 333 In motion	MIN. 71 at rest MAX. 81 at rest MIN. 74 In motion MAX. 169 In motion
Considerations: Much more ample range of motion and less pain							
Ag.Ad.	62	M	LEFT LUMBAR	10	0	MIN. 28 MAX. 32	MIN. 25 MAX. 107
Considerations: The muscle contracts much more due to the absence of pain.							
Car.Arc.	64	F	LEFT SCAPULA	6	3	MIN. 62 MAX. 87	MIN. 55 MAX. 67

Patient	Age	Gender	Physical Problem - Painful Area	Pain Perception	Pain Following Application	NM4 Detection - Before	NM4 Detection - After
MAR.DIG.	47	F	CERVICODORSAL L	10	6	MIN. 100 L	MIN. 54 L
						MAX. 114 L	MAX. 67 L
			CERVICODORSAL R	10	4	MIN. 58 R	MIN. 58 R
						MAX. 78 R	MAX. 63 R
Considerations: Evident reduction of pain and muscular tension.							
Tiz.Ram.	47	F	CERVICAL	4	1	MIN. 56 L	MIN. 52 L
						MAX. 75 L	MAX. 62 L
						MIN. 179 R	MIN. 133 R
						MAX. 194 R	MAX. 155 R
Considerations: Less pain and less muscular tension.							
Let.Sig.	56	F	Left Shoulder	9	0	MIN. 82	MIN. 71
						MAX. 129	MAX. 290
Considerations: The muscular activity (movement) increased under effort.							
Rom.Car.53	53	F	Big toe left foot	8	3		
St.Sal.	48	F	Lumbar sciatica	5	0	MIN. 26	MIN. 28
						MAX. 56	MAX. 64
Considerations: Much more ample range of motion, reached a max. contraction of 126.							
Il.Pen.	57	F	Left shoulder	5	1	MIN. 69	MIN. 60
						MAX. 84	MAX. 74
Gi.Tes.	18	F	Cervical	5	3	MIN. 70	MIN. 52
						MAX. 95	MAX. 69
Br.Cas.	50	F	Gastric pain	9	1		
Energy on stomach 36 and glutathione on cv 17							
Sil.Bia.	55	F	Cervical	8	4	MIN. 35	MIN. 28
						MAX. 58	MAX. 35
Br.Bian.	60	F	Widespread pain arm/shoulder	8	4	MIN. 56	MIN. 56
						MAX. 103	MAX. 61
Pas.Cecc.	85	F	Widespread and localized eye pain	10	4	MIN. 150	MIN. 42
						MAX. 170	MAX. 79
Mar.Par.	58	F	Widespread pain on foot	5	2	MIN. 26	MIN. 13
						MAX. 49	MAX. 30
An.Dim.	63	M	Left knee	10	7	MIN. 83	MIN. 63 Standing
						MAX. 149	MAX. 71 Standing
							MIN. 69 Contracted
							MAX. 81 Contracted
Mar.Deb.	61	M	Cervicalgia	6	0	MIN. 55	MIN. 21
						MAX. 59	MAX. 24

Patient	Age	Gender	Physical Problem - Painful Area	Pain Perception	Pain Following Application	NM4 Detection -Before	NM4 Detection -After
Rit.Laz.	72	F	Muscular inflammation	7	3	MIN. 35	MIN. 19
			Left pectoral muscle			MAX. 132	MAX. 26
Fr.Sap.	53	M	Widespread lumbar pain	8	2	MIN. 26 L	MIN. 21 L
						MAX. 42 L	MAX. 29 L
						MIN. 29 R	MIN. 16 R
						MAX. 50 R	MAX. 20 R
Fr.Ser.	64	M		5	3	MIN. 20	Under stress
						MAX. 29	From 540 to 140
Considerations: Muscular activation, needed less of an effort to make a wider range of motion.							
Gue.Ricci	65	F	Right knee pain	10	2	MIN. 60	MIN. 40
						MAX. 133	MAX. 65
Mar.Belf.	58	F	Cervicalgia	6	3	MIN. 73	MIN. 42
						MAX. 157	MAX. 67
San.Dan.	71	M	Painful discal hernia	6	1	MIN. 74	MIN. 33
						MAX. 112	MAX. 51
Lu.Tr.	38	M	Post surgery Left foot articulation	6	1		
An.Gard.	45	F	Lumbar pain	8	1		
An.Tom.	58	F	Cervicalgia	10	5		
Gab.Pag.	43	F	Lumbar sciatica	10	5		
Di.Bur.	61	F	Right arm	8	4	MIN. 63	MIN. 28
						MAX. 147	MAX. 63
Gi.Sor.	16	F	Left knee	10	6	MIN. 40	MIN. 36
						MAX. 75	MAX. 48
Dan.Gio.	49	F	Left intercostal pain	5	1	MIN. 23	MIN. 23
						MAX. 56	MAX. 56
Considerations: Electromyographic detection unchanged (bone pain) and zero pain.							
Br.Cas.	47	F	Left ankle sprain	7	0	MIN. 57	MIN. 49
						MAX. 150	MAX. 56
Nun.Lo	ELECTROMYOGRAPHIC TEST WITH ENERGY PATCHES TO VERIFY THE INCREASE OF ENERGETIC POTENTIAL						
	MIN. 58	Rest					
	MAX. 112	Rest					
	MIN. 61	Under stress (with forearm muscular contraction)					
	MAX. 135	Under stress (with forearm muscular contraction)					
	With Energy Enhancer patches	Min. 60 max. 228 (increase of 100% more)					
	With inverted patches	Min. 60 max. 102					
	Clear right on the left						
(32 WITH ICEWAVE PATCHES FOR PAIN AND 1 WITH ENERGY PATCHES FOR INCREASE IN STRENGTH)							



## CLOSING CONSIDERATIONS

The analysis of the data shown in the preceding paragraph highlights that the measurements carried out with the NM4 device, before and after the application of the LifeWave devices, on over 100 patients, detect the changes as highlighted by the sensations and checks carried out with the electromyographic device on the patients themselves.

We can therefore demonstrate that the use of the IceWave class I medical devices for pain control have a very important and almost immediate effect on the moderation of the muscular contractions and tensions, as well as of the associated pain.

All microvolt measurements showed a considerable improvement of the range of motion of the joint and of the various movements whose range returned to normal thanks to the solution of the various problems.

Therefore the instrumental methodology used is absolutely useful to obtain objective data that confirm the effectiveness of the application of the LifeWave devices, both in the acute phase of the pain in which the collected results have provided very important scientific evidence, as well as in the chronic phase in which however the moderation of the pain felt by the patient was proportional to the results obtained with the NM4 device.

A further noteworthy data point is the detection of the increase of the muscular energetic potentials thanks to the use of the Energy Enhancer devices on patients with normal or scanty muscular density in which an increase of the bioelectric potential of up to 100% in a few seconds was detected, therefore opening various application fields both on a sporting level, as well as in the geriatric field.

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