



Case Study

Metodo Frequency® (Frequency Method) Holistic Therapeutic-Technological Method Based on Haptic Sensory Vibration for Treating Case Report of Pain and Inflammatory Symptoms of Painful Ovulation and Dysmenorrhoea

Giovanni Peduto*

Kinesiologist, Professor of Physical Education, Italy

***Corresponding author:** Giovanni Peduto, Kinesiologist, Professor of Physical Education, Italy

Citation: Peduto G (2024) Metodo Frequency® (Frequency Method) Holistic Therapeutic-Technological Method Based on Haptic Sensory Vibration for Treating Case Report of Pain and Inflammatory Symptoms of Painful Ovulation and Dysmenorrhoea. Gynecol Obstet Open Acc 8: 220. DOI: <https://doi.org/10.29011/2577-2236.100220>

Received Date: 16 November 2024; **Accepted Date:** 22 November 2024; **Published Date:** 24 November 2024

Abstract

Introduction

The **Metodo Frequency®** is a non-invasive method that uses sound frequencies in the form of haptic mechanical vibration, referred to as Haptic Vibe Sensory, used for the rebalancing of organic and tissue dysfunction that aims to reduce and/or disappear the symptoms of certain physiological problems and acts quickly, markedly and sustainably; it is currently used in the holistic domain for some specific disorders, namely: painful ovulation; dysmenorrhoea; polycystic ovary; and other studies in progress. In testing the method, I came across many cases of painful symptoms during the menstrual cycle phase, such as dysmenorrhoea, or pre-menstrual cycle, such as mittelschmerz, and polycystic ovary symptoms. By treating them with this method, patients have experienced instant and lasting benefits throughout the premenstrual and menstrual phase, both during a single menstrual cycle and also in subsequent cycles.

What is unique and why is it important?

The study is based on the intuition of **Dr. Giovanni Peduto**, Chinesiologist (formerly creator of term Chinesiologia Sensoriale™), in using devices to increase the perception of mechanical vibrations on the body, specifically **Woojer** (respectively **Strap™ Edge** and **Vest™ Edge**) devices to apply to the human body sound frequencies, in the form of vibrations, capable of producing physiological effects, painkillers, anti-

inflammatories, both skeletal and organic muscle.

The patient's main concerns and important clinical results.

The main concerns of my patients were:

- the effectiveness of the treatment
- the duration of efficacy
- the contraindications

The important results:

- few sessions to have a positive effect
- reduction in the use of pharmaceuticals

The main diagnoses, interventions, and outcomes.

The main diagnoses were based on the objective palpatory examination and the verbal pain scale (VRS) .

The intervention and control were based on repeating the request for pain perception and in some cases the comparison check of ESR and PCR and PCK blood tests.

Conclusion

With this method, we realized the effectiveness of sound frequencies as a form of pharmaceuticals to treat certain symptoms, without the undesired effects.

Keywords

Frequency, haptic vibe sensory, pain, inflammatory symptoms, quicky effect, painful ovulation, dysmenorrhoea.

Introduction

This intuition has allowed the application, in studies previously conducted by researchers, through these devices; therefore the method itself uses previous studies but with the use of devices, not born for these purposes (but to expand haptic sensations during gaming), emphasizing the originality of the method, and marking the effectiveness of previous studies as:

- Owens, J., Marsh, G.A.: Binaural Auditory Beats Affect Vigilance Performance and
- Mood. In: *Physiology & Behavior*, 63 (2), p.249-252, 1998;
- Various authors: Binaural beat technology in humans: a pilot study to assess neuropsychologic, physiologic, and electroencephalographic effects. In: *Journal of alternative and complementary medicine* 13 (2), p.199-206, 2007
- Wahbeh, H., Calabrian, C., Zwickey, H.: Binaural beat technology in humans: a pilot study to assess psychologic and physiologic effects. In: *Journal of alternative and complementary medicine* 13 (1), p.25-32, 2007

(Other See reference to Bibliography)

Dysmenorrhoea

Dysmenorrhoea is the medical term given to the cycle when it is painful, so-called menstrual pain, and it affects more or less all fertile women of any age. The pain is intense and occurs in the lower abdomen, a few days before the onset of menstruation; usually, it is a sharp pain, sometimes with constant cramping. Dysmenorrhoea is one of the most common symptoms of premenstrual syndrome; therefore, it may be associated with 'accessory' or 'consequential' symptoms such as headaches, nausea, constipation or diarrhoea and lumbago, but the main symptom is pain in the lower abdomen.

Painful Ovulation – Mittelschmerz

In some women, ovulation is accompanied by abdominal or pelvic pain. The medical term for mid-cycle ovulation pain is

mittelschmerz (derived from the German words medium and pain) and about 20% of women experience pain during this phase. Ovulatory pain occurs approximately 2 weeks after the onset of menstruation and coincides with the rupture of the mature ovarian follicle and the subsequent release of the egg cell. The pain may be either bilateral or unilateral and may vary from a slight twinge in the side to severe discomfort. The pain may occur before, during or after ovulation.

Polycystic ovary

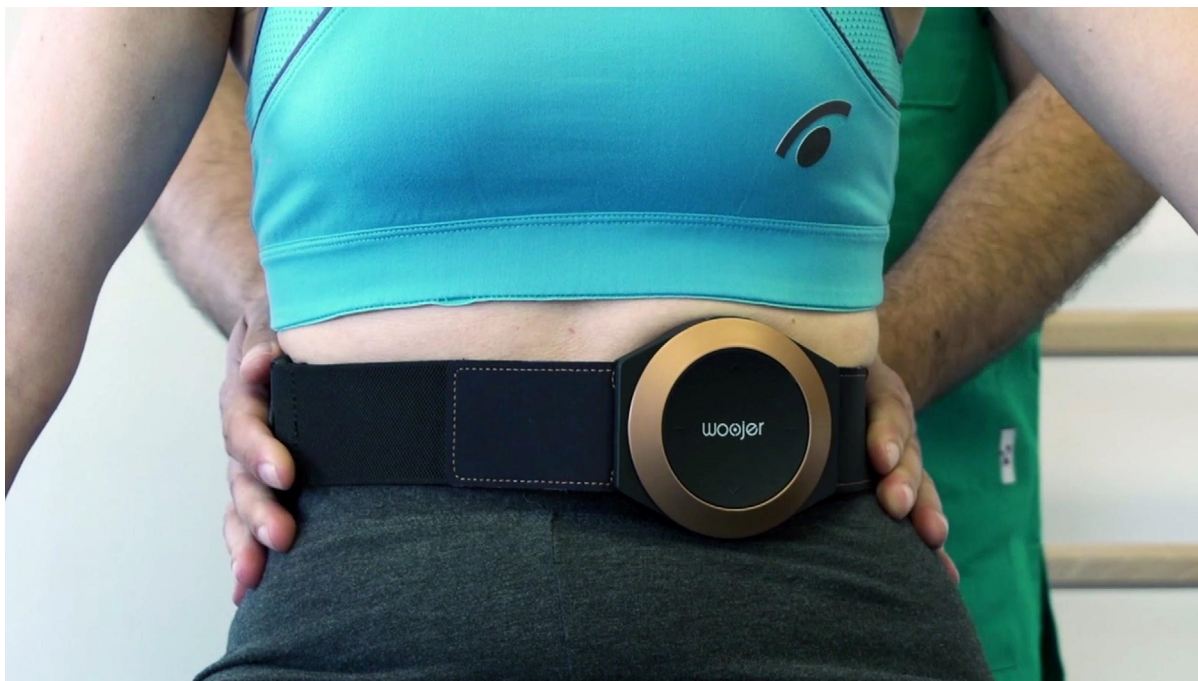
Polycystic ovary, also known as polycystic ovary syndrome (PCOS), is an endocrine condition that affects women of reproductive age. It is characterized by a combination of symptoms, which may include:

- Irregular or absent menstrual cycles;
- Ovarian hypertrophy;
- Decompensated hormone levels;
- Hyperandrogenemia.

The diagnosis of PCOS is usually made on the basis of symptoms, hormone tests, pelvic ultrasound and the exclusion of other similar conditions. Although the exact cause of PCOS is not completely understood, genetic and insulin factors seem to play an important role in the development of the condition.

The physiological effect

Every organ in our body emits its own characteristic frequency, and when an organ is sick or has a dysfunction, this frequency deviates from the norm. The use of sound frequencies becomes useful if a physical mechanism called resonance is taken into account: for example, if two pendulums or diapasons are placed side by side and on the same wall, they tend to sync (C. Huygens, 1665). The synchronization, however, takes place if the two diapasons are equal, of equal frequency. Our body also obeys this law, so a sick organ can be "helped" with a sound, for example, to re-tune to the right frequency. The **Metodo Frequency®** aims to research its curative aims, which allow cells and brain areas to be stimulated, through stimulation by both dermatomes, via the associated pathways, and by hearing through the use of headphones directly connected to haptic devices.



- Cell stimulation occurs because the cells in our body vibrate continuously, in a movement that follows precise and never random directions. We are composed of approximately **37.200 billion cells** that communicate with each other “vibrating”, neither oscillating nor “ringing” randomly. It is possible to distinguish the cells that are differentiating from those that produce repair molecules, as well as those that suffer and die (**Carlo Ventura**, professor of molecular biology at the University of Bologna and director of the Guna ATTRE laboratory, Advanced Therapies and Tissue REgeneration, recently established at the “Innovation Accelerators” of the Bologna CNR), explains this. This movement, at the level of microtubules and cellular filaments, has a certain resonance frequency, known as the “base note”, emitted according to the various organic functions of the cells of the organ itself. When the organ is healthy, its cells vibrate in a mutually harmonious manner. In the case of an alteration of the normal function of the organ, on the contrary, they vibrate in a disharmonious manner. The application of an external frequency, which is transmitted to the body through devices, causes this vibration to create a counter-resonance within the body. It produces the effect of re-harmonizing the natural vibration of cells, „re-harmonizing them“ and restoring the natural function of the organ. Just as the tissues differ between each other, such as, muscular, nervous, epithelial, blood, glandular, so do the cells that make up them and the frequencies that generate them by intervening on the rebalancing of individual tissues and organs.

- Biochemically, for example, a drug’s (medicine) molecule reaches its receptor on the cell membrane and the encounter between the molecule and receptor initiates the reaction within the cell itself. But with the use of a frequency you can access the cell, instead of the molecule, it is the frequency that activates the receptor and opens the cell; a bit like a key that to open a door has to be inserted into the slot of the door (drug) and, instead, to open a gate remotely you have to use a remote control that activates it allows the frequencies issued by the latter to open the gate (frequency).

- In the brain (through the application of audio headphones) listening to specific frequencies (which we call “organic-cellular” frequencies), through the ear, enables sound to pass through the brain by stimulating the neocortex through the electrical pulses of sound, and the neocortex, by reflection, stimulates the target organ involved. This is because the brain has an incessant activity that gives rise to synchronised electrical impulses or brain waves, rhythmic fluctuations of the electrical activity of the brain that coordinate emotions, moods, thoughts and memories and the biological functions of the organs. This stimulates the control area of the specific organ by the electrical impulse stimulated by the mirror frequency (Alfred Tomatis).

Methods and Application the Method

The current method involves using, audio headphones to treat symptoms where only specific brain areas need to be stimulated

and haptic devices (currently supplied by the Israeli company **Woojer**), which are worn respectively, one as a belt, resting the device in the area to be treated and the other, being a vest, worn on the trunk.

The woojer devices used are **Strap™ Edge** and **Vest™ Edge** (a belt and a vest containing one or more haptic actuators), respectively, a combination of tactile perception of objects on the skin's surface and proprioception. They are activated via bluetooth or direct connection to tablets and/or PCs and made to wear to the subject to be treated. It is therefore a matter of having an innovative polyphonic haptic technology that acts as a musical instrument, based on a patented component, **Osci™**, which offers a very accurate haptic experience, with a number of advantages for a wide range of sensory applications. In particular, the **Osci™** technology behind the devices provides rich polyphonic vibrations that accurately reproduce frequencies up to 250Hz and for future technologies even beyond, including subsonic frequencies below the human ear perception threshold (1-20Hz).

The application

The application is simple, first of all a specific and general history of the subject is carried out to fully understand his/her symptoms and then (use the correct frequency) prepare her for treatment. Understand the treatment point, perform a palpation examination, realising any swelling in the abdomen.

Frequencies are generated by a dedicated native app **Dr. Frequency** (in stores 2024) connected via bluetooth or mini jack 3.5 (see table n.1) to the haptic devices supplied.

Application times are standardised at 20 minutes, time which the method allows to have a physiological effect by the sound frequencies in the form of vibration, time which also allows to contain the overheating of the device, which is cooled by a water-based eco-gel placed on the basis of the same device.

The process starts by turning on the device and simultaneously starting the Bluetooth on the mobile or tablet, once the Woojer device is connected, the app starts to send the specific sound frequency, which as described will then be transformed into equal mechanical vibration. Then it will be applied to the area to be treated, (both the device and the area to be treated are sanitised with alcohol) and where it concedes and needs it, moves the device on the area to be treated to have a vascularizing effect and with greater propagation of the sound frequencies, (as on the abdomen). The subject at the end of the session is cleaned from the eco-gel used and re-palpated to control adhesions, swelling, pain or other conditions that had been assessed prior to treatment.

The results

The personal study was carried out between 2021 and 2023 on

a sample of people, both directly to my clients and volunteers. Approximately 100 subjects, aged 18 to 45 years, were examined and had different problems from painful ovulation to dysmenorrhoea and polycystic ovary.

The frequency placed on the app is named **‘antalgic’**, specifically it is **136,10 Hz** Subjects treated with the frequency referred to as “Antalgica” immediately experienced an immediate benefit, especially in reducing pain in the affected area, with both painkiller (at present) and anti-inflammatory (over time) effects, resulting in reduced and/or disappeared symptoms.

This frequency was applied to subjects with:

- **Dysmenorrhea:** reduction in pain at the end of the first and sometimes single session with effect throughout the cycle; in many women there was a rebalancing of the menstrual cycle even for many months.
- **painful ovulation (mittelschmerz) and polycystic ovary:** reduction of inflammation and irritation of the peritoneum and disappearance of pain throughout the follicular phase; It is assumed that the vibrational frequencies (136.10 Hz) that are applied via Woojer devices to the area to be treated reduce the production of prostaglandins and promote the reabsorption of fluid, factors that cause irritation and inflammation, as well as allow for increased blood flow.

Test report

The data correspond to the subjects taken into account only in the period between 2021 and 2023 until the publication of this document, the tests for so long will continue to find other data benefits from the frequencies applied through this method with the prospect of patenting other haptic actuators specific to the individual needs.

All subjects underwent the Verbal Rating Scale (VRS) by making individual feelings about their pain before and after the session and at the end of the cycle and 4 weeks after the last session.

In these tests, 5 sessions (20 minutes) were taken for each person and the average VRS values were examined, before the single session and after the session, as well as 4 weeks later.

Data

- 100 women, 3 groups;
 - 1° Group: 40 women with dysmenorrhea > (37/40 , 92.50% success)
 - 2° Group: 35 women with painful ovulation > (30/35 , 85,71% success)
 - 3° Group: 25 women with polycystic ovary > (22/25 , 88% success)

VRS scale (Verbal rating scale)

Scale: (0 no pain) (1 mild) (2 moderate) (3 strong) (4 unbearable) average, before single treatment: A average, post-single treatment: B after 4 weeks: C (green) : Yellow: No Effect (2 moderate, 3 strong 4 unbearable) subject: id

no pain	mild	moderate	strong	unbearable
0	1	2	3	4
Average, before single treatment			A	
Average, post single treatment:			B	
After 4 weeks			C	
No Effect (2 moderate, 3 strong 4 unbearable)				
Subject (assisted)			id	

The method should be considered effective in subjects with mean VRS value between (0 > 1) considered B, C not effective mean VRS value (2 > 4)

1° Group: 40 women with dysmenorrhea > (37/40 , 92.50%)

>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
A	1.50	2	3	4	1.50	4	3	4	3	3	4	3	3	2.5	4
B	0.50	0	0	3	0.50	1	0	0	0	2.50	1	0	0	0	1
C	0	1	0	2.50	1	0	0	1	1	3	1	0	0	0	1
>	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
A	3	3	2	3.50	4	3	4	4	3	4	3	2.50	4	3	3
B	1	0	0	2.50	1	0	1	0	1	0	1	1	1	0	1
C	0	1	0	3	0	0	1	0	1	1	0	0	1	1	0
>	31	32	33	34	35	36	37	38	39	40					
A	4	3	3	4	3	2	3	4	3	4					
B	1	0	1	1	1	1	1	3	1	0					
C	0	1	0	1	0	0	1	2	1	1					

2° Group: 35 women with painful ovulation > (30/35 , 85,71%)

>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15		
A	2	3	3	2	1	3	1	3	4	2	2	3	2	2	2		
B	1	4	1	0	0.50	1	1	0	3	0.50	1	1	1	0	0		
C	0	2	0	1	1	0	0	1	2	0	1	0	1	0	1		
>	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30		
A	4	3	2	3	3	2	3	4	2	1	4	2	3	4	3		
B	1	1.50	0	1	1	1	1	3	0	0	0	1	1	2	0		
C	0	1	1	1	0	1	1	3	0	1	1	0	1	2	1		
>	31	32	33	34	35												
A	4	4	2	2	1												
B	3	1	0	1	1												
C	1	0	0	1	0												

3° Group: 25 women with polycystic ovary > (22/25 , 88%)

>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
A	4	3	4	4	3	3	2	1	3	3	4	1	1	2	3
B	2	0	1	3	0	1	2	1	0	1.50	1	0	0	0	1
C	0	0	0	2	0	1.50	1	0	0	1	1	0	0	0	1
>	16	17	18	19	20	21	22	23	24	25					
A	3	3	4	2	3	1	4	2	3	2					
B	1	0	3	0	1	0	1.50	0	1	0					
C	0	0	2	0	0	0	1	0	0	0					

Discussion

Strengths and limitations of the approach in this case.

The strengths of this approach are its effective pain-relieving and anti-inflammatory effect on certain symptoms, such as dysmenorrhoea and painful ovulation. The limitations now are the still too low frequency range of the devices and the overheating of the device.

Conclusions

The extrapolated data were taken from the personal perceptions of pain/discomfort experienced by subjects before and after treatment and 4 weeks after the last treatment, confirming in some subjects the long-term efficacy of the method as well. Therefore, for statistical and practical purposes, it can be confirmed that this method may be used as a means of reducing and/or disappearing symptoms or signs of a physiological disorder in order, also, to prevent pathological degeneration given by the disorder itself. For some symptoms the method can be used directly, without association with a treatment, while for other problems the right choice is the association, as an aid, to treatment, kinesiology, physiotherapy, reeducation, osteopath, whatever it is.

The method does not have side effects, and, the devices used are devices tested, other than taking precautions avoiding the use of persons with pacemakers and with seizures (at least regarding the application of the headphones) and not to be used while driving.

Looking ahead is the possibility of creating targeted anti-inflammatory and rebalancing effects by reducing drug use where possible.

Other ongoing studies

Other studies are carried out on other issues, many will have to be started if new haptic devices are ready:

- Spasticity
- Flutter
- Tissue healing
- Anxiety and Distress
- DNA regeneration
- Immune System stimulation
- Vascular headaches
- Tensive headaches
- Migraine • Allergies
- Decongestant effect
- Alzheimer's
- axial growth
- depression (tactile)
- Parkinson's disease
- Blood
- Adrenal

- Thyroid – Parathyroid
- Kidney
- Liver
- Bladder
- Bowel
- Lung
- Colon
- Biliary bladder
- Pancreas • Stomach
- Brain
- Fat cells • Muscles
- Bone • Heart
- Diaphragm
- Throat
- Spleen

Reference

1. <https://www.musica-spirito.it/musica-scienza/tecnologia-battiti-binaurali/>
2. Owens J, Marsh GA, (1998) Binaural Auditory Beats Affect Vigilance Performance and Mood. In: *Physiology & Behavior*, 63: 249-252.
3. Helané Wahbeh, Carlo Calabrese, Heather Zwickey, Dan Zajdel (2007) Binaural beat technology in humans: a pilot study to assess neuropsychologic, physiologic, and electroencephalographic effects. In: *Journal of alternative and complementary medicine* 13: 199-206.
4. Wahbeh H, Calabrian C, Zwickey H (2007) Binaural beat technology in humans: a pilot study to assess psychologic and physiologic effects. In: *Journal of alternative and complementary medicine* 13: 25-32.
5. R P Le Scouarnec, R M Poirier, J E Owens, J Gauthier, A G Taylor, P A Foresman (2001) Use of binaural beat tapes for treatment of anxiety: a pilot study of tape preference and outcomes. In: *Alternative therapies in health and medicine* 7: 58-63.
6. Ruth Maria Ingendoh, Ella S Posny, Angela Heine (2003) Binaural beat induced theta EEG activity and hypnotic susceptibility: contradictory results and technical considerations. In: *The American journal of clinical hypnosis* 45: 295-309.
7. Brady B, Stevens L (2000) Binaural-beat induced theta EEG activity and hypnotic susceptibility. In: *The American journal of clinical hypnosis*, 43: 53-69.
8. Harris B, Thresholds of the mind. – USA : Centerpointe Research Institute, 2007 Vibration Therapy – Breatheology Sound Therapy and the Vagus Nerve.
9. Nelcy Hisao Hiraba, Motoharu Inoue, Takako Sato, Satoshi Nishimura, Masaru Yamaoka (2012) Optimal Vibrotactile Stimulation Activates the Parasympathetic Nervous System, *IntechOpen*.

10. Lee Bartel 1, Abdullah Mosabbir (2021) Possible Mechanisms for the Effects of Sound Vibration on Human Health Sound Vibration on Human Health 18: 597.
11. William J. Tyler, Sarah Wyckoff, Taylor Hearn, Nicholas Hool (2019) The Safety and Efficacy of Transdermal Auricular Vagal Nerve Stimulation Earbud Electrodes for Modulating Autonomic Arousal, Attention, Sensory Gating, and Cortical Brain Plasticity in Humans.
12. Neurohemodynamic correlates of 'OM' chanting: A pilot functional magnetic resonance imaging study - PMC
13. Meghan E. Addorisio, Gavin H. Imperato, Alex F. de Vos, Steve Forti, Richard S. Goldstein (2019) Music Therapy on Heart Rate Variability Investigational treatment of rheumatoid arthritis with a vibrotactile device applied to the external ear | Bioelectronic Medicine 5:4.
14. Gudrun Agusta Sigurdardóttir , Peter Michael Nielsen, Jesper Rønager, August Gabriel Wang (2019) A pilot study on high amplitude low frequency music impulse stimulation as an add-on treatment for depression - Sigurdardóttir 9: e01399.
15. Ruben T. Azevedo, Nell Bennett, Andreas Bilicki, Jack Hooper, Fotini Markopoulou (2017) The calming effect of a new wearable device during the anticipation of public speech 7: 2285.
16. Thom A H Eshuis, Peter J C Stuijt, Hans Timmerman, Peter Michael L Nielsen, André Paul Wolff (2021) Music and low-frequency vibrations for the treatment of chronic musculoskeletal pain in elderly: A pilot study 16: e0259394.
17. <https://www.informasalus.it/it/articles/how-our-cells.phps>