10 reasons to use H-Wave

1. Uniquely mimics nature's own nerve waveform
2. Low output - therefore no heat produced or reddening of the skin
3. Alternating current - stops electrolytes migrating to electrodes
4. Ideal for use where mains power is unavailable/unreliable
5. Simultaneous therapy modalities
6. Therapist can manipulate patient during treatment avoiding cross stimulation
7. Self adhesive re-usable electrodes allow treatment of awkward injury sites
8. Rugged construction for portable applications (sport, military, home-loans, etc)
9. Replaces other types of electrotherapy modalities
10. Injury treatment, odema reduction and pain relief in a single unit

H-Wave Specifications	2 Channel	3 Channel
Treatment Frequency	2Hz or 60Hz switched	2Hz to 60Hz variable
Current Intensity Control	✓	✓
Automatic Timer	✓	✓
Digital Display	✓	✓
Rechargeable Battery	12V 2.1Ah	12V 7Ah
Typical Battery Life	6-18 hours	15-70 hours
Recharge Time	10 hours	10 hours
Nett Weight	2Kg	5Kg
Size (mm) WxHxD	185 x 65 x 203	280 x 146 x 367

Clinically proven by the following scientific publications: B.C. McDowell, D.M. Walsh, G.D. Baxter & J.M. Allen. Investigations of the hypoalgesic effects of H-Wave Therapy (HWT). Biotherapeutics Research Group, University of Ulster at Jordanstown, BT37 0QB, N.Ireland. D.M. Walsh, C. Liggett*, G.D. Baxter* & J.M. Allen. Analgesic effects of transcutaneous electrical Nerve Stimulation (TENS) and H-Wave therapy. Biomedical Sciences Research Center, *Dept. Occupational Therapy & Physiotherapy, University of Ulster at Jordanstown, BT37 0QB, N.Ireland. Brian D. Ross, M.D., Ph.D. Consultation Report on H-Wave and Determination of Tissue Water. Aug 15, 1991. Magnetic Resonance Spectroscopy Laboratory, Huntington Medical Research Institutes, Pasadena, CA 91105. D.M. Walsh, G.D. Baxter, J.M. Allen, A.J. Bell & B. Mokhtar (1992). An assessment of the analgesic effects of H-Wave therapy upon experimentally induced ischaemic pain. Irish Jornal of Medical Science, 161, 7, 472. B.C. McDowell, M. McCrory, G.D. Baxter, J.M. Allen & D.m. Walsh (1994). A double blind investigation of the hypoalgesic effects of low pulse repetition rate H-Wave Therapy (2-16Hz) upon experimentally induced ischaemic pain. Irish Jornal of Medical Science, 163, 2, 101. B.C. McDowell, G.D. Baxter, D.M. Walsh, H.C. Cherry & J.M. Allen. An investigation to determine the effect of electrode placement on the hypoalgesic effects of H-Wave Therapy. Physiotherapy Ireland, 15, 1, 32. B.C. McDowell, A.S. Lowe, G.D. Baxter, D.M. Walsh & J.M. Allen. An investigation to determine the hypoalgesic effects of H-Wave Therapy at various frequencies. Irish Jornal of Medical Science. B.C. McDowell, A.S. Lowe, G.D. Baxter, D.M. Walsh & J.M. Allen. An investigation of the hypoalgesic efficacy of H-Wave Therapy on experimental ischaemic pain. European Journal of pain. B.C. McDowell, J. Robinson, H.C. Cherry, G.D. Baxter, D.M. Walsh & J.M. Allen. (1994) The comparative analgesic efficacy of H-Wave Therapy to well established oral analgesics. European Journal of pain. **And the following references :** Cruse, R., The efficacy of transcutaneous H-Wave as a non-invasive local anaesthetic, B.Sc. (Hons) Podiatric Studies, Brighton Polytechnic (October,1991) Unpublished Monograph. Ebersold, M.J., Laws, E.R., Stonnington, H.H. & Stillwell, G.K., Transcutaneous electral stimulation for treatment of chronic pain; a preliminary report, Surg. Neurol., 4 (1975) 96-99. Fuller, M.I. Superintendent Physiotherapist, St Mary's Hospital. North East Essex Health Authority (July,1991) Unpublished Case Studies. Jenkins, S.D., A preliminary report on a study to assess the efficacy of H-Wave induced analgesia in the treatment of painful hyperkeratotic skin legions on plantar aspect of the foot, (1991) Unpublished Monograph. McDowell B.C., Lowe A.S., Baxter G.D., Walsh D.M. & Allen J.M. (1994) An investigation of hypoalgesic efficacy of H-Wave Therapy on experimental ischaemic pain. Pain, in Press. Newman, M., Using H-Wave electronic dental anaesthesia, General Dental Practitioner, (April,1990) Unpublished Monograph.

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Celebrating over 21 years of innovation in bioscience technology

H-WAVE

Fast Drug Free Pain Relief
Promotes Rapid Healing

Clinical 3 Channel Unit

Easy to use, rugged, portable & rechargeable

Uniquely mimics nature's own nerve waveform

Professional 2 Channel Unit

Professional Electrotherapy for Pain Management

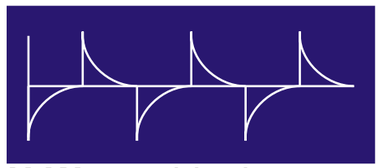
Portable Pain Relief

Medical Research Limited

Promotes Fast Healing

H-Wave Works naturally

H-Wave uses a signal that is natural to the human body. It emulates the H waveform found in nerve signals (Hoffman Reflex) and therefore enables greater and deeper penetration of a low frequency current, whilst using significantly less power than other machines. This makes H-Wave much safer, less painful and more effective than any other form of electrotherapy to date.

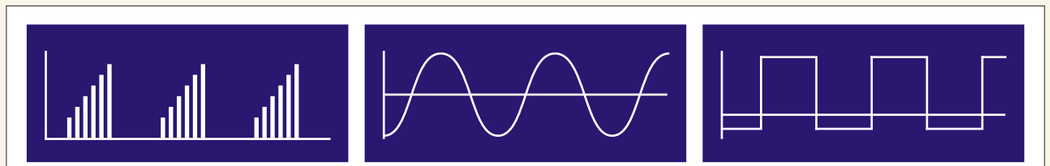


H-Wave - bipolar exponentially decaying

The revolutionary H-Wave signal is a bipolar, exponential decaying waveform that overcomes the disadvantages of other electrotherapy machines.
It allows the therapist to apply two treatments at the same time - low frequency muscle stimulation and high frequency deep analgesic pain control.

The dramatic increase in blood and lymph flow accelerates the removal of toxins, improves oxygen supply to an injury and promotes excellent drainage of oedema.

The high frequencies needed to pass traditional forms of electrotherapy through the skin often cause discomfort and pain.



Faradism - saw tooth **Interferential -** sinusoidal **TENS -** square

By contrast to some other electrical modalities, H-Wave:

- can be used simultaneously with hands-on treatment and/or exercise therapy
- can treat a large area and/or multiple injury sites
- uses re-usable self-adhesive electrodes that can easily be applied to awkward sites
- patients can see and feel the treatment
- uniquely provides muscle stimulation and pain relief

Unlike TENS machines, H-Wave is a rehabilitation modality that assists in increasing local blood circulation and lymphatic drainage as well as pain management.

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H-Wave relieves pain

At a frequency of 60Hz:

Analgesia is achieved without muscle stimulation. Pain is transmitted along the slower conducting C-fibres, whilst H-Wave stimulates the fast-conducting A fibres. The message carried by the A fibres reaches the brain first, causing closure of the postulated 'pain gate' of Melzack and Wall. Because H-Wave is bipolar with both positive and negative elements stimulating the sensory nerve, a frequency of 60Hz (rather than 120Hz) is sufficient to recruit the pain gate.

H-Wave promotes healing

At a frequency of 2Hz:

Electrodes are placed on the muscle bellies surrounding the injury site. Unlike Faradism, only one electrode is needed per muscle belly. Stimulation of the motor point causes muscle contraction which compresses surrounding lymphatic and venous vessels. This pump-action accelerates the body's ability to mechanically flush out excess fluids and unwanted substances. The end result is a dramatic reduction of oedema and removal of inflammatory products without appreciable muscle fatigue to the patient.

H-Wave saves time

- 2 Hz, 16Hz* and 60Hz therapy given together allow you to stimulate the muscle pump and give pain relief at the same time.
- 16Hz* therapy can be given on its own, resulting in pain relief and some muscle stimulation.
- You can treat two injury sites, e.g. a sprained ankle and a bruised wrist, simultaneously.
- Due to no crossfire and re-usable self adhesive electrodes you can actively and passively exercise the patient concurrently.

H-Wave can treat

- Chronic and post operative pain
- Frozen Shoulder
- Muscle Strains
- Acute injuries
- Referred pain
- Phantom limb pain
- Tendonitis
- Whiplash
- Oedema
- Diabetic peripheral neuropathy
- Sports injuries
- Muscle spasms and re-education
- Reduce inflamation
- Increase Circulation

*16Hz operation only applies to Clinical 3-Channel unit

Reduces Pain and Oedema

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