



Science Behind Therapeutic Touch and Energy Medicine

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History of Therapeutic Touch

- Therapeutic Touch was developed in the early 1970's at New York University Teaching Hospital by Dr. Dolores Krieger PhD, RN, and Dora Kunz, a natural healer.
- The practice of Therapeutic Touch requires a quietened meditative state and compassionate intent which is projected through the hands of the practitioner to convey calmness, acceptance and peacefulness. It involves a transfer of energy that has been demonstrated to facilitate the body's natural healing responses in the recipient.
- Initially, Therapeutic Touch was developed for application by the nursing profession as an adjunct to regular medical care. It is now practiced by health professionals in hospitals worldwide.
- In Australia Therapeutic Touch is practiced in hospitals, aged care facilities and community settings.
- A number of aged care facilities have trained teams of Therapeutic Touch practitioners who are available on all shifts to aid the elderly to sleep at night as well as to manage behaviour during the day.
- Therapeutic Touch is used pre- and post- surgery, prior to chemotherapy, in midwifery and childcare, rehabilitation, and with the elderly. It is also used in animal husbandry.
- Standards for Therapeutic Touch have been established by the International Organization for Therapeutic Touch - Nurse Healers Professional Associates International (NHPAI).
- Training is available in a number of States in Australia.

Research in Therapeutic Touch

- An extensive scientific research base involving Therapeutic Touch has been developed with over 30 PhD's and over 100 Masters studies investigating its efficacy. An extensive bibliography of the research can be gained through an literature search or by contacting the International Organization for Therapeutic Touch – NHPAI which keeps an updated research base.
- From the early 1970's to 1990's, most studies were undertaken by nurse clinicians who investigated the outcomes for recipients receiving Therapeutic Touch.
- Outcomes included: changes to the autonomic nervous system including slowed rate of breathing, reduced heart rate, lowered diastolic blood pressure and muscular relaxation; reduced pain; reduced anxiety levels; increased haemoglobin levels; increased speed of wound healing; improved sleep; and changes to the makeup of the immune system cells.
- The science behind these results was little understood until researchers focused on the electromagnetic exchanges occurring in the body at the cellular and molecular level. This field of science has become known as energy medicine.

Energy within the body

From studies in energy medicine we know that:

- The body and the heart have electrical and magnetic energy. This knowledge is applied, for example, in conventional medicine for diagnosis and treatment (eg. MRI's, electrocardiograms and magneto cardiograms diagnose at the level of electrical and magnetic energy).¹
- This energy travels through the body by 3 pathways:
 1. Neuromuscular pathway in which a stimulus activates a receptor triggering flow through the afferent neurons to the brain
 2. The spinal reflex
 3. Through connective tissue which encases all organs, nerves and muscles (for example, on a breast of chicken it is the membranous casing enclosing the flesh)
- The third pathway, connective tissue, forms a continually connected system throughout the body.²
- This connective tissue is liquid crystalline. It has been found to conduct energy throughout the body at a speed much faster than the other 2 pathways, through the oscillating and vibrating electrons, photons, protons and other molecules.
- Researchers suspect that when recipients of energy medicine describe sensations of tingling during complementary therapies involving energy exchange, that they may be describing the sensations occurring on this pathway.

Measuring energy fields around the body

- As well as energy circulating through the body, researchers have found that electrical and magnetic energy also emanates from the body as a pulsing biomagnetic field.³ This field can be measured up to 8 to 10 feet away from the body with sensitive detectors called magnetometers.
- These fields around the body can be felt by the hands and are sometimes described as magnet-like sensations or tingling sensations.⁴
- The fields around a person's body can be detected by practitioners of Therapeutic Touch.⁵

Measuring energy fields projected from the hands

- Studies have shown that when Therapeutic Touch practitioners enter a quietened, meditative state to commence Therapeutic Touch, the biomagnetic field from their hands increases and is the same strength and frequency as clinical devices that mechanically pulse magnetic fields into the body's existing field to "jump start" the healing process.⁶ Many practitioners describe a sensation of vibration or tingling during treatments.
- In an experiment by Zimmerman⁷, a therapeutic touch practitioner and his patient entered a magnetically shielded chamber containing a SQUID detector (a type of magnetometer). When the practitioner relaxed into the meditative or healing state, a biomagnetic field emanated from the practitioners hands. It pulsed at a range varying from .3 to 30 Hertz with most of the activity being at 7 to 8 Hertz. In this study, non-practitioners were unable to produce the biomagnetic pulses.

How these fields affect healing

- Natural healing responses occur at a cellular level.
- When pulsing electro magnetic fields are projected from the hands a chain of reactions is initiated that flows from the cell membrane to the cell nucleus and to the DNA, activating a host of cellular processes. These cellular processes include immune surveillance, regeneration, tumour invasion, injury repair and immune system responses.⁸
- The sensitivity that cells have to pick up the signals from an energy medicine practitioner is accounted for in research that led to the 1994 Nobel Prize in Physiology or Medicine presented to Gilman⁹ and Rodbell,
- Gilman and Rodbell demonstrated that a single photon of electromagnetic energy initiates a massive influx of calcium into the cell, triggering cellular activities that include immune surveillance, regeneration, tumour invasion, injury repair and immune system responses.¹⁰

- With the administration of Therapeutic Touch the outcome of this energy exchange has been documented in a number of studies:
 - Reducing pain¹¹
 - Increasing haemoglobin levels¹²
 - Changes in emotional state and immune system¹³

The Role of the Heart in Energy Medicine

- Researchers hypothesise that pulsations arising in the heart of the practitioners may be involved in the effects of Therapeutic Touch and other complementary therapies. This is because the practice involves focusing on the wellbeing of the recipient in an act of unconditional love and compassion.¹⁴
- At the Institute of Heart Math, McCraty, Atkinson & Tomasino¹⁵ have shown a relationship between emotional state and the frequency spectrum of the electrical signals from the heart. Feelings of love, caring and compassion or of frustration and anger will affect the signals produced by the heart. These signals are conducted to every cell in the body and are radiated into the space outside the body.
- When intent of care, compassion, appreciation and love is generated there is a change in heart rate rhythm from dysrhythmic to smooth and harmonious, which then creates autonomic nervous system balance and cardiovascular efficiency.¹⁶
- Further laboratory work has documented energy exchanges between people who are touching or are in proximity.¹⁷ Specifically, a person's electrocardiogram signal can be registered in another person's electroencephalogram and elsewhere in the person's body. The signal is greatest when they are in contact, but is still present when they are in proximity without contact.
- So far however, focus has been on electrical and magnetic energies because they are the easiest to measure. But the body produces other kinds of energy such as light, sound, heat, chemical energy, gravity, and elastic energy. It is known, for example, that both light and sound signals can be emitted by the hands of the healers.¹⁸

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² *ibid.* pp. 9

³ Childre, D. and Martin, H. (1999). *The HeartMath Solution*. San Francisco: Harper San Francisco. pp. 33

⁴ Oschman, J. 2003, pp. 8

Oschman, J. 2000, '*Energy medicine: The scientific basis*' Churchill Livingstone, London

⁵ Krieger, D. 1993. *Accepting your power to Heal: The personal practice of Therapeutic Touch*. Santa Fe: Bear & Co.

⁶ Zimmerman, J. 1990, 'Laying-on-of-hands healing and therapeutic touch: A testable theory', *BEMI Currents, Journal of the Bio-Electro-Magnetics Institute*, (2) pp. 8 -17.

Oschman, J. 2003, pp. 8

⁷ Zimmerman, J. 1990, pp.8 - 17.

⁸ Oschman, J. 2003, pp. 8

⁹ Gilman, A.G. 1997 G proteins and regulation of adenylyl cyclase. (Nobel lecture presented December 8 1994) *Nobel Lectures Physiology or medicine, 1991 – 1995*, (ed). N. Ringertz, World Scientific, Singapore, pp. 182 – 212.

¹⁰ *ibid.* pp.8

¹¹ Keller, E. & Bzdek, V.M. (1986) Effects of Therapeutic Touch on tension headache pain, *Nursing Research*, 35 (2), pp.101-106.

¹² Krieger, D. 1974, 'Healing by the laying on of hands as a facilitator of bio-energetic change: The response of in vivo haemoglobin', *Psychoenergetic Systems*, (1) pp. 121 – 129.

¹³ Quinn, J. 1984, 'Therapeutic Touch as an energy exchange: Testing the Theory' *Advanced Nursing Science*, Jan., pp. 42 – 29.

¹⁴ Oschman, J. 2003, pp. 10

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¹⁶ Childre, D. and Martin, H. (1999). pp. 33

¹⁷ Mc Craty, R., Atkinson, M., & Tomasino, D. & Tiller, W. A. 1998. Op cit.

¹⁸ Oschman, J. 2003, pp. 11

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