

Canadian Pain Society
Annual Conference
28 May 2008



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Canadian Pain Society Annual Conference
28 May 2008

9:00 am - 10:30 am SESSION 104
COMPLEMENTARY THERAPIES
FOR PAIN CONTROL

Chair: Gerald Tevaarwerk, BA, MD, FRCPC, Cert. Endocrine
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Alternative and Supplemental Pain
Relief Practices: Plausibility, Efficacy
Assessment, and the Placebo Effect

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Learning objectives

A review of:

- Some common terms defined
- The common origins of healthcare practices
- The Cartesian divide: The body as a mechanism
- The importance of sensations: Descartes' soul
- The measure of effectiveness: Does it work?
- Intervention effects: Disease-specific and non-specific effects
- Measuring effectiveness: Sample comparisons and N=1 trials

Some common terms defined

Malady or ailment – that from which a patient suffers or perceives to be suffering.

Disorder – a clearly defined malady, the cause of which may not (yet) be known. Examples pneumonia, stroke, diabetes.

Disease – an ailment the cause of which has been identified.

Illness – the total effect of a disorder or disease on the individual (and family).

Sensations – experiences that do not lend themselves to machine measurements. Examples are fear, pleasure, anger, happiness, unhappiness, love, desire, etc. It includes pain.

The soul/spirit – That part of a person/being that does not obey Descartes' rules of the body as a mechanism. Unknowable.

The common origins of healthcare practices

All healthcare practices appear to have their origin in folk medicine. They are strongly influenced by the cultural values and spiritual practices of the society in which they originate.

Hellenic medicine –

Ayurvedic practices – “long life knowledge” Hindu origin.

Anthroposophic practices (Rudolf Steiner) – “two streams”.

Traditional health practices - Chinese herbal medicine, Aboriginal medicine

Single concept practices - Chiropractic, Magnetism, Homeopathy

René Descartes - 1596-1650

“Dubito ergo sum” “I doubt, therefore I am”

(“Cogito ergo sum”)

Developed a mechanistic philosophy based on his mathematical discoveries.

René Descartes - 1596-1650

Concluded that the body is a machine the workings of which could be explained mathematically. Also stated that human beings have a soul that is distinct from the machine, god-like and unknowable.

'Cartesian divide'.

Thesis: Descartes' error (Antonio Damasio)

The success of Descartes' mechanistic approach to dealing with disorders/diseases has given that approach great prominence, sometimes at the expense of those maladies that are not (yet?) able to be dealt with in that manner.

Prominent among those are afflictions of the soul/spirit/mind, manifested through *sensations*.

Thesis: Descartes' error (Antonio Damasio)

Proposition: It is the void created by the relative lack of attention to those maladies that has propelled the popularity of unconventional healthcare practices.

Plausibility, efficacy and effectiveness



Plausibility - might work

Efficacy – can work (under ideal conditions)

Effectiveness – does work (under real life conditions)

The *placebo* effect - 1

Placebo - "A substance or procedure which a patient accepts as a medicine or therapy but which has no specific therapeutic activity for the condition". *Wikipedia Encyclopedia*

From the Latin: *I will please.*

Latin text in the [Bible](#) (Psalm 114:1–9, [Vulgate](#) version).

The *placebo* effect - 2

It became familiar to the public via the Office of the Dead church service. From that, a singer of Placebo (at funeral) became associated with someone who falsely claimed a connection to the deceased to get a share of the funeral meal, hence a flatterer.

The *placebo* effect - 3

The word **Obecalp**, "placebo" spelled backwards, is sometimes used to make the use or prescription of fake medicine less obvious to the patient. *Gulf War Veterans*

Professional physician organizations now consider the use of placebos unethical "*without disclosure to the patient*".

"*The Bottle of Medicine*" [Editorial], *British Medical Journal*, No.4750, (19 January 1952), pp.149–150. *Estimates that 40% of general practice patients receive a bottle of medicine as a placebo.*

The placebo effect: an *alternative*

The measured results of interventions consist of a *specific* and *non-specific* component.

Specific effects are a measure of activity of the disease/disorder targeted by the intervention and are found/occur only in subjects with that disease.

Non-specific effects are effects found to the same extent in subjects *with* and *without* the targeted disease/disorder.

Non-specific effects:



Hypothesis: *Non-specific effects* act through their effect on the sensations.

Sensations include pain, anxiety, fear, happiness, sense of well-being, etc.

Non-specific effects:

Non-specific effects may act through effects on the nervous system such as the release of endorphins and other substances. *Bruce Pomeranz Univ of Toronto*

Interventions such as meditation and acupuncture have been shown to alter brain activity (MRI)

Measuring disease-specific effects



Two types of trials are used:

Both *compare* the **total measured effects** in subjects who receive the active components to those who do not:

1. Randomized controlled trials in groups (*'samples'*)
2. Repeated cross-over trials in individuals using randomized sequence entry (*'N = 1 trials'*)

To minimize bias both should use a 'placebo' component and be triple-blinded (patients, assessors, and investigators).

Non-specific effects:

Breast cancer patients who do yoga tend to enjoy better health, less fatigue and experience less daytime sleepiness - this applies to women who are undergoing radiotherapy for their breast cancer, say scientists from the University of Texas, M.D. Anderson Cancer Center, USA.

American Society of Clinical Oncology, 39th Annual Meeting, Chicago, Illinois, May 31-June 3, 2003, "Randomized Controlled Trial Of Yoga For Symptom Management During Breast Cancer Treatment."

Non-specific effects:



German Acupuncture Trials (GERAC) for Chronic Low Back Pain
Randomized, Multicenter, Blinded, Parallel-Group Trial With 3 Groups
Michael Haake et al. *Arch Intern Med.* 2007;167(17):1892-1898.

Results At 6 months, response rate was 47.6% in the verum acupuncture group, 44.2% in the sham acupuncture group, and 27.4% in the conventional therapy group.

Non-specific effects:



Prayers by strangers did not affect patients undergoing cardiac procedures or obstetrical ones.

It would appear that the patient must know of the intervention for it to be effective.

Conclusion



Failure to recognize the potential benefits of **unconventional therapeutic interventions** is a disservice to our patients.

The acceptance of what may currently be considered unconventional practices requires measuring their effects in properly designed controlled trials.