

Complementary & Alternative Approaches to Palliative Care in Cancer: What Does the Research Show?



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National Institutes of Health says Complementary and Alternative Medicine is

- **“a group of diverse medical and health care systems, practices, and products that are not presently considered to be part of conventional medicine.”**



Selected for Review

- **Mind-Body Therapies**
- **Acupuncture**
- **Massage Therapies**
- **Energy Therapies**



National Institutes of Health (NIH) National Center for Complementary and Alternative Medicine

- **Mind-Body Medicine: Techniques designed to enhance the mind's capacity to affect bodily function and symptoms to promote health and well-being.**



Mind-Body Medicine

- Focus is on how the following can directly affect health
 - Emotional
 - Mental
 - Social
 - Spiritual
 - Behavioral



Mind-Body Medicine Includes

- Relaxation
- Hypnosis
- Guided Imagery
- Biofeedback
- Yoga, Tai Chi
- Meditation
- Prayer
- Expressive Arts
 - Movement Therapy
 - Art Therapy
 - Music Therapy
- Cognitive-Behavioral Therapy
- Group Support



Walter Cannon, 1920's “Fight or Flight Response”

- Perceive threat
- Autonomic nervous system response
 - Sympathetic nervous system triggers
 - Adrenaline release
 - Mobilize the body
 - Increase muscle tension
 - Rapid breathing
 - Blood flows to vital organs, away from hands, feet



Herbert Benson, MD, 1970's “Relaxation Response”

- **Perceive safety, reassurance**
- **Autonomic nervous system response**
 - **Parasympathetic nervous system allows a physical state of deep rest**
 - reduced heart rate
 - reduced blood pressure
 - reduced rate of breathing
 - reduced muscle tension
 - Increased subjective well-being



Calming Self Statements

- **Select word, short phrase**
- **Sit quietly, comfortably, relax muscles**
- **Breathe slowly, naturally**
- **Silently say word/phrase with exhale**
- **Don't evaluate your performance**
- **Gently return attention to object of concentration**



Mindfulness Meditation

- **Pay attention to the present moment**
- **Observe experience (e.g. breath, sensation, thoughts, sound)**
- **Non-judgmental**

Center for Mindfulness in Medicine, Health Care, and Society, University of Massachusetts Medical School

www.umassmed.edu/cfm



Guided Imagery

- **Purposefully imagining positive, relaxing, uplifting internal states**
- **Use all the senses**
 - **Sight**
 - **Touch**
 - **Taste**
 - **Sound**
 - **Smell**



Hypnosis, Self-Hypnosis

- **State of inner absorption, concentration, and focused attention.**
- **Post-hypnotic suggestions.**

American Society of Clinical Hypnosis www.asch.net



Biofeedback

- **Real time information from non-invasive sensors of physiology recording from surface of the skin**
- **Person being recorded attends to and uses displayed information for self-regulation**

Association for Applied Psychophysiology and Biofeedback
www.aapb.org



Progressive Muscle Relaxation

- Tense and relax muscle groups in sequence to increase awareness of contrast
- Tense a muscle group
 - Hold tension for a few seconds
 - Focus on sensations of tension
- Relax muscles as you exhale.
 - Breathe normally
 - Focus on sensations of relaxation for several seconds
- Variation: eliminate tensing, focus on relaxing

Yoga

- *From Sanskrit meaning “to link” or “join together”*
- *Unifying mind, body, and spirit*

*Yoga Alliance
www.yogaalliance.org*





Evidence for Mind-Body Medicine

■ Cancer patients

- Improved mood
- Improved quality of life
- Enhanced coping
- Reduced disease-related & treatment-related symptoms
- Improved sleep



Meta-Analytic Review

- **Luebbert, Dahme, and Hasenbring
“The effectiveness of relaxation
training in reducing treatment-
related symptoms and improving
emotional adjustment in acute non-
surgical cancer treatment: a meta-
analytical review” Psycho-oncology
2001**



Search Strategy produced 15 Papers

- **1980-1995 inclusive, several databases**
- **Relaxation, progressive muscle relaxation, autogenic training, hypnosis, imagination, guided imagery**
- **Treatments: chemotherapy, radiotherapy, hyperthermia, BMT (not surgery)**




Findings: Treatment-related Symptoms

- **Significant reductions in**
 - Nausea
 - Pain (large CI, no effect to large effect)
 - pulse rate
 - blood pressure
- **Effect sizes 0.45 to 0.55**



Cancer Pain

- **Consistent Evidence of Benefit**
 - Hypnosis
 - meta-analysis well-designed, controlled studies
 - Well-designed experimental studies
 - Case reports, clinical examples
 - Relaxation with Imagery
- **Generally Consistent Evidence of Benefit**
 - Cog-Behav Coping Skills, Distraction
 - Meta-analysis well-designed, controlled studies
 - Well-designed quasi-experimental studies
 - Case reports, clinical examples
 - Psychotherapy, Structured Support
 - Well-designed experimental studies
 - Case reports, clinical examples
- **Inconsistent Evidence of Benefit**
 - PMR Well-designed experimental studies



Findings:

Emotional Adjustment

- **Significant reductions in**
 - Depression
 - Hostility
 - Tension (2 studies)
 - Anxiety
 - Mood (2 studies)
- **Non-significant: fatigue, confusion, vigor**
- **Effect size 0.08 (vigor) to 0.54 (depression)**



Tibetan Yoga Intervention

Cohen et al., 2004

- **“Psychological Adjustment and Sleep Quality in a Randomized Trial of the Effects of a Tibetan Yoga Intervention in Patients with Lymphoma”**
 - **Cohen et al. M.D. Anderson Cancer Center, Houston**
 - **Cancer, May 15, 2004, Vol. 100, No. 10:2253-2260**



Cohen et al., continued

- 39 patients \geq 18
- In treatment or completed in past 12 mo.
- Assigned 7 weekly Yoga class or WLC
- Assessed distress, state anxiety, depression, fatigue, and sleep.
- Result: Yoga was associated with lower sleep disturbance at follow-up (sleep quality, faster latency, longer sleep duration, less sleep medication)



Acupuncture

- **A method of healing developed in China at least 2,000 years ago. Today, acupuncture describes a family of procedures involving stimulation of anatomical points on the body by a variety of techniques. American practices of acupuncture incorporate medical traditions from China, Japan, Korea, and other countries. The acupuncture technique that has been most studied scientifically involves penetrating the skin with thin, solid, metallic needles that are manipulated by the hands or by electrical stimulation.**

NIH Consensus Statement on Acupuncture



- **National Institutes of Health
Acupuncture Consensus
Development Conference Statement
November 3-5, 1997**
- **<http://consensus.nih.gov/1997/1997Acupuncture107.html>**




Safety of Acupuncture

- **Contraindications:**
 - Anticoagulation
 - Cardiac pacemakers (electroacupuncture)
 - Prolonged placement of needles with diabetes
- **Common side effects:**
 - Local bruising
 - Local pain
 - Fainting
- **Rare problems:**
 - Injury to internal organs
 - Infection transmission with unclean needles

Auricular Acupuncture for Cancer Pain *Alimi et al, 2003*

- 90 adults persistent neuropathic pain
 - ≥ 1 month prior to randomization
 - ≥ 30 mm /100 mm VAS despite analgesics
 - Randomized to
 - True acupuncture needle placement
 - Placebo acupuncture needle placement
 - Placebo acupuncture seed
- Pain was significantly lower with true acupuncture





NIH: National Center for Complementary & Alternative Medicine (NCCAM)

- **“Massage therapists manipulate muscle and connective tissue to enhance function of those tissues and promote relaxation and well-being.”**



Massage, Bodywork, and Touch Therapies Studied with Cancer Patients

- **Swedish Massage**
- **Aromatherapy Massage**
- **Asian Bodywork**
- **Reflexology**
- **Manual Lymphatic Drainage**



Techniques vary within, across

- Theory and Intention
- Pressure
 - From light to deep
 - Constant to percussive
- Pace from slow to fast
- May use passive motion
- Extent of coverage of body surface



Swedish Massage

- **Theory, Intent: Increase oxygen to muscles, decrease “toxins” and tension**
 - Long flowing strokes (Effleurage)
 - Kneading, compression (Petrissage)
 - Friction
 - Tapping, cupping, hacking (Tapotement)
 - Vibration



Research on Swedish Massage

- Ahles et al 1999
- Cassileth & Vickers 2004
- Ferrell-Tory & Glick 1993
- Grealish et al 2000
- Hernandez-Reif et al 2004
- Post-White et al 2003
- Smith et al 2002, 2003
- Weinrich & Weinrich 1990
- Wilkie et al 2000



Cassileth and Vickers, 2004

- **1290 MSKCC adult cancer patients**
- **Observational study**
- **Massages**
 - 20 minute inpatient, 60 minute outpatient
 - Swedish, light touch, or foot massage
- **Numerical Rating Scales 0-10 pre-post**
 - Pain
 - Fatigue
 - Stress/anxiety
 - Nausea
 - Depression



Cassileth and Vickers, continued Improvement, baseline ≥ 4

■ Anxiety	60%	n = 786
■ Nausea	51%	n = 222
■ Depression	49%	n = 378
■ Pain	48%	n = 625
■ Fatigue	43%	n = 819



Post-White et al, 2003

- **Randomized, prospective, cross-over design**
 - **4 weekly 45 minute sessions of**
 - **Massage therapy** **n = 63**
 - **Healing Touch** **n = 56**
 - **Presence** **n = 45**
 - **4 weekly sessions of standard care**
- **164 adults with varied cancer diagnoses**



Post-White, continued

- **Compared to presence or standard care, massage and healing touch were more effective in reducing**
 - **Pain**
 - **Mood disturbance**
 - **Fatigue**



Myers R21

- 40 participants age 5 to 21 years old
- Six in-home sessions (twice weekly)
 - Professionally administered massage
 - Teach family member also
- Outcomes
 - Cancer Pt. pain, mood, stress
 - Parent-report pre-post each session
 - Patient self-report pre-post each session
 - Research Assistant-report of pain behavior pre, during, post each session
 - Caregiver mood, stress
 - Feasibility and Acceptability



Aromatherapy Massage

- **Theory, Intent:** Increased benefit will be obtained from massage if provided in combination with aromatic essential oils distilled from plants
- **Goals:**
 - alleviate symptoms
 - improve physical, mental, emotional, and spiritual health



Research on Aromatherapy Massage

- **Corner et al 1995**
- **Hadfield 2001**
- **Soden et al 2004**
- **Wilcock et al 2004**
- **Wilkinson et al 1999**
- **(Cochrane Systematic Review by
Fellowes et al, 2004)**

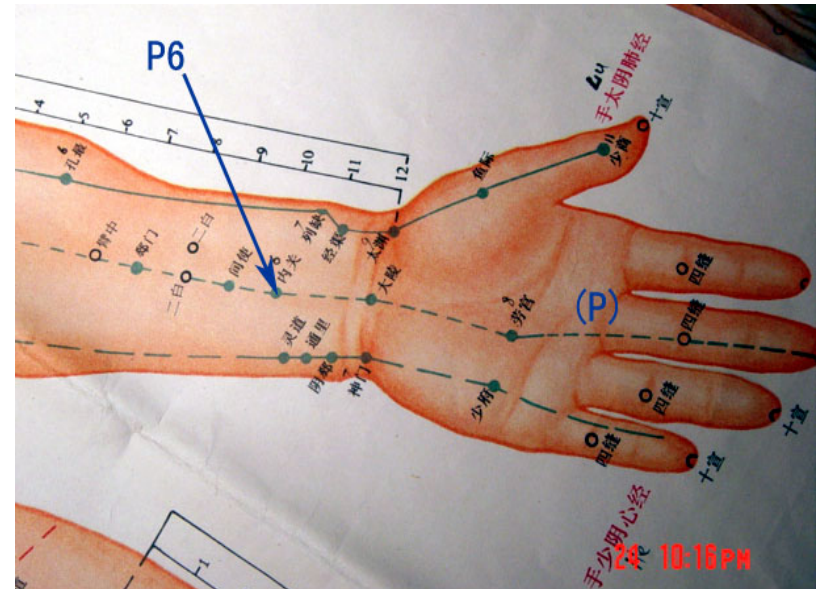


Asian Bodywork Therapy

- **Theory, Intent: Based on traditional Asian health paradigms. Stimulation of meridian points, soft tissue manipulation, stretching.**
 - **Shiatsu (Japan)**
 - **Acupressure (China)**
 - **Tuina (China)**
 - **Thai Massage (Thailand)**

Research on Asian Bodywork

- Dibble et al 2000
- Roscoe et al 2003
- Shin et al 2004





Reflexology

- **Theory, intent: stimulation of “reflex zones” on feet and hands to systematically affect remote areas**
- **Entire body mapped as “reflex zones” on feet and hands**



Research on Reflexology

- **Hodgson 2000**
- **Milligan et al 2002**
- **Quattrin et al 2006**
- **Ross et al 2002**
- **Stephenson et al 2000**
- **Stephenson et al 2003**



Type of Evidence

Level I: Meta-analyses of controlled studies.

Level II: At least one well-designed experimental study.

Level III: Well-designed quasi-experimental studies (e.g. nonrandomized controlled, single-group pre-post, cohort, time series, or matched-case controlled studies).


Level IV: Well-designed nonexperimental studies (e.g. comparative and correlational descriptive and case studies).

Level V: Case reports and clinical examples.



Strength & Consistency of Evidence for Massage

- **A. Evidence of type I or consistent findings from multiple studies of types II, III or IV.**
- **B. Evidence of types II, III, or IV, and findings are generally consistent.**
- **C. Evidence of types II, III, or IV, but findings are inconsistent.**
- **D. Little or no evidence, or there is type V evidence only.**



Symptom	Type of Evidence	Strength, Consistency of Evidence	Massage a Reasonable Adjunct in the Absence of Contraindications
Anxiety	Level II	A	Acceptable, consider recommending, monitor
Pain related to disease or treatment	Level II	B	Acceptable, monitor
Nausea	Level II	B	Acceptable, monitor



Cancer: Clinical Considerations

- Bruising or bleeding, low platelets
- DVT Risk
- Infection Control
- Tumor site, metastases
- Lymphedema risk
- Medical devices
- Neuropathy
- Skin changes
- Anemia
- Fatigue
- GI symptoms



Bruising or bleeding

- Low platelets, anticoagulants
- Easy bruising, bleeding
- 50-70k/uL gentle to moderate pressure
- 20-50k/uL gentle pressure
- ≤ 20 k/uL minimal pressure



Energy Therapies: Biofield Therapies

- **Intention is to affect energy fields thought to surround and penetrate the human body. Examples include Reiki, Therapeutic Touch, Healing Touch, etc.**



Reiki

- **Japanese word representing Universal Life Energy. Reiki is based on the belief that life energy (“ki”) can be channeled through a Reiki practitioner to the patient, benefiting the flow and balance of energy and thus the patient's health.**



Phase II Trial of Reiki for Pain in Pts with Advanced Cancer

- Olson K, Hanson J, Michaud M. A phase II trial of Reiki for the management of pain in advanced cancer patients. *J Pain Symptom Manage.* 2003;26(5):990-7. et al, 2003
- N = 24, Reiki VS usual care
- Results reported:
 - Reiki associated with improved pain control, improved QOL
 - No reduction in opioid use



Integrative Medicine

- **“Integrative Medicine is the practice of medicine that reaffirms the importance of the relationship between practitioner and patient, focuses on the whole person, is informed by evidence, and makes use of all appropriate therapeutic approaches, healthcare professionals and disciplines to achieve optimal health and healing.”**

Consortium for Academic Health Centers for Integrative Medicine