Holistic Approaches for Managing the Postoperative Orthopaedic Patient

Lourdes Lorenz, RN, MSN-IH, AHN-BC, NEA-BC

Conflict of Interest

• I hereby certify that, to the best of my knowledge, no aspect of my current personal or professional situation might reasonably be expected to affect significantly my views on the subject on which I presenting.

OBJECTIVES

• Contrast the effects of holistic nursing interventions performed with orthopaedic patients.

• Articulate physiologic changes in the orthopaedic patient that can result from holistic nursing interventions.
Polling Question

- Where are you employed?
  A. Outpatient Facility
  B. Inpatient Facility
  C. Other

Polling Question

- What is your position
  A. Staff Nurse
  B. Administrator/Supervisory Nurse
  C. Advance Clinical Nurse- CNS, NP
  D. Other Category

Holistic Nursing

ROOTS of HOLISM

was first developed as a philosophy in health care from Florence Nightingale who believed in care that focused on unity, wellness, and the inter-relationship of human beings, events and environment.
Holistic Nursing Focuses on

- creating therapeutic partnerships with individuals, families, communities, and populations
- integrating holistic nursing modalities into clinical practice to treat the whole person
- integration rather than separation
- nurses integrating self care, self-responsibility, spirituality and self-reflection

The BIG Picture

- the caring-healing relationship
- experience and meanings given to health, illness, wellness, healing, birth...
- cultural values and beliefs
- Spirituality
- evaluation of CAM modalities
- comprehensive health promotion and prevention
- self-care

Polling Question

- Do you hold the Holistic Nurse Certification offered by the American Holistic Credentialing Corporation?
  
  A. Yes
  B. No
Holistic Nursing

The Standards of Practice and the statements of knowledge and skills required for holistic nursing have been used to establish minimum competencies for practice in the nursing specialty.


What are Holistic Approaches?

- Healing Presence
- Aromatherapy
- Reflexology
- Acupressure
- Massage Therapy
- Nurse Coaching
- Nutritional Coaching
- Biofeedback
- Meditation
- Self-Care Interventions
- Healing Touch
- Music Therapy
- Prayer
- Relaxation Modalities


How are patients affected?

Evidence based results include:
- decreased complication rates
- decreased use of medications
- decreased length of stay
- increased patient satisfaction

Holistic Nursing Modalities

- Aromatherapy
- Healing Touch
- Massage
- Guided Imagery

What is the Purpose of Aromatherapy?

- “The use of essential oils from plants to support and balance the mind, body, and spirit” (NCI, 2012).
- Aromatherapy may be combined with other complementary treatments like massage therapy and acupuncture, as well as with standard treatments.
- Does not require FDA approval

What is Aromatherapy?

- It is the non-oily, volatile component of an aromatic plant. The word essential is misleading - if essential oils were essential, all plants would have them. This is not true: fewer than one half of the plant world produce essential oils. However, when a plant does produce an essential oils, the essential oil is vital to the plant’s survival.

Buckle, 2005
Aromatherapy - Methods of Application

- **INHALATION**: 1-5 drops undiluted either with/without steam
- **TOPICAL**: absorbed into and thru skin via diffusion like topical medical patches, through touch, compress, or bath OR "Internal skin" through vaginal douches, oral mouthwashes, gargles, and anal suppositories
- **INGESTION**: diluted in carrier oil in capsules or in honey. INGESTION is not accepted as part of holistic nurse training.

Aromatherapy Warnings and Contraindications

- Allergies, asthma
- Don’t use near eyes
- Don’t use near flames
- Don’t take by mouth
- Store in cool, colored glass
- Oils can stain clothing
- Keep away from pets and children
- Use with care in pregnancy

- Phenol rich oils need to be diluted before use
- Know photosensitive oils (bergamot)
- Reputable supplier needed: correct botanical, origin, part plant, method extraction, batch number
- Close container immediately after use

Aromatherapy - Drug Interactions

- Homeopathy: strong aromas can negate remedies (peppermint, eucalyptus)
- Allergies to ragweed: cross over with chamomile
- Enhanced effect with sedative oils on tranquilizer, anticonvulsant, and antihistamine therapy
Essential Oil Antidote

Smell the Coffee Beans

The Do's of Aromatherapy

- Explain procedure and rationale for use.
- Always determine the patient's allergy status.
- Use inhalation method only.
- Use with care in pregnancy (never in the first trimester).

The Do's of Aromatherapy

- Store essential oils in a cool, dry, locked area (best to even refrigerate) and away from naked flames (volatile and flammable).
- Reputable supplier needed: correct botanical, origin, part plant, method extraction, batch number
- Close container immediately after use
- Have coffee bean antidote available
The effects of aromatherapy are theorized to result from the effect of odorant molecules from essential oils on the brain’s emotional center, the limbic system. Topical application of aromatic oils may exert antibacterial, anti-inflammatory, and analgesic effects.

Studies in animals show sedative and stimulant effects of specific essential oils as well as positive effects on behavior and the immune system. Functional imaging studies in humans support the influence of odors on the limbic system and its emotional pathways.

Benefits of Aromatherapy

- Increase energy
- Relax muscles
- Regulate hormones
- Reduce inflammation
- Relieve menstrual cramps
- Improve sleep
- Balance mood
- Fight infections
- Decrease sinus & lung congestion
- Aid digestion
- Stimulate immune system
- Relieve pain
- Reduce stress

Aromatherapy Pots/Jars

- Place 3 drops of oil on a cotton ball and place in approved container that is properly labeled.
- Name, DO NOT EAT
- Amber or blue containers
- Educational handout
- Supplies: websites
  - Industrial Containers Services
  - Vitacost
  - Aromatic International
### Evidence Table Symptoms - Lavender

<table>
<thead>
<tr>
<th>Symptom</th>
<th>Author/Yr</th>
<th>Design/N Stat Sign</th>
<th>Quality</th>
<th>Benefit</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anxiety</td>
<td>Kasper 2010</td>
<td>Randomized control N=220</td>
<td>Yes</td>
<td>5=excellent</td>
<td>Medium showed decrease in Hamilton Anxiety Scale scores</td>
</tr>
<tr>
<td>Anxiety</td>
<td>Woelk 2010</td>
<td>Randomized control N=77</td>
<td>Yes</td>
<td>4=Good</td>
<td>Large Oil vs lorazepam on generalized anxiety resulted similar effect</td>
</tr>
<tr>
<td>Anxiety</td>
<td>Graham 2003</td>
<td>Randomized control N=313</td>
<td>No</td>
<td>3=Good</td>
<td>N/A Inhalation during radiotherapy was not found to be beneficial</td>
</tr>
</tbody>
</table>

### Evidence Table Symptoms - Lemon

<table>
<thead>
<tr>
<th>Symptom</th>
<th>Author/Yr</th>
<th>Design/N Stat Sign</th>
<th>Quality</th>
<th>Benefit</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anti-stress</td>
<td>Komiyama 2006</td>
<td>Only with mice</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td>Cognitive function/Alzheimer's disease</td>
<td>Jimbo 2012</td>
<td>Interventional N=28</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
</tr>
</tbody>
</table>

**No reliable supportive evidence in humans for medical use**
### Evidence Table Symptoms - Peppermint

<table>
<thead>
<tr>
<th>Symptom</th>
<th>Author/Yr</th>
<th>Design/N</th>
<th>Stat Sign</th>
<th>Quality</th>
<th>Benefit</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Irritable bowel</td>
<td>Cappello 2007</td>
<td>Randomized Controlled Trial/57</td>
<td>Yes</td>
<td>5 = Excellent</td>
<td>Medium</td>
<td>4 weeks of peppermint oil improved symptoms</td>
</tr>
<tr>
<td>Antispasmodic</td>
<td>Sharakhil 2010</td>
<td>Randomized Controlled Trial/ 131</td>
<td>Yes</td>
<td>4 = Excellent</td>
<td>Medium</td>
<td>20 ml of peppermint oil spray vs placebo with evidence of arresting peristalsis</td>
</tr>
<tr>
<td>Nausea</td>
<td>Lua 2012</td>
<td>Systematic Review of 4 trials</td>
<td>Inhaled peppermint oil from gauze pad showed evidence of benefit in reducing incidence of nausea</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Aromatherapy Post-Operative Nausea
- A study in the Anesthesia & Analgesia, Sept. 2013
- Sample Size: 301 patients with Nausea
- Interventions:
  1. Essential oil of ginger
  2. A blend of essential oils of ginger, spearmint, peppermint, and cardamom, or
  3. Isopropyl alcohol
- Patients with Nausea level of 1-3 received a gauze pad saturated with a randomly chosen aromatherapy agent and told to inhale deeply 3 times.

### Aromatherapy PON - Findings

<table>
<thead>
<tr>
<th>Blend (p&lt;0.001)</th>
<th>Alcohol (p=0.76)</th>
</tr>
</thead>
<tbody>
<tr>
<td>PON of -1 in 48 patients</td>
<td>PON of -1 in 34 patients</td>
</tr>
<tr>
<td>PON of -2 in 11 patients</td>
<td>PON of -2 in 6 patients</td>
</tr>
<tr>
<td>PON of -3 in 4 patients</td>
<td>PON of -3 in 0 patients</td>
</tr>
<tr>
<td>No Change in 12 patients</td>
<td>No Change in 33 patients</td>
</tr>
<tr>
<td>Worse in 1 patient</td>
<td>Worse in 5 patients</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Ginger (p&lt;0.002)</th>
<th>Saline</th>
</tr>
</thead>
<tbody>
<tr>
<td>PON of -1 in 38 patients</td>
<td>PON of -1 in 24 patients</td>
</tr>
<tr>
<td>PON of -2 in 11 patients</td>
<td>PON of -2 in 5 patients</td>
</tr>
<tr>
<td>PON of -3 in 2 patients</td>
<td>PON of -3 in 0 patients</td>
</tr>
<tr>
<td>No Change in 12 patients</td>
<td>No Change in 40 patients</td>
</tr>
<tr>
<td>Worse in 1 patient</td>
<td>Worse in 4 patients</td>
</tr>
</tbody>
</table>

Aromatherapy as Treatment for Postoperative Nausea: A Randomized Trial

"The hypothesis that aromatherapy would be effective as a treatment for PON was supported. On the basis of our results, future research further evaluating aromatherapy is warranted. Aromatherapy is promising as an inexpensive, noninvasive treatment for PON that can be administered and controlled by patients as needed." (Hunt et al., 2013)


Aromatherapy Findings

- Sample Size: 196 patients with Nausea and/or Vomiting
- Interventions on initial PONV complaint patients randomly received either:
  1. Controlled breathing (CB) using 3-3-3 breath technique,
  2. Aromatherapy of inhalation of Peppermint essential oil (AR), and
  3. 2nd treatment was repeated in 5 minutes if indicated.
- Final assessment occurred 10 minutes post initial treatment.


Aromatherapy for Post-Operative Nausea and/or Vomiting

Findings:
- Among eligible subjects, PONV incidence was 21.4% (42/196). Though not statistically significant, CB was more efficacious than AR, 62.5% versus 57.7%, respectively.
- CB can be initiated without delay as an alternative to prescribed antiemetics. Data also support use of peppermint AR in conjunction with CB for PONV relief.
- None of the intervention groups required rescue with antiemetic medications.

### Therapeutic Touch (TT)
- Developed in the 1970s (Dora Kunz and Dolores Krieger, PhD RN)
- TT used to balance and promote the flow of human energy
- Energy can be assessed and felt and should be apart of nursing practice

### Healing Touch (HT)
- Developed in the 1980s (Janet Mentgen, BSN, RN)
- HT is an energy therapy in which practitioners consciously use their hands in a heart-centered and intentional way to support health and healing.
- Nurses and allied health providers

---

### Healing Touch
#### Bilateral Total Knee Arthroplasty
- Sample Size: 41 patients
- Interventions:
  1. Healing Touch was administered once a day between 2 physical therapy sessions.
  2. Pain and Anxiety were measured pre and post HT.
- Visual Analog Scale (VAS) was used for measuring interval-level acute pain and State-Trait Anxiety Inventory (STAI) was used to measure Anxiety.
- HT group had lower Anxiety on post-op Day 2
  - HT group had STAI score of 31.24 versus Control group STAI score of 37.81

---

### Healing Touch Findings
- No change in the amount of pain medication used by patients in HT and Control group.
- Visual Analog Scale (VAS) was used for measuring interval-level acute pain and State-Trait Anxiety Inventory (STAI) was used to measure Anxiety.
- HT group had lower Anxiety on post-op Day 2
  - HT group had STAI score of 31.24 versus Control group STAI score of 37.81
Healing Touch Findings

- Pain was lower in the Healing Touch group.

<table>
<thead>
<tr>
<th></th>
<th>PACU</th>
<th>Day 1</th>
<th>Day 2</th>
<th>Discharge</th>
</tr>
</thead>
<tbody>
<tr>
<td>HT</td>
<td>2.35</td>
<td>3.73</td>
<td>2.39</td>
<td>2.44</td>
</tr>
<tr>
<td>Control</td>
<td>3.08</td>
<td>4.95</td>
<td>2.85</td>
<td>3.38</td>
</tr>
</tbody>
</table>

- Healing Touch group walked further on post-op Day 1.
- ROM was similar in both groups.


Healing Touch Research

- Poster Presentation from the International Research Congress on Integrative Medicine and Health (May, 2012)
- Sample Size: 75 patients
  - Divided into 3 groups: Sham (32%), HT (35%), and Control (33%).
- Interventions:
  1. 4 sessions were provided to the patients


Healing Touch Research-Findings

- Comparing the Sham and HT groups in terms of changes in anxiety and pain scores showed marginal differences:
  - statistically significant differences in anxiety scores in Session 2,
  - statistically significant differences in anxiety in Session 3,
  - statistically significant differences in pain scores were noted in Sessions 2, 3, and 4.
- No differences were noted in the Hospital Anxiety Depression Scale (HADS).

Energy Medicine- Healing Touch

- Brigham and Women’s Hospital, Harvard Medical School teaching hospital
- NYU Medical Center in New York
- Hartford Hospital
- Greenwich Hospital’s Dept. of Integrative Medicine in Connecticut
- Kaiser Permanente Santa Clara Medical Center in California
- Scripps Medical Center in San Diego, California
- Beth Israel Hospital in New York City, NY
- Mission Hospital in Asheville, NC

Massage Therapy

- Nursing used massage in 1960/70’s to help patients sleep/ease pain.
- Today growing in popularity to maintain health, sports medicine, illnesses, some businesses for staff relaxation
- 64% of hospitals report using massage therapy as part of outpatient care, with 44% using it as part of inpatient care.

Source: American Massage Therapy Association, 2011

Massage Therapy Research

- A study in the Orthopaedic Nursing, Nov./Dec. 2010
- Sample Size: 60 patients
- Interventions:
  1. 5 minute back massages were given twice a day while patient sat on side of bed.
  2. Relaxation CDs were provided to experimental group with music, breath techniques, progressive relaxation, and guided imagery. (CDs were 30 minutes in length)
  3. 10 minute massages were given once a day using effleurage and petrissage using lanolin oil.

Massage Therapy Research - Findings

- McGill Pain Questionnaire Short Form was used for measuring pain. The State Anxiety Inventory (SAI) was used to measure anxiety, and vital signs were obtained.
- Data was collected pre-intervention, immediately after intervention, 1 hour after intervention and 2 hours after intervention.
- Study showed statistically significant differences in pain intensity, anxiety levels, and vital signs between the experimental and the control group.


### Massage Therapy Research - Findings

<table>
<thead>
<tr>
<th></th>
<th>Exp.</th>
<th>Control</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pain (VAS)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pre-intervention</td>
<td>7.13</td>
<td>7.20</td>
</tr>
<tr>
<td>Immediately post</td>
<td>5.04</td>
<td>7.23</td>
</tr>
<tr>
<td>intervention</td>
<td>4.05</td>
<td>6.99</td>
</tr>
<tr>
<td>1 hour post</td>
<td>4.76</td>
<td>6.56</td>
</tr>
<tr>
<td>intervention</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Anxiety (VAS)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pre-intervention</td>
<td>5.83</td>
<td>5.99</td>
</tr>
<tr>
<td>Immediately post</td>
<td>3.84</td>
<td>6.09</td>
</tr>
<tr>
<td>intervention</td>
<td>3.31</td>
<td>6.04</td>
</tr>
<tr>
<td>2 hours post</td>
<td>3.93</td>
<td>5.79</td>
</tr>
<tr>
<td>intervention</td>
<td></td>
<td></td>
</tr>
<tr>
<td>A parasympathetic</td>
<td></td>
<td></td>
</tr>
<tr>
<td>response was noted</td>
<td></td>
<td></td>
</tr>
<tr>
<td>with the vital signs</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>


Guided Imagery
Imagery described as “the world’s oldest and greatest healing resource” (Thomas, 2010).

Health care providers believe that imagery works by allowing access to patient’s subconscious mind and by opening communication among the body, mind, and spirit.

Guided imagery is a technique that uses imagination or visualization of pictures, as well as other senses (hearing, smell, touch) with the purpose of reaching a specific goal.

Guided imagery or visualization is a technique that uses an individual’s imagination to elicit positive images to reduce stress, decrease pain, or promote healing.

Imagery has been used effectively in a wide variety of situations: symptom management of cancer and chemotherapy, chronic pain management and stress reduction, substance abuse counseling, sleep disorders, allergies and asthma, labor and delivery, headaches, migraines, hypertension, and a myriad of other conditions.

Guided Imagery

- Geriatric Variation
- Pediatric Variation
- Home Variation
- Long-Term Variation
Guided Imagery
Post-Operative Pain & Anxiety

- A study in the Orthopedic Journal, Nov./Dec. 2010
- Sample Size: 121 patients with Pain & Anxiety
- Interventions:
  1. Listened to a guided imagery CD twice a day for 5 days before surgery and then twice a day during post-op days.


Guided Imagery
Post-Operative Pain & Anxiety

- Aim of the study was to evaluate the effects of guided imagery on pain and anxiety in patients undergoing a total joint replacement.
  - 55% of these patients had a Total Knee Arthroplasty (TKA)
  - 45% of these patients had a Total Hip Arthroplasty (THA)


Polling Question

Do you offer any holistic nursing modalities to your orthopaedic patients?

- A. Yes
- B. No
- C. Uncertain
Guided Imagery Findings

- There was no significant difference in pain and anxiety levels between the groups. However, the intervention group had lower levels of anxiety and pain at all time points.
- Both groups followed a similar anxiety and pain pattern with the highest reported levels at Day 2. (Hunt et al., 2013)


Guided Imagery

Joint Replacement Surgery

- A study in the Journal of Clinical Nursing, 2011
- Sample Size: 93 patients average age was 71 years
- Interventions:
  1. Listened to a breath relaxation and guided imagery CD for 20 minutes a day the day before surgery to 3rd post-operative day.
- Aim of the study was to examine the effects of relaxation therapy in patients undergoing joint replacement.
  - 84% of these patients had a Total Knee Arthroplasty (TKA)
  - 16% of these patients had a Total Hip Arthroplasty (THA)


Guided Imagery Findings

- Pain and anxiety was significantly reduced after guided imagery therapy in the experimental group. Blood pressure was also lower in the experimental group.
- Mean differences for pain were higher on pre-op Day and post-op Day 1
- Patients reported that guided imagery promoted sleep

Orthopaedic Patients Integration of Holistic Nursing Modalities

1. INTENTION
2. MODALITIES
3. TRAINING
4. COLLABORATION
5. DOCUMENTATIONS

Orthopaedic Patients Integration of Holistic Nursing Modalities

QUESTIONS TO ASK???

- What would it look like?
- Why should we create this integrative environment?
- Who needs to be involved?
- Do we have time to do this?
- How much is it going to cost?
- How will we measure the impact to our patients?
- What modalities should we use?

Documentation

Requirements

- Brochures
- Patient Education forms
- Intervention
- Documentation
- Policies and procedures
- Resource Book
- Downtime Forms
- MSDS Sheets
Orthopaedic Patients Integration of Holistic Nursing Modalities

**Scope of Practice**
- Nursing Position on Complementary Therapies
- Practice Act and Position Statements

**Evidence - Based**
- Aromatherapy
- Guided Imagery
- Healing Touch
- Biofeedback
- Hypnotherapy
- Acupressure
- Reflexology
- Nurse Coaching
- Meditation
- Prayer

**Pilot Programs**
- Planning Team
- Decide Modality
- Literature Review
- Decide Target Population
- Decide what is going to be measured?

SCOPE OF PRACTICE

WEB RESOURCES
- NCCAM - www.nccam.nih.gov
- Cochrane - www.cochrane.org
- NIH Technology Panel - www.ahcpr.gov/clinic/epcix.htm
- BMJ - http://ebn.bmjjournals.com
- Agency for Healthcare Research and Quality - www.ahrq.gov/clinic/epicte.htm
- NCCAM - www.nccam.nih.gov/health/complementary

Source: NCBON permission received on 4/2/2014
Orthopaedic Patients Integration of Holistic Nursing Modalities- 4 Strategies

1. Survey Physician’s and Nurses

2. Find and Create Experts

3. Use only Evidence-based Modalities

4. Dedicated Staff versus All Staff

PATIENT PILOT

- Developing an Holistic Nursing Modality Pilot Team and work for:
  - In what unit/ patient population group will be piloted
  - Determine who and how services will be access by patients
  - Ensure staff is trained properly
  - Establish Protocols for Holistic Nurse practitioners
  - Ensure what will be documented in the patient’s chart

PATIENT PILOT - Protocols

All integrative interventions performed by the nurse include:
- Communicate with patient’s primary nurse
- An introduction and description of the therapies offered.
- Verbal permission from the patient or family.
- Allergy assessment and documentation.
- Vital signs (BP, HR, RR, and Temp), taken and documented.
PATIENT PILOT - Protocols

- An assessment of the patient for the nurse to determine the most appropriate technique to be offered.
- Allowing and encouraging the patient to remain in a position of comfort.
- Quieting of the telephone, with patient permission. The TV will be turned off or placed on the Relaxation Station.
- Allowing family to remain in the room during the intervention.

PATIENT PILOT - Protocols

- A ‘Please Enter Quietly’ sign being placed on the outside of the door to the room.
- The actual intervention
- Vital signs retaken and patient re-assessed.
- Returning the room, phone and TV to the previous set up for the patient.

Polling Question

Would you now consider taking the Holistic Nurse Certification offered by the American Holistic Nurses Credentialing Corporation?

A. Yes
B. No
C. Uncertain
PATIENT PILOT - Protocols

- An evaluation form left at the bedside and the patient asked to fill out the form to be returned to the staff.
- Providing answers to questions and information on how to contact the department for future interventions.
- Documentation in computer or by paper format.
- A sticker placed in the front of the patient’s chart on the Physician Communication sheet, notifying the physician of the patients’ participation in Integrative therapy.

PATIENT PILOT- Roll Out

- Physicians and leadership meetings for the service line where pilot will take place
- Presentations at Staff Meetings
- Posters along nursing units

Pilot for Holistic Nursing Modalities

- Get stakeholders at the Table
- Determine Modality
  - Support with evidence-based literature
  - Determine competencies require
  - Create Policy & Procedure
  - Develop Patient Information
  - Develop Documentation
  - Outcome Measures
PEARLS, PITFALLS, & BARRIERS

- **Pearls-** It can be done! Hospital or Organizational Goals, Patient Experience, Staff Satisfaction, Research
- **Pitfalls-** Inadequate structure
- **Barriers-** Funding/Reimbursement, Time, Cross trained practitioners

Holistic Nursing Approaches

- Values the individual
- Emphasizes healing
- Creates relationship-centered care
- Creates patient and provider satisfaction
- Empowers caregivers
- Promotes excellence in medical care

References

References