Complementary and Alternative Modalities

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Purpose of this workshop

* 1) Outline approach for CAM in pain management
* 2) Evidence base for CAM therapies
* 3) How to integrate/practise CAM therapies both personally and professionally
Common Terms

CAHC - complementary & alternative health care
CAM  - complementary & alternative medicine
CAT  - complementary & alternative therapies
IM    - Integrative Medicine

Complementary – non-mainstream together with conventional
Alternative – non-mainstream in place of conventional

Integrative Health- growing trend focusing on whole person and relationship as partnership
CAM categories
(National Institute of Complementary and Alternative Medicine)

* Manipulative; chiropractor, massage
* Movement: yoga, tai chi
* Mind-Body: meditation, relaxation, imagery, CBT, art
* Energy: qi gong, tai chi
* Biological: herbal, diet, homeopathy
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<th></th>
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</thead>
<tbody>
<tr>
<td>Used at least one therapy in lifetime</td>
<td>73%</td>
<td>74%</td>
<td>84%</td>
<td>83%</td>
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<tr>
<td>Chiropractic care</td>
<td>36%</td>
<td>40%</td>
<td>48%</td>
<td>51%</td>
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<tr>
<td>Massage</td>
<td>23%</td>
<td>35%</td>
<td>37%</td>
<td>44%</td>
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<tr>
<td>Relaxation techniques</td>
<td>23%</td>
<td>20%</td>
<td>31%</td>
<td>26%</td>
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<tr>
<td>Prayer/spiritual practice</td>
<td>21%</td>
<td>18%</td>
<td>24%</td>
<td>23%</td>
</tr>
<tr>
<td>Acupuncture</td>
<td>12%</td>
<td>17%</td>
<td>16%</td>
<td>22%</td>
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<tr>
<td>Yoga</td>
<td>10%</td>
<td>16%</td>
<td>21%</td>
<td>20%</td>
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<tr>
<td>Herbal therapies</td>
<td>17%</td>
<td>15%</td>
<td>32%</td>
<td>20%</td>
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<tr>
<td>Special diet programs</td>
<td>12%</td>
<td>10%</td>
<td>15%</td>
<td>8%</td>
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<tr>
<td>Energy healing</td>
<td>7%</td>
<td>9%</td>
<td>10%</td>
<td>15%</td>
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<tr>
<td>Naturopathy</td>
<td>6%</td>
<td>9%</td>
<td>14%</td>
<td>16%</td>
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<tr>
<td>Homeopathy</td>
<td>9%</td>
<td>9%</td>
<td>9%</td>
<td>10%</td>
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Table 5: Use of Complementary and Alternative Therapies in Canada in the 12 Months Preceding the Survey, by Region, 1997 and 2006 (%)\(^1\)

<table>
<thead>
<tr>
<th>Therapy</th>
<th>Canada*</th>
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<tr>
<td></td>
<td>1997</td>
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<tr>
<td>Used at least one therapy in past 12 months*</td>
<td>50%</td>
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<tr>
<td>Massage</td>
<td>12%</td>
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<td>Prayer/spiritual practice</td>
<td>18%</td>
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<tr>
<td>Chiropractic care</td>
<td>13%</td>
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<tr>
<td>Relaxation techniques</td>
<td>17%</td>
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<tr>
<td>Herbal therapies</td>
<td>12%</td>
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<tr>
<td>Yoga</td>
<td>4%</td>
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<td>Aromatherapy</td>
<td>5%</td>
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<td>Energy healing</td>
<td>3%</td>
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<tr>
<td>Acupuncture</td>
<td>2%</td>
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<tr>
<td>Folk remedies</td>
<td>6%</td>
</tr>
<tr>
<td>Special diet programs</td>
<td>3%</td>
</tr>
<tr>
<td>Naturopathy</td>
<td>3%</td>
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</tbody>
</table>
Specific Health Conditions

- **Arthritis**: POP ~ 50% CLIN 67%
- **Back pain**: CAN 39% US 38-54%
- **Cancer**: 37-83% (72% no disclosure)
- **Diabetes**: 49% treatment/prevention

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Arthritis & Rheumatism (2005) 53:748
Joint Bone Spine (2005) 72:571
Diabetes Care (2006) 29:15
[PubMed + condition + CAM]

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Sawynok J, CAM in UME at Dalhousie: CAM Basics
CAM Modalities

* Acupressure  acupuncture  affirmative prayer  alexander technique  apitherapy  applied kinesiology  aromatherapy  astrology  auriculotherapy  autogenic training  autosuggestion  ayuveda  alfalfa  antioxidants

* Baineotherapy  behavioural approaches  belladonna  beta carotene  biofeedback  biotin  breathing exercises  breathing retraining  butterbur

* ...and that’s just A and B
CAM

* Highest growth since 60’s in the 1990’s
* Interest in CAM increases with severity of pain
* Use of CAM associated with depression and other co-morbidities
* 40%-70% of clients of pain programs use a form of CAM
* Determined by belief system of clients. Clients prefer hands on and cost-less than $10/session
Goals of Pain Management (IASP)

- Reduce pain intensity
- Enhance physical functioning
- Improve psychological functioning
- Reduce health care utilization
- Promote return to work/school and role in family and community
- Improve health related quality of life
Goals of CAM modalities

- Holistic movement that combines body and mind health
- Starts with activating parasympathetic nervous system
- Circular movements and weight shifts that provide new learning to ROM, body awareness and co-ordination
- Empowerment of client in active health choices
Pain programs

* (BIO) Understanding of neuromatrix and plasticity of our physiology, engagement in healing movements and to optimize posture and breath

* (PSYCHO) empowerment of client and stability of thinking and emotional response

* (SOCIAL) focus on quality of life, community involvement and meaningful activity
Neuro-endocrine-immunological or Biopsychosocial or Holistic??

Health Psychology: Developing Biologically Plausible Models Linking the Social World and Physical Health
Annual Review of Psychology Vol. 60: 501-524
Does the therapy make biological sense?

Is the therapy credible based on our understanding of the biological and behavioral mechanisms underlying their effects
Meditation

- Immediate and long term effects on cortical structures for attention and emotional reasoning
- Predicts less negative appraisal of pain, and less anticipation. Equanimity of perception.
- Education is equally effective, but not as long-lasting (>4 months)
YOGA

- **Physical**: Improved body awareness and sleep, lower heart rate and muscle tension, slower brain wave, less static load in posture

- **Cognitive**: Increased perceived control over health

- **Emotional**: Greater acceptance of pain and life burdens

- **Behavioural**: enhanced use of active coping

- Increase in self assurance, attentiveness and serenity
TAI CHI

- Increases relaxation and quality of sleep, reduces stress, depression and fatigue
- Balance improvement (proprioception, regained equilibrium)
- Moderate cardiovascular activity
- Modulates complex factors of pain and improves health outcomes (high use of imagery)
Qi Gong

- Teaching people to live in state of energy balance by cleansing and dispersing stagnant chi

- 3 aspects of Qi gong:
  - **Medical** – healing
  - **Spiritual** – self awareness
  - **Martial** – self protection

- Improved self efficacy as compared to CBT

- Improved sleep patterns

- Strong evidence for treatment of hypertension and anxiety
Manual and body therapies

- Most manual methods involve combinations of stretch, compression, shear and torque forces, *(and bending)* and that: “despite being called different names, many of these techniques used around the world really create the same (or nearly the same) effects on tissues and cells.”

Standley, 2013
Passive Joint mobilisation (movement)

- concurrent hypoalgesia, sympathetic nervous system excitation and changes in motor function.
- descending pathways might play a key role in manual therapy induced hypoalgesia.
- existence of an alternative neurophysiological model, in which passive joint mobilisation stimulates areas within the central nervous system.

An experimental body of evidence exists indicating that spinal manipulation impacts primary afferent neurons from paraspinal tissues, the motor control system and pain processing.

Neurophysiological effects of spinal manipulation. Pickar, 2002
Investigating the mechanisms of massage efficacy: the role of mechanical immunomodulation.

C Waters-Banker 2014

* By altering signaling pathways involved with the inflammatory process, massage may decrease secondary injury, nerve sensitization, and collateral sprouting

* massage therapy activates potentially beneficial immunomodulatory pathways.
Therapeutic Massage produced decreases in EMG signal amplitude of the upper trapezius muscle when compared to the Light Touch and the Control (rest) groups maybe directly related to the change in α-motoneuron pool activation.

“moderate (positive)” evidence for the use of:

* Manipulation/mobilisation (with movement) for shoulder girdle pain/dysfunction
* High grade mobilisation for adhesive capsulitis
* Myofascial treatments (ischaemic compression, deep friction massage, therapeutic stretch) for soft tissue shoulder disorders
Clinical Effectiveness con’t

* Self-mobilising apophyseal glides for cervicogenic headache
* Self-mobilising apophyseal glides for cervicogenic dizziness
* Massage including myofascial release/strain/counterstrain for cancer care
* Manipulation/mobilisation (with exercise) for plantar fasciitis
Are complementary therapies and integrative care cost-effective? A systematic review of economic evaluations. PM Herman 2012

* The higher-quality studies indicate potential cost-effectiveness, and even cost savings across a number of CIM therapies and populations.
* CAM treatments were significantly more efficacious than no treatment, placebo, physical therapy, or usual care in reducing pain immediately or at short-term after treatment.
CAM: FAQ

* Are CAM approaches safe?
  * No simple answer
  * Good safely records
  * Not risk free – talk to HCP

Are CAM approaches effective?
Not strong enough evidence
Growing body for:
  spinal manipulation
  acupuncture
  massage
  yoga
Questions