Utilization of Complementary and Integrative Healthcare in Persons with Spinal Cord Injury

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Learning Outcomes

At the conclusion of this activity, the participant will be able to:

1. Learn what types of CIH people with SCI are currently using and for what reasons
2. Learn what types of CIH people with SCI tried or used previously, for what reasons, and why they stopped
3. Learn about barriers to CIH use for people with SCI
4. Learn about ways to talk to patients about CIH use
Acknowledgements

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Presentation Outline

• What is CIH?
• CIH in the general population
• CIH for people with SCI
• Current study
  • Methodology
  • Results
  • Conclusions
• Exploring the more “unusual” examples of CIH among people with SCI
• How to talk to your patients or your provider about CIH
What is CIH?

• Complimentary and Integrative Healthcare is:

  Complementary medicine + Alternative medicine + Integrative medicine

• Two approaches:
  • Products
  • Practices
A Few Examples…

**Acupuncture**
- Acupuncture
- Auricular therapy
- Ayurveda
- Binaural beats
- Biofeedback

**Chiropractic**
- Craniosacral therapy
- Cupping
- Diets, such as:
  - Vegetarian
  - Vegan
- Macrobiotic
- Atkins
- Pritikin
- Ornish
- Juicing
- Fasting
- Raw foods

**Cannabis, cannabinoids**
- 5-HTP
- Acai
- Bee Pollen
- Chondroitin
- Co-enzyme Q10 (CoQ10)
- Cordyceps
- Cranberry
- Creatine
- Digestive enzymes (lactaid)
- Echinacea
- Fish Oil/omega 3/fatty acids
- Garcinia Cambogia
- Garlic supplements
- Gingko Biloba

**Examples of CHI Practices**
- Needleling
- Candling
- Electromagnetic therapy
- Energy healing therapy
- Fasting
- Feng shui
- Guided imagery, visualization
- Heat therapy
- Heliotherapy
- Homeopathy
- Hydrotherapy
- Hypnosis
- Hypnotherapy
- Magnetotheraphy
- Manual Therapy
- Massage
- Meditation, such as:
  - Mantra Meditations
  - Transcendental Meditation
  - Relaxation Response, and Clinically Standardized Meditation
- Mindfulness Meditations
- Vipassana
- Zen Buddhist meditation
- Stress Reduction, Cognitive Therapy
- Spiritual meditation
  - Centering Prayer, Contemplative Meditation

**Transcutaneous electrical nerve stimulation (TES, TNS, TENS)**
- Mind-body therapy
- Move such as:
  - Rolfing
  - Pilates
- Trager Psychophysical Integration
- Naturopathy
- Osteopathic Manipulation
- Prayer therapy, affirmative prayer
- Prolotherapy
- Qi Gong
- Reiki
- Reflexology
- Relaxation therapy

**Examples of CHI Products**
- Vitamin supplements, such as:
  - Vitamin A (retinol)
  - Vitamin B
  - Vitamin B1 (thiamine)
  - Vitamin B2 (riboflavin)
  - Vitamin B3 (niacin)
  - Vitamin B5 (pantothenic acid)
  - Vitamin B6 (pyridoxine)
  - Vitamin B12 (cobalamin)
  - Vitamin C (ascorbic acid)
  - Vitamin D
- Multi-vitamin supplement

**Multi-vitamin supplement**

**CRAIG**
Use of CIH in the US population: Key findings from the 2017 NHIS

- Use of CIH in the general adult US population has increased since 2002
- Over 1/3 of US adults are using CIH approaches
- Yoga was the most commonly used complementary health approach among US adults (14.3%)
- Women were more likely to have used CIH in the past 12 months compared with men
- Non-Hispanic white adults were more likely to use CIH compared with Hispanic and non-Hispanic black adults
Key Findings: Natural Products

- Fish oil was the #1 natural product used among adults
- Use of fish oil, probiotics/prebiotics, melatonin increased from 2012
- Use of glucosamine/chondroitin, Echinacea, and garlic supplements decreased from 2012
Key Findings: Practices

• Most commonly used were yoga, meditation, and chiropractic
• Use of each significantly increased from 2012 to 2017
  • Yoga: 9.5% to 14.3%
  • Meditation: 4.1% to 14.2%
  • Chiropractic: 9.1% to 10.3%
Key Findings: Spending

Key Findings: Reasons for Use

- Pain is the most common reason people use CIH
- People who use chiropractic more often do so for specific treatment reasons rather than general wellness
- Those who used natural products or took dietary supplements were more likely to do so for general wellness
- Yoga users reported less stress (85%)
- Yoga users were more likely to report feeling better emotionally than users of dietary supplements or chiropractic
Barriers to Use of CIH

- Lack of insurance coverage and prohibitive cost
- Lack of physician support
- Skepticism of efficacy and safety
- Lack of knowledge
- Lack of access to providers
- No reason to use CIH
- Desire for a “magic bullet” cure
CIH Use in People with SCI

• Almost 300,000 persons living with SCI in the US, with more than 17,000 new SCI occurring every year

• 2006 survey of CIH use in people with SCI, MS, CP, and arthritis
  • People with SCI reported least use of CIH

• 2015 survey of CIH use in people with SCI in Switzerland
  • 74% had used CIH since injury
  • Acupuncture and homeopathy most common
  • To treat pain and UTIs
CIH Use for Pain in People with SCI

• Pain is the most common reason people with SCI use CIH
• High prevalence of pain after SCI
• 73% had tried at least one type
• Most commonly tried:
  • Massage (54.7%) (18.4%)
  • Cannabis (31.6%) (15.8%)
  • Acupuncture (28.2%) (2.6%)
Research on CIH for People with SCI

- Research has focused on treatments for pain
- May be effective:
  - Acupuncture
  - Biofeedback
  - Chiropractic
  - Herbs, vitamins, and minerals
  - Hypnosis
  - Massage and healing touch
  - Relaxation therapy
  - TENS
  - Yoga and tai chi
Other Use of CIH for People with SCI

- Herbal supplements: Functional recovery
- Cranberry & other herbs: Bladder health
- Vitamins & minerals: Bone health, wound healing
Other Use of CIH for People with SCI

• Acupuncture: Functional recovery, neurogenic bladder, bowel function
• Biofeedback: Functional recovery
• E-stim & electromagnetic therapy: Functional recovery, bone health, cardio health, wound healing, respiration
• Massage: Bowel function, depression & anxiety, range of motion
• Relaxation therapy: Coping & emotional distress
• Seated Tai Chi: Balance
Veterans with SCI

• In 2011, 90% of VAMC provided some CIH services or referred to licensed practitioners
• 70% of veterans would like to see services offered
• 76% would use services if offered
• High rates of satisfaction and self-reported improvements in health
• Only 20% of veterans receiving care at VA facilities used CIH within the last 12 months
  • Majority received CIH services outside the VA system
• Reasons for not offering CIH therapies
• VA research on a number of CIH therapies, but nothing targeted to veterans with SCI
Barriers to use of CIH for People with SCI

- Stereotype of the typical user
- “Not like me”
Current Study

• Utilization of and Barriers to Complementary and Integrative Healthcare to Treat Pain in People with SCI

• What is the SCIMS?

• National Database
  • ~13% of all SCI in the US
  • More than 33,000 participants with up to 45 years of follow-up
  • Enrolled during inpatient rehabilitation
  • Followed at one year and subsequent 5 year injury anniversaries
Goals

• Short term goal
  • To provide current and comprehensive information regarding CIH utilization and barriers to utilization for people with SCI

• Implications
  • Development of RCTs to test effectiveness of CIH techniques actually being used and found helpful
  • Policy change on access to CIH that is efficacious

• Long term goal
  • Improve health and quality of life
Participating SCIMS

- 5 SCIMS participating:
  - Rocky Mountain Regional Spinal Injury System (Craig Hospital, CO)
  - Spaulding New England Regional SCI Center (Spaulding, MA)
  - Northern New Jersey SCI System (Kessler Rehab, NJ)
  - Texas Regional SCI System (TIRR, TX)
  - Midwest Regional SCI Care System (Shirley Ryan AbilityLab, IL)
Aims and Hypotheses

- **Aim 1**: Characterize utilization of CIH in people with SCI in the SCIMS
  
  **Hypothesis 1**: Treatment of pain will be the primary reason people with SCI use CIH.

- **Aim 2**: Identify barriers to use of CIH for people with SCI
  
  **Hypothesis 2**: Financial limitations will be the primary barrier.
Study Design and Data Collection

• Cross-sectional survey design

• Sample

• Telephone interview or online survey

• Three sources of data:
  • CIH survey
  • SCIMS NDB enrollment data
    • demographics & injury-related variables
  • SCIMS NDB follow-up data
    • functional & psychosocial variables
CIH Survey

- CIH Survey was developed with input from collaborators and stakeholders

Questions

10. Why did you stop using [PAST_CIH#1]? (choose all that apply)

1. _____ I didn’t need it anymore
2. _____ I didn’t feel like it helped
3. _____ It stopped helping me
4. _____ Insurance did not cover or stopped covering it
5. _____ I could no longer access provider or practitioner
6. _____ It was too expensive, I couldn’t afford it
7. _____ Other (Specify ____________________________)

1. _____ Per visit/session    How much per visit/session?    $ __________
2. _____ Per month       How much per month?    $ __________
3. _____ Per year        How much per year?    $ __________
4. _____ My insurance covers, so I spend $0 out of pocket
5. _____ I don’t know
Results – Utilization of CIH

- A total of 366 participants with SCI had completed the survey at the time of this presentation.
- ~ half had used CIH before their SCI (52.7%)
- 72.5% are currently using CIH
- 11.3% are not currently using any CIH but have used or tried CIH since their SCI
- Only 16.2% have not used or tried any CIH since their injury
# Results - Demographics

<table>
<thead>
<tr>
<th></th>
<th>Currently uses CIH (72.5%)</th>
<th>Used CIH since SCI, but not currently (11.2%)</th>
<th>Has not used since SCI (16.1%)</th>
<th>Total Sample (n = 366)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Sex (%)</strong></td>
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<td><strong>Race/Ethnicity (%)</strong></td>
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<td><strong>Age at Study (years)</strong></td>
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<td>15.2</td>
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<tr>
<td><strong>Time Since Injury (years)</strong></td>
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<tr>
<td>Mean</td>
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<td>14.5</td>
<td>12.8</td>
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<tr>
<td>SD</td>
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<td>13.7</td>
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## Results – Injury-Related

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<th>Currently uses CIH (n = 266)</th>
<th>Used CIH since SCI, but not currently (n = 41)</th>
<th>Has not used since SCI (n = 59)</th>
<th>Total Sample (n = 366)</th>
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<tr>
<td><strong>Etiology (%)</strong></td>
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<td>Violence</td>
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<td>12.3</td>
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<td><strong>Injury Level (%)</strong></td>
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<tr>
<td>Cervical</td>
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<td>Lumbar</td>
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<td>23.1</td>
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<td><strong>AIS Level (%)</strong></td>
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<td>15.1</td>
<td>15.4</td>
</tr>
<tr>
<td>C</td>
<td>70</td>
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<td>20</td>
<td>14.5</td>
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<td>D</td>
<td>67.7</td>
<td>9.7</td>
<td>22.6</td>
<td>27.0</td>
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<td><strong>Neuro Impairment (%)</strong></td>
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<tr>
<td>Tetra, Incomplete</td>
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<td>Tetra, Complete</td>
<td>81.3</td>
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<td>18.4</td>
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</table>
Results – Currently used CIH

- Multivitamin
- CBD
- Cranberry
- Meditation
- Probiotics
- Vitamin B12
- Dry Needling
- Healing Therapy
- Meditation
- Antioxidants
- Botox
- Minerals
- Exercise
- Herbs
- Cranberry
- Calcium
- Acupuncture
- Aromatherapy
- Multivitamins
- Massage
- Vitamins
- Fish Oil
- Special Diets
- Dietary Supplements
Results – Currently used CIH

- Products: 67.6%
- Practices: 32.4%
Results –
Top 10 currently used CIH

- Multivitamin: 41.7%
- Massage Therapy: 33.1%
- Cannabis Products: 24.8%
- Vitamin D: 21.8%
- Cranberry...: 17.3%
- Vitamin C: 15.4%
- Herbs: 12.8%
- Special Exercises: 10.2%
- CBD Products: 9.0%
- Meditation: 7.9%
Results –Currently used CIH

- **Multivitamins/minerals:** general health and wellness
  - Other: spasticity, stool softener, and UTI prevention
- **Massage therapy:** pain relief
  - Other: spasticity, stress management
- **Cannabis:** pain relief
  - Other: pain, spasticity, stress, anxiety, sleep
- **Vitamin D:** bone health
- **Cranberry:** bladder health, UTI prevention
Results – Currently used CIH

- **Vitamin C:** General health and wellness
  - Other: Infection prevention
- **Herbs:** various
  - Melatonin for sleep, turmeric for inflammation, and senna for bowel health
- **Special Exercises:** General health and wellness
  - Other: Pain relief, sleep, bone health, weight mgmt, anxiety, stress
- **CBD Products:** Pain relief
- **Meditation:** General health and wellness
  - Other: Anxiety, stress, sleep
Results – Previously used CIH
Results – Previously used CIH

<table>
<thead>
<tr>
<th>Products</th>
<th>Practices</th>
</tr>
</thead>
<tbody>
<tr>
<td>69.5%</td>
<td>30.5%</td>
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</table>
Results –
Top 10 previously used CIH

- Acupuncture: 33.3%
- Massage Therapy: 27.2%
- Chiropractic: 11.1%
- Special Exercises: 9.9%
- E-stim/TENS: 8.6%
- Dry Needling: 8.0%
- Herbs: 8.0%
- Yoga: 7.4%
- Botox Injections: 6.2%
- Special Diet: 5.6%
Results – Previously used CIH

• **Acupuncture**: pain relief, spasticity
  • **Why stopped**: didn’t feel that it helped, benefits weren’t worth the cost, pain relief didn’t last

• **Massage**: pain relief
  • **Why stopped**: didn’t have time, loss of access to practitioner

• **Chiropractic**: pain relief
  • **Why stopped**: didn’t feel like it helped, didn’t like it

• **Special exercises**: various reasons
  • **Why stopped**: various reasons
Results – Previously used CIH

• E-stim: various reasons
  • Why stopped: various reasons

• Dry Needling: pain relief
  • Why stopped: benefits weren’t worth side effects and cost

• Herbs: sleep (melatonin)
  • Why stopped: didn’t feel like it helped

• Yoga: general health and wellness
  • Why stopped: lack of time

• Botox Injections: spasticity, mobility
  • Why stopped: unwanted side effects
Results – Barriers to CIH Use

- I don't need it: 42.4%
- I don't know what options are available: 40.7%
- My primary care doctor has never...: 28.8%
- I don't think it would help me: 18.6%
- I am not interested in trying CIH: 16.9%
- I don't trust that kind of medicine: 11.9%
- Insurance does not cover it: 8.5%
- It is too expensive, I can't afford it: 8.5%
- I don't have access to a provider/practitioner: 6.8%
- I don't have transportation: 5.1%
- That kind of medicine isn't for people with...: 3.4%
Things that make you go hmmm...

(AKA, The Anecdotal Stuff)

Colostrum

Life

Jewels

Colostomy

Colonscopic

mushroom

Colo-therapy

CRAIG
**Red Yeast Rice.** Potential use: lowering cholesterol

**Lion’s mane mushroom.** Reported use: nerve function and growth

**Coloring Books.** Reported use: Stress management

**Life Vessel Therapy.** Reported use: pain

**Chi machine.** Reported use: pain, sleep, bone health, spasticity, weight management, lymphatic health
Colon Therapy

Ear Seeds

Ear Candling

Colostrum

Human Growth Hormone

Feldenkrais Deep Breathing

Energy healing
Antiseptic stimulator. Reported use: bowel program

Antiseptic Dorogov’s Stimulator (Russian: АСД, антисептик-стимулятор Дорогова, ASD) is an antiseptic drug invented by A. V. Dorogov in 40’s in former USSR.

ASD was originally invented by a Russian researcher A. V. Dorogov in 40’s and initially kept secret and allowed only for army and special services use. Attributed strong anti-carcinogenic and anti-viral [1] properties. The production process is described as “thermal processing of animal-origin tissues”, the final product is a dark fluid with very strong and specific odour. Available in two fractions - “third”, denser, is to be administered on skin, “second” fraction - orally.

Since 90’s produced in biochemical factory in Armavir and registered in Russia as official drug for animal-only usage and recommended for skin diseases in pigs and cows.

⭐⭐⭐⭐⭐ ASD-2
October 24, 2018
Verified Purchase

I don’t know if this’s a good product, but because of a very unbearable smell I threw a bottle
John of God Crystal Bed Therapy. Reported use: regain ability to walk

More than 200 women accuse famous Brazilian spiritual healer of sexual abuse

Prosecutors received flood of complaints against João Teixeira de Faria in country’s first major #MeToo scandal
Conclusions

• Wide range of CIH
• Pain was the most common reason
• “Benefits not worth the cost”
• Cost did not seem to be a barrier to use for people who had not used CIH since injury
• Lack of information and distrust of CIH was the primary barrier to using or trying CIH
The Key Takeaway

- **PATIENT PROVIDER**
  - sense of autonomy
  - medical knowledge
  - implementation
  - legality

- **PATIENT**
  - efficacy

- **PROVIDER**
  - safety

CRAIG
Resources on the Web

• National Center for Complementary and Integrative Healthcare: https://nccih.nih.gov/
  • Things to know when choosing a practitioner: https://nccih.nih.gov/health/tips/selecting
  • Guide to evaluating online resources: https://nccih.nih.gov/health/webresources

• Alternative Medicine and Spinal Cord Injury: http://www.healingtherapies.info

CE/CME credit

If you would like to receive continuing education credit for this activity, please visit:

https://pva.cds.pesgce.com

Questions?