Integrative Approaches in Peripheral Neuropathy

Jinny Tavee
Associate Professor
Medical Director, Neuromuscular Division
Director, EMG Neurodiagnostic Testing Center
Northwestern University Feinberg School of Medicine
Financial Disclosure

• Nothing to disclose
Warning

Videotaping or taking pictures of the slides associated with this presentation is prohibited. The information on the slides is copyrighted and cannot be used without permission and author attribution.
Complementary Alternative Medicine

• Definition:
  ○ Use of complementary therapies in conjunction with conventional medicine

• $30 billion out-of-pocket expenses spent on CAM in 2012
• 33% to 40% of adults use CAM
• Safety and guidance
• Improved patient satisfaction scores

Barnes PM et al. Nat Health Stats (CDC) 2008;12
Clarke TC et al. Nat Health Stats (CDC) 2015;79
Integrative Holistic Medicine and Neurology

- Nutrition
  - Food as medicine
- Exercise
  - Healthy body, healthy brain
- Mind-body therapy
  - Meditation, tai chi, yoga
- Supplements
  - EVIDENCE BASED
  - Be wary of websites that review supplements
Nutrition

• Omega 3 fatty acids
  o Fish, flaxseeds, walnuts
  o Supplements: 3:2 ratio of DHA:EPA
  o 1000mg/day (excess bleed with higher doses)
• Fruits and vegetables - 5 servings/day
  • Choose brightly colored, e.g. tomatoes, berries, broccoli, avocado, and spinach
• Protein: fish, chicken, lean cuts of red meat
  o Nuts: Brazil nuts (selenium), cashews (Cu, Mg), almonds (Ca, Vit E), pistachios (lutein, B6), walnuts (Om 3FA)
Nutrition: Food as Medicine

- Gluten free
- Brown rice, quinoa, teff, buckwheat
- Avoid EtOH
- Cut sugar, artificial sweeteners
- Reduce processed foods
- Local vs organic
  - neonicotinoids
- If you can’t pronounce it, don’t buy it
- Eat what you can digest
  - Kale, cauliflower, lentils, beans, chickpeas
- Reduce dairy intake
Exercise

• Aim for 150min/week for metab syndrome

• 4 rules of exercise
  o 1. Pick something you like or can tolerate
  o 2. If you feel tired or worse 2 hours after you’ve worked out you’ve done too much
  o 3. Try to do something every day
  o 4. No Pain/No Gain does not apply

• Aqua therapy
• Recumbent biking

Supplements

- Acetyl-L-Carnitine 1000mg TID
- Alpha lipoic acid: 600mg/D
- Glutamine 15gm BID
- Juiceplus® (Costco equivalent: Juice festiv®)
- Curcumin
- Omega 3 FA (seal oil) for DM PN

Supplements

- Frankincense essential oil
  - Modulates TRPV1 expression
  - Reduces mechanical allodynia thermal sensitivity in mice
- Hemp cream
- Vicks vaporub
- Horse liniment cream, tiger balm
- No evidence for Chinese herbals

Medical marijuana

- CBD non psychoactive component with anti-inflammatory and antioxidant properties
- CB1 and CB2 receptors throughout CNS and PNS
- Improved pain in HIV, diabetic neuropathy, and neuropathic pain due to other causes
- Adverse psyche, cognitive effects: memory loss, suicide, mood disorders, psychosis, lower IQ and decline in school performance in children
- Not federally regulated

Nugent et al Ann Int Med 2017;167:319-331
Marijuana

- Aerosolized THC (1%) reduced pain in DM PN with dose-related effect ($p; .31, .04 < .001$) but with marked cognitive impairment.
  - Crossover RCT $n=16$
  - 4 single dose sessions at low, med, high doses
  - Cognitive testing at 5m, 30m, and q30m for 3hrs
- Smoked cannabis reduced pain in HIV PN vs placebo cigarettes in RCT
- Limitations: Inadvertent unblinding

Ellis RJ et al. Neuropsychopharmacology 2009;34(3):672-680
616-27
Ellis RJ et al. Neuropsychopharmacology 2009;34(3):672-680
Types of Meditation

• Definition: nonjudgmental awareness of the present moment

• Concentration meditation
  o Focused attention on object, image, sensory stimuli
  o Mindful breathing is actually concentration

• Movement meditation (combination)
  o Yoga: breathing, postures
  o Tai chi: rooted in martial arts
  o Qigong: movements with release of energy
THE MINDFUL REVOLUTION
The science of finding focus in a stressed-out, multitasking culture
BY KATE PICKERT
MEDITATION,
BECauses SOME QUESTIONS
CAN'T BE ANSWERED BY GOOGLE.
Mindfulness-based interventions (MBI)

• Mindfulness-based stress reduction (MBSR)
  o 8 week program that combines yoga postures (movement meditation), body awareness, breathing techniques
  o Frequently used in clinical studies (MBCT)

• Mindfulness-based cognitive therapy
  o Emphasis on cognitive techniques
  o Best for recurrent depression
Meditation for Painful Neuropathy

• MBSR – 1 RCT
  o Reduced pain intensity and improved QOL in painful DM neuropathy

• Mindfulness meditation (CD guided) – 1 NRCT
  o No benefit for diabetic PN compared to controls

• Tai chi (1 NCT, 1 NRCT)
  o Improved balance, pain, glucose control in DM PN compared to usual care

Texeira Hol nurs pract 2010;24:277-83
Meditation on the Effects of Fatigue and Pain in Neuropathy and Multiple Sclerosis

- 22 patients (10 with MS, 12 with PN)
- SF-36, VAS Pain Scale for both arms, Neuropathy impairment scale for PN, Fatigue scale for MS
- 8 weeks of meditation led by a Buddhist monk and the PI
- Weekly 2 hr sessions of Tai Chi with Qi Gong, Sitting, Walking meditation

Tavee J, et al Neurology 2010;74(S2):A160
Results at two months

• Improved scores on SF-36 for both groups:
  – overall summed physical health scores (p=0.014 PN, p=0.011 MS)
  – overall summed mental health scores (p=.02 for all patients combined)
  – physical role (p=.0174), bodily pain (p=.0309), and vitality (p=.0051) in MS patients

• Improved fatigue in MS patients, with regards to the cognitive and psychosocial components of the MFIS (p=.0368, p=.0319)

• Significant reduction in pain on the VAS (p=.0436) for PN patients compared to controls
HOW NOT TO MEDITATE
Patient resources

• Community classes
  o YMCA, gyms/health clubs, wellness centers
• Books/CDs: Jack Kornfield, John Kabat-Zinn
• Meditation retreats:
  o www.dhamma.org (multi-locations, free)
  o www.dharma.org (Barre MA, sliding scale fees)
  o www.spiritrock.org (northern CA, $$)
Everyday Mindfulness

- Sitting practice with breathing techniques
- Mindfulness in the car
  - 5 deep breaths
- Mindfulness with eating
- Mindfulness with walking
  - Walk quickly with no distractions
- Mindfulness at your desk
  - Look out the window or at the ceiling
  - Shift in the gaze = shift in your thoughts
Resources

• Community classes
  o Gyms/health clubs, wellness centers

• Books/CDs: Jack Kornfield, John Kabat-Zinn

• MBSR courses (local universities, webinars)
  o https://www.umassmed.edu/cfm/mindfulness-based-programs/mbsr-courses/

• Meditation retreats:
  o www.dhamma.org (multi-locations, free)
  o www.dharma.org (Barre MA, sliding scale fees)
  o www.spiritrock.org (northern CA, $$)
Share Your Feedback

• Please use the 2019 AANEM Annual Meeting app to rate this presentation and the speaker(s).

• Your feedback helps us enhance our annual meeting to ensure we are continuing to meet your needs.
• Claiming CME
• Course and Plenary Presentations

Visit: www.aanem.org/resources

Record your attendance hours after each session or do it all at once after the meeting is complete! Credit not recorded by December 15, 2019 will not be reported to ABPN and ABPMR. The AANEM will report ALL Annual Meeting attendees’ credit to ABPN and ABPMR by December, 31, 2019.