



The Foundation for Peripheral Neuropathy

Welcome!

**Complementary and Alternative
Medicine in Neuropathy**

Wednesday, November 11, 2020

We will begin our presentation shortly.



The Foundation for Peripheral Neuropathy

Foundation staff:

Moderator:



Nancy Frohman
Director of Development & Marketing



Lindsay Colbert
Executive Director



Tanya Zivin
Sr. Administrative Coordinator



The Foundation for Peripheral Neuropathy

Before We Begin



This presentation is being recorded. The recording link will be emailed to you so you can view it again later.



Submit your questions anytime. We will answer them in the Q&A session at the end of the presentation.

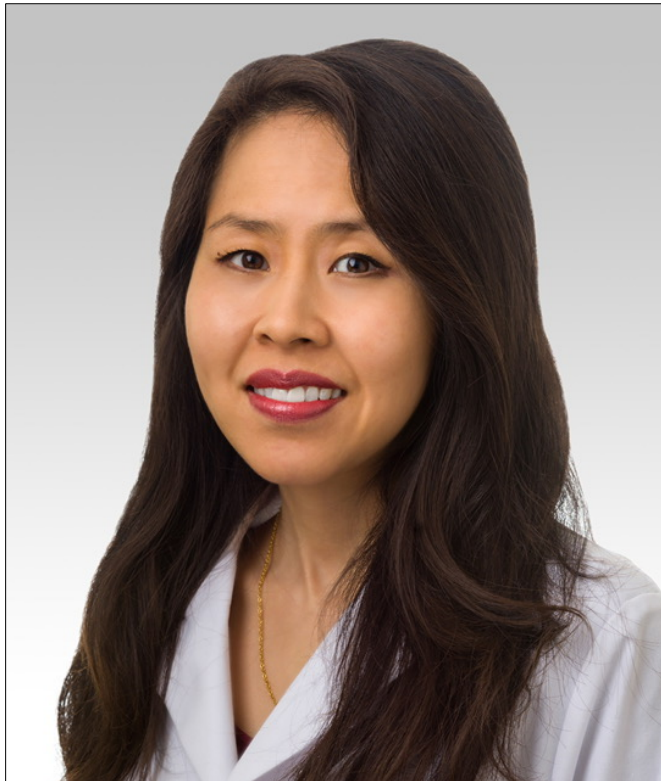


If you are having trouble with the audio using your computer, you can dial in by phone (check your email for dial-in instructions).



The Foundation *for* Peripheral Neuropathy

Today's Guest Speaker:



Jinny Tavee, MD
Neurologist



Complementary and Alternative Medicine in Neuropathy

Jinny Tavee, MD

Associate Professor

Medical Director, Neuromuscular Division

Northwestern Feinberg School of Medicine

Department of Neurology

Neuropathy diagnosis and treatment

1. Look for causes
2. EMG and other workup
3. Treat the pain with medications
4. Integrative holistic therapies
 - Lifestyle modifications
 - Mind-body therapies
 - Natural supplements



Integrative Holistic Therapies



Integrative Holistic Therapies

- 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

Nutrition: Omega-3 Fatty Acids



- Fish, flaxseeds, walnuts
- Supplements: 3:2 ratio of DHA:EPA
- 1000mg/day (excess bleed with higher doses)
- May help with nerve regeneration in type 1 diabetic neuropathy
 - 10cc/day of seal oil omega-3 PUFA
 - (750mg EPA, 1020mg DHA, 560mg DPA)
 - Increased corneal nerve fiber length 29% at one year
 - Weight gain – 5 patients with increase 6kg

Nutrition

- Fruits and vegetables - 5 servings/day
- Choose brightly colored fruits and veggies
 - tomatoes, berries, broccoli, avocado, and spinach
- Berries = brain food
 - May function as a natural “aricept”



Best Nuts for Health

- Antioxidants, vitamins, essential fatty acids
- Walnuts: omega-3 FA
 - Improves cholesterol
- Cashews: copper, magnesium
- Brazil nuts: selenium
- Almonds: Vitamin E and calcium
 - Helps with Parkinson's disease
- Pistachios: lutein and B6
 - Lowers cholesterol
- Best when eaten raw or without oils



Nutrition – Gluten free

- May be helpful for weight loss, metabolic syndrome, diabetes
- Brown rice
- Quinoa
- Teff
- Buckwheat



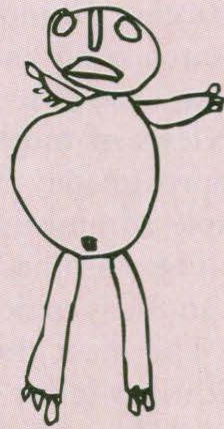


Nutrition

- Avoid/reduce alcohol intake
- Cut sugar, artificial sweeteners
- Reduce processed foods
 - If you can't pronounce it, don't buy it
- Eat what you can digest
 - Kale, cauliflower, lentils, beans, chickpeas
- Reduce dairy intake
- Local vs organic
 - Neonicotinoids
 - Neurologic effects



Foothills

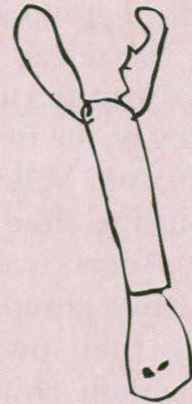
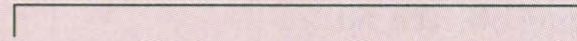


60-Month-old female

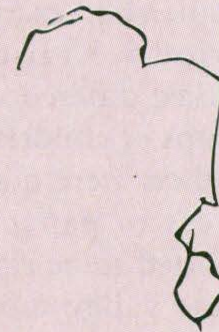


71-Month-old male

Valley



71-Month-old female



71-Month-old male

Foothills



54-Month-old female



55-Month-old female

Valley



54-Month-old female



53-Month-old female



Nutrition – specific diets

- Vegetarian diet + Exercise for diabetic PN
 - Improved pain in 17 of 21 SFN patients
- Low-fat, plant-based diet with B12 supplementation + weekly classes in diabetic PN (RCT)
 - Weight loss, reduced pain, improved electrical skin conductance (sudoscans)

Crane et al. J Nutr Med 1994;4:431-9

Bunner et al. Nutr Diabet 2015;15:e158

Late Breaking

Systematic Review and Meta-Analysis

Medicine®

OPEN

The relationship between serum 25-hydroxyvitamin D concentration and type 2 diabetic peripheral neuropathy

A systematic review and a meta-analysis

Binjie Zhang, MD^a, Wenli Zhao, MD, PhD^{b,c}, Jinli Tu, BS^d, Xueying Wang, MD^a, Yu Hao, MD^e,
Hongwu Wang, MD, PhD^f, Ye Zhao, MD, PhD^g, Kaito Mizuno, MD, PhD^h, Yiider Tseng, PhD^{i,*},
Huaien Bu, PhD^{f,*}

- 13 studies
- 2815 patients with type 2 diabetic neuropathy
- Vitamin D level <30ng/mL associated with symptoms (pain, numbness, etc...)



Exercise



Exercise

4 rules of exercise:

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

Exercise

- Aim for 150min/week for metabolic syndrome
- Aqua therapy
- Recumbent bicycle

Exercise

- Cutaneous nerve regeneration in metabolic syndrome (6 months of supervised aerobic exercise)
- Increased intraepidermal nerve fiber density (IENFD) in patients with impaired glucose tolerance and PN (1 year)
- Prevents onset and modify natural history of diabetic PN (4hrs/week aerobic exercise)

Singleton et al. Ann Neurol 2015;77:146-53.

Smith et al. Diabetes care 2006;29:1294-99.

Balducci et al. J Diabetes Compl 2006,20:216-23.



Supplements



Supplements: OTC meds

- Acetyl-L-Carnitine: 1000mg three times daily
- Alpha-lipoic acid: 600mg/D
- Glutamine: 15mg twice daily
- Juiceplus® (Costco equivalent JuiceFestiv®)
- Curcumin: dose varies
- Omega 3 FA: 1-3gm/D for DM PN
- Glutathione
- Probiotics?

Tavee J. CCJM 2018;10: 801-812

Sima, et al. Diabetes care 2005;28:89-94.

Wang, et al. *Oncologist* 2007;12:312-319.



Supplements: Topicals

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

Recent review of treatments for painful diabetic neuropathy

- Possibly **MORE LIKELY** TO IMPROVE PAIN than placebo
 - Gingko Biloba 120mg/D
- Possibly **NO MORE LIKELY** TO IMPROVE PAIN than placebo
 - Nutmeg abstract 4 sprays 3 times daily
 - Metanx 2 times daily
 - Tocotrienols 200mg twice daily

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
- Cognitive effects, memory loss, suicide, mood disorders, psychosis, lower IQ and decline in school performance in children; increased risk of stroke, pulmonary complications (chronic use); social impact: diversion, addiction; illegal in some states
- Not federally regulated

Andreae et al J Pain 2015;16:616-27.

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



Mind-Body Therapies

Mind-Body Practices

- Yoga
 - Restorative yoga for patients with limited ambulation
- Meditation
 - Breathing techniques, walking
 - Tai chi, qigong for balance
 - Mindfulness
- Feldenkrais
- Pilates

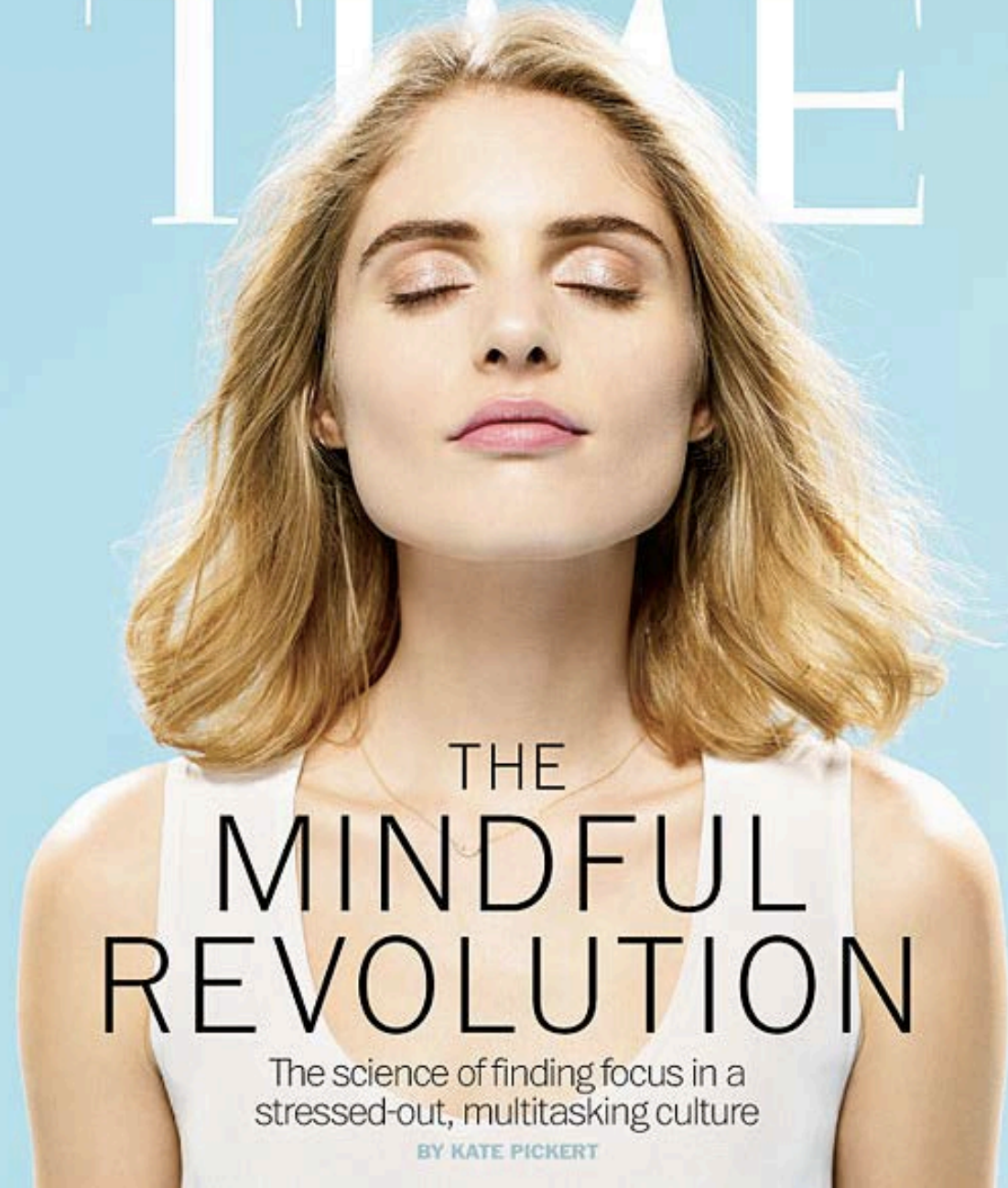




Fleeing Syria Photographs by James Nachtwey / Peyton Power / Steve McQueen

FEBRUARY 3, 2014

TIME



THE MINDFUL REVOLUTION

The science of finding focus in a stressed-out, multitasking culture

BY KATE PICKERT



Image source: purehappylife.com

MBT for Painful Neuropathy

- MBSR – 1 RCT
 - Reduced pain intensity and improved QOL in painful DM neuropathy
- Mindfulness meditation (CD guided) – 1 NRCT
 - No benefit for diabetic PN compared to controls
- Combined Tai chi and Qigong (1 NRCT)
 - Improve pain and QOL measures
- Tai chi (1 NCT, 1 NRCT)
 - Improved balance, pain, glucose control in DM PN compared to usual care

Ahn S, et al 2012;18:1172-8.

Richerson et al. Diab tech therap 2007;9:276-86.

Texeira Hol nurs pract 2010;24:277-83

Nathan et al. Clin Diab 2017;35:294-304

Tavee et al. J Int MS care 2011;113:163-169.



Everyday Mindfulness

- Sitting practice with breathing techniques
 - FOCUS → ACKNOWLEDGE → DISENGAGE → RETURN TO FOCUS
- Mindfulness in the car
 - 5 deep breaths
- 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

Patient Resources

- Community classes
 - YMCA, gyms/health clubs, wellness centers
- Books/CDs: Jack Kornfield, John Kabat-Zinn
 - Tavee (Last Day of Suffering: 5 Steps to Health and Happiness)
- MBSR courses (local universities, webinars)
 - <https://www.umassmed.edu/cfm/mindfulness-based-programs/mbsr-courses/>
- Meditation retreats:
 - www.dhamma.org (multi-locations, free)
 - www.dharma.org (Barre MA, sliding scale fees)
 - www.spiritrock.org (northern CA, \$\$)



Qigong for painful diabetic neuropathy



CONTACT EMAIL: diabeticpainresearch@gmail.com



Thank you



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Questions?



The Foundation for Peripheral Neuropathy

Thank You for Watching!

Did you like this webinar? Please take our survey at the end of this webinar. A recording will be uploaded on our website at www.foundationforpn.org shortly. Stay tuned.

Do you like us? Please consider supporting us so that we can continue to fulfill our mission of improving the lives of people living with Peripheral Neuropathy. You can give securely online, via mail or via phone. Every dollar matters!

Can we help with anything else? Call 847-883-9942 or email info@tffpn.org. You may also mail inquiries and donations to *The Foundation for Peripheral Neuropathy* at 485 Half Day Road, Suite 350, Buffalo Grove, Illinois 60089.