

# HEALTHFUL LONGEVITY

BEST LESSONS FROM  
INTEGRATIVE GERIATRICS

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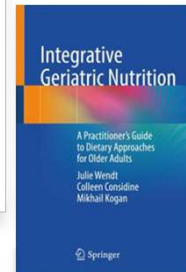
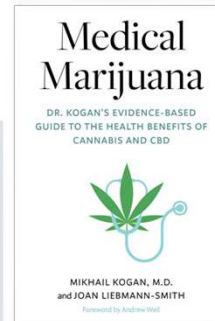


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## DISCLOSURES

- I collect royalties from *Medical Marijuana*, *Integrative Geriatric Medicine* and *Integrative Geriatric Nutrition* Textbooks. This talk covers topics discussed in all 3 books.
- I co-own my private practice where I see at least 50% of patients 65 years of age and older.




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## OBJECTIVES

- Understand severity of iatrogenic complications that we are causing by overprescribing and not having enough integrative approaches in most providers' therapeutic toolbox.
- Learn about concepts of Integrative Geriatrics and Blue Zones and how they relate to each other.
- Learn Integrative Geriatric pearls – case examples:
  - Chronic back pain and Peripheral Neuropathy
  - How to resolve Proton Pump Inhibitors overprescribing
  - Alternative approach to mild Urine Tract Infection
  - Cannabis for Elderly – Hype or Gateway from overprescribing?



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Successful aging is far beyond being healthy and vibrant. It is rectifying internal conflicts, paradoxes, and redefining life's meaning, and adding years to life and life to years both.

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ACADEMY

Kogan M, Integrative Geriatric Medicine 2017

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**Is aging a disease:  
should we intervene?**

**Tamas Fulop M.D., PhD**

Université de Sherbrooke, Centre de recherche  
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en Aging

UNIVERSITÉ DE  
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## SENS RESEARCH FOUNDATION

SENS goal is to "transform the way the world researches and treats age-related disease." It advocates the 'SENS' approach, which it describes as "the repair of living cells and extracellular material in situ".

"Immortality science" is just a concept, but what is real and current?



Aubrey de Grey



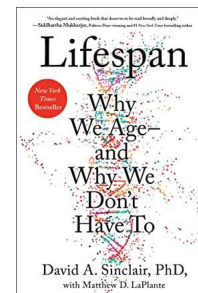
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## LONGEVITY DEVELOPMENTS

- "Next generation will have average life span of 100."
  - "Within our lifetime life expectancy will be 120." Why?
    - Identification of SIRT1 (**sirtuin**) modifiers listed below to increase life span in animal models by 20-30%
      - Resveratrol
      - Caloric restrictions and intermittent fasting
      - NAD+ boosters: Nicotinamide Riboside (NR) and Nicotinamide mononucleotide (NMN)
      - Cold and Heat exposure to activate HSPs and regulate mTOR (below)
- Above widely in practice now and evidence will be clear within 10 years or so. Number of "age or biohackers" combine all these methods at the same time and more.
- Other key players IGF-1 and mTOR all have either already existing or upcoming safe and effective approaches.
    - IGF1 – low sugar low methionine (animal protein) diet, metformin, intermittent fasting
    - mTOR – resveratrol, metformin, intermittent fasting



David Sinclair, PhD



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## INFORMATIONAL THEORY OF AGING

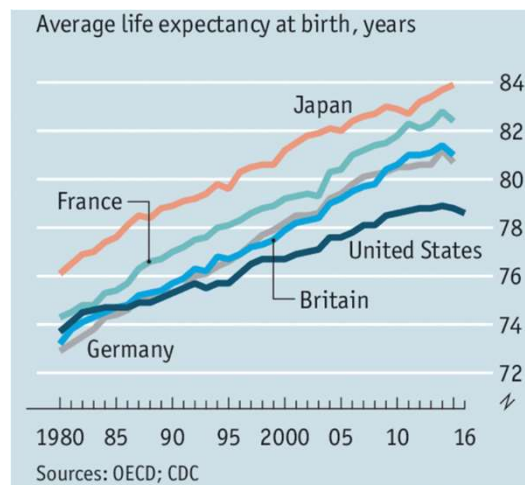


- Genomic (information) instability as a whole mark of aging
- Sirtuins one of several groups of enzymes that regulate gene expression in response to DNA damage
- However, as damage accumulates sirtuins become “distracted”, make mistakes, and mutations begin to accumulate
- In parallel as above occurs poly-ADP-ribose-polymerases, or PARPs, are activated and deplete NAD<sup>+</sup> stores (this is testable – I already assess this part through Medicare covered test that looks at all Krebs cycle enzymes)
- This leads to continuous drop in mitochondrial energy generation “fatigue of aging”
- Sinclair and others claim that above can be altered



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## LIFE EXPECTANCY - WRONG TURN! WHY?



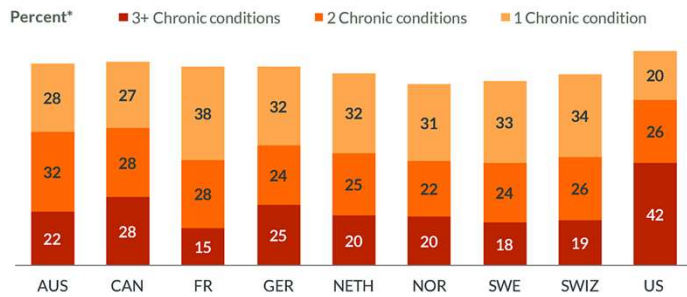
Economist.com



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# CHRONIC CONDITIONS

Exhibit 1  
More Older Adults in U.S. Have Multiple Chronic Conditions



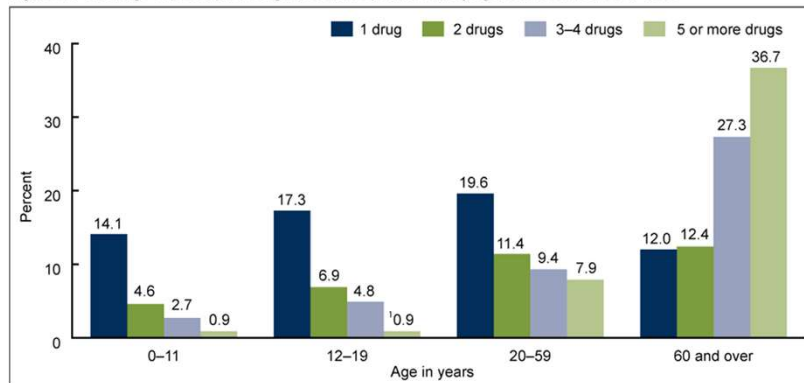
\* Reported having hypertension or high blood pressure, heart disease, diabetes, lung problems, mental health problems, cancer, and/or joint pain/arthritis.  
Source: 2014 Commonwealth Fund International Health Policy Survey of Older Adults.



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# POLYPHARMACY

Figure 2. Percentage of prescription drugs used in the past month, by age: United States, 2007–2008



† Estimate is unstable; the relative standard error is greater than 30%.  
SOURCE: CDC/NCHS, National Health and Nutrition Examination Survey.



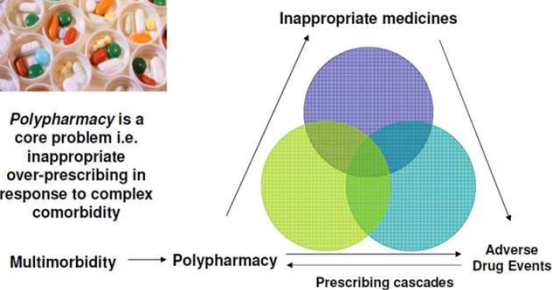
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## COMPLEX COMORBIDITY PLUS LACK OF NON-PHARMACOLOGICAL TREATMENT OPTIONS

~ 3 million serious adverse reactions/year



Polypharmacy is a core problem i.e. inappropriate over-prescribing in response to complex comorbidity

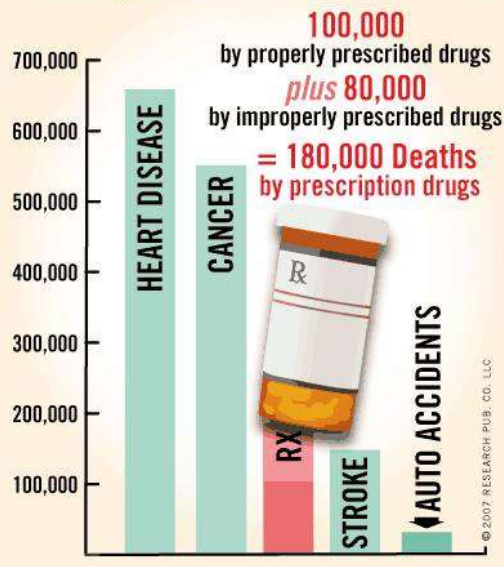


<https://ethics.harvard.edu/blog/new-prescription-drugs-major-health-risk-few-offsetting-advantages>

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## CAN WE DO BETTER?

### Leading Causes of Death in U.S.



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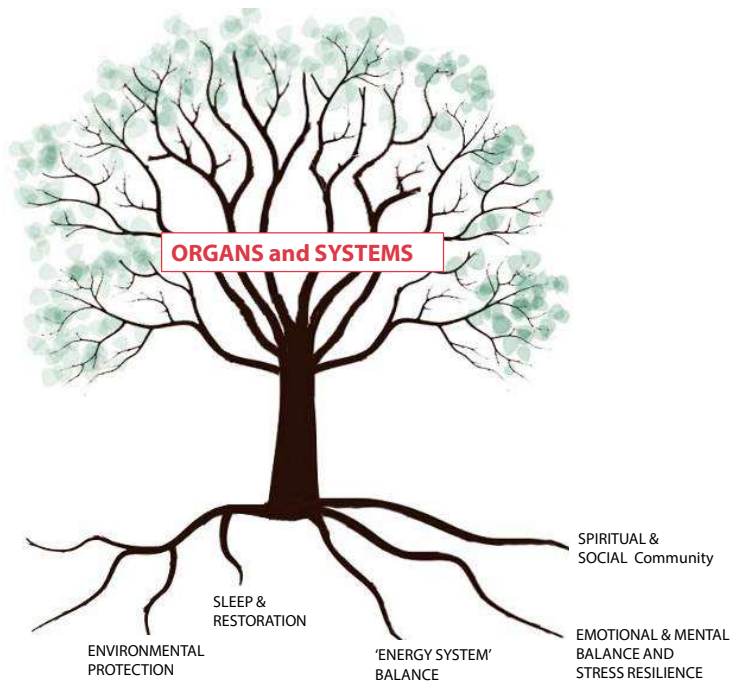
# INTEGRATIVE GERIATRICS - DEFINITION

Is a new field of medicine that advocates for a whole-person, patient-centered, primarily non-pharmacological approach to medical care of the elderly. The practice of integrative geriatrics is rooted in lifestyle interventions, such as nutrition, movement therapies, and mind-body and spirituality approaches, that allow patients to have a different path to their healthcare — one that utilizes pharmaceuticals and invasive procedures only when safer integrative approaches are not available or not effective.



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# INTEGRATIVE HEALTH



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## IS IT ALL ABOUT LIFESTYLE?



Copyright 2003 by Randy Glasbergen.  
www.glasbergen.com

**“What fits your busy schedule better, exercising one hour a day or being dead 24 hours a day?”**

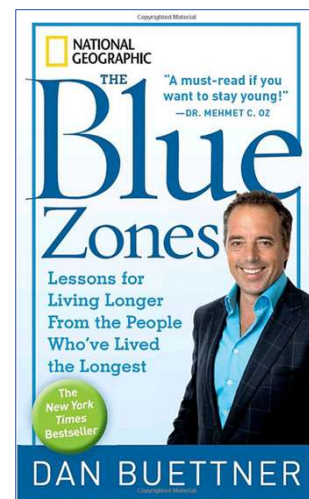


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## THE BLUE ZONES

The “Blue Zones” are communities where common elements of lifestyle, diet, and outlook have led to a superior quality and length of life in the elderly populations.

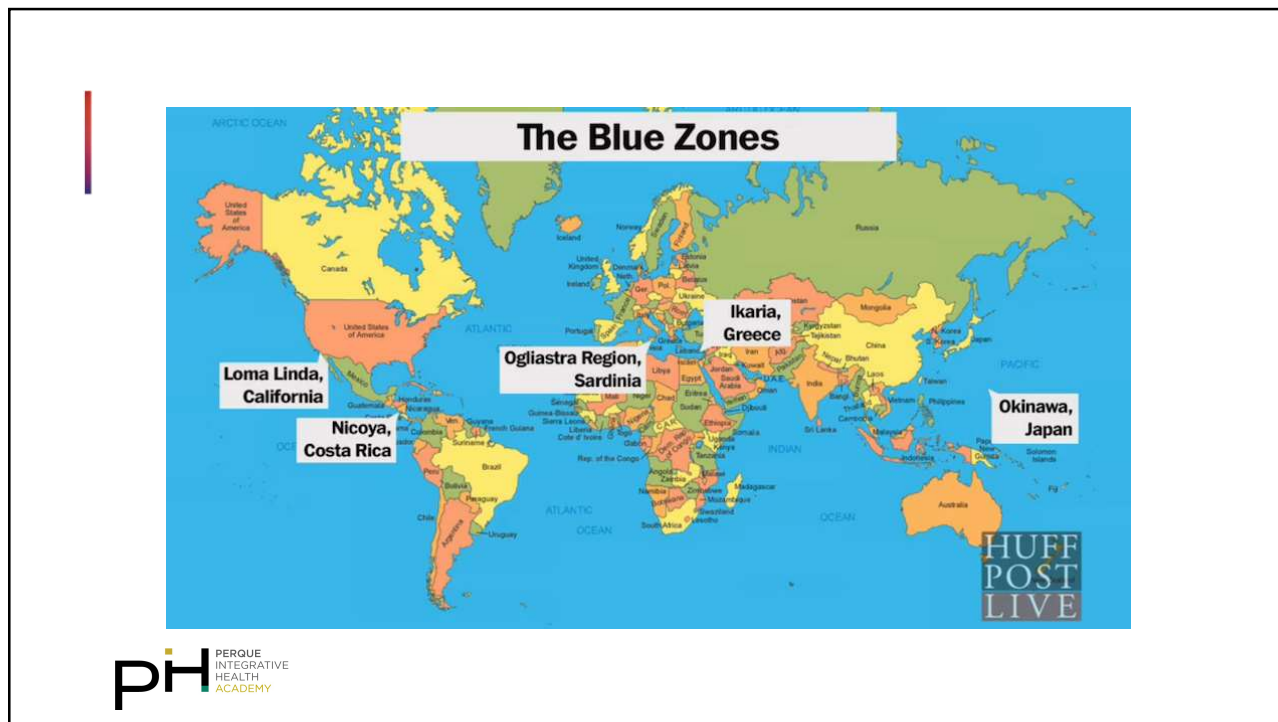
Areas of highest concentration of CENTENARIANS



Buettner, D. *The Blue Zones*, 2008



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## BLUE ZONES - UNIVERSAL SIMILARITIES

- Move Naturally a lot and daily
- Balance between rest, activity, lots of sleep, following daily rhythm, daily light exposure
- Regular intermittent fasting or continuous caloric restriction
- All diets are micronutrients and phytonutrients dense and low in glycemic index
- Food As Medicine
- Developed sense of belonging or meaning in life within social context

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## DON'T FORGET TO SMILE OFTEN!

What's your favorite geriatric medicine joke?



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## SELECTED CLINICAL PEARLS

- Getting our elderly off Acid Suppressants
- Chronic Pain – how to avoid Opioids
- Chronic Insomnia – New best approach

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## GET YOUR OLDER PATIENTS OFF PPI!!! NOW

- Proton Pump Inhibitors drugs are heavily over prescribed
- Short courses are safe and often very effective for ulcers, acid reflux, acute GI bleeding, etc.
- Long term PPI use is very concerning due to increased risks
  - Changes in Microbiome - changes in immune system – current hot research topic
  - B12 and Magnesium Deficiency
  - Falls and Fractures
  - Pneumonias
  - C- Diff Colitis
  - Kidney Failure
  - Dementia?!!!!



Tetsuhide Ito et. al. 2011, Daniel E. Freedberg et. al. 2015,  
Joel J. Heidelbaugh et. al 2012

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## HOW TO DO IT?

- 69 year old male with HTN, Chronic Fatigue and muscle aches, high cholesterol, acid reflux, referred by his wife
- Healthy looking, fun to talk to, expresses concerns about decreasing functional status, hard time exercising, loves long distance running but dropped speed nearly 30% and still can't run for more than 30 min. Previously regular half marathons (2.5 hours)
- Non stressful retirement, financial security, strong family support.
- Excellent diet and good sleep
- Meds/Supplements –for over a decade
  - Pantoprazole 40mg, HCTZ 25mg , Lisinopril 20mg , Rosuvastatin, 10mg ASA 81mg, Acetaminophen PRN
  - Fish Oil, Multivitamin, CoQ10, Vitamin D3 2000 units
- Exam – nothing to report, Labs – B12 300 (WNL but borderline low), Ferritin 65 WNL, RBC Magnesium 4.1 (borderline low), TSH 0.8, CBC, CMP WNL, Vitamin D 25 OH 40
- Total Cholesterol 185 TG 119 HDL 52 LDL 98 VLDL 15



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## HOW TO DO IT?

- Start the following:
  - Aloe – as Juice or Capsules. Juice mix with water (cuts cost and easier to drink)
  - Okra – add to the diet
  - Deglycyrrhizinated licorice (DGL) before each meal, could also do after each meal and when start getting any acid reflux – MAKE SURE DGL is very high potency.
  - If diet is poor and stress – address that first – OFTEN THIS DOES IT!
    - DO NOT ASSUME GI DOCS recommended diet change/stress reduction

The Healthy Gut 303

### Box 16.1 Weaning from PPIs

#### **Weaning Protocol for Proton Pump Inhibitors** (pantoprazole, omeprazole, etc.)

*Skip dose every third day, substituting ranitidine 150 mg or famotidine 20 mg or other H2 blocker for 2 weeks.*

*If the patient tolerates this, skip every other day with substitution every other day for 2 weeks.*

*If this is tolerated, at the end of a month, switch entirely to ranitidine, famotidine, or other H2 blocker and keep pantoprazole or other PPI in reserve for flare-ups of heartburn.*

*May also consider DGL or aloe as an alternative to H2 blockers or to assist in the taper.*

Serpina. al. Ch. 16 Integrative Geriatric Medicine, Oxford University Press 2017



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## CASE

- Follow above protocol plus
  - No eating after 8PM
  - Coffee down to 1 cup/day, substitute with Matcha green tea
  - Hold Chocolate for 3 months
  - Cut simple carbs (sugar and bread) loves pasta
- Added topical Magnesium daily before each run, Changed Multivitamin to better quality with higher amount of B vitamins and in activated form
- Electrolyte capsules 1-2 with each meal when remembers
- Monitor Blood Pressure; report when decreases under 100 systolic
- 4 weeks in get call from patient BP dropped – stop HCTZ
- 1 week later BP still under 100 systolic – stop Lisinopril



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## CASE - 3 MONTHS FOLLOW UP

- Off Pantoprazole, Lisinopril, HCTZ
- BPs are steady under 140 systolic
- Able to run 1 hour each time, but still get's exhausted
- Pain and fatigue is 50% better
- Looked through all records, no h/o CVA/MI, non smoker
- Stop Aspirin and Rosuvastatin



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## CASE - 6 MONTHS FOLLOW UP

- Off all meds
- Pain and Fatigue completely resolved
- Got his runs back to almost 2 hours and scheduled half marathon in 6 months
- Total Cholesterol 233 TG 98 HDL 71 LDL 142 VLDL 16
- What happened???
  - Magnesium Deficiency was driving HTN, fatigue, and muscle cramps
  - Crestor may have contributed to muscle pain
  - B12 deficiency/insufficiency was driving pain and fatigue
  - Increased exercise helped to raise HDL, go back to statins vs Red Yeast Rice?



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## CHRONIC BACK PAIN APRIL 2017 ACP GUIDELINES

- Recommendation 1: *Given that most patients with acute or subacute low back pain improve over time regardless of treatment, clinicians and patients should select non-pharmacologic treatment with superficial heat (moderate-quality evidence), massage, acupuncture, or spinal manipulation (low-quality evidence). If pharmacologic treatment is desired, clinicians and patients should select nonsteroidal anti-inflammatory drugs or skeletal muscle relaxants (moderate-quality evidence). (Grade: strong recommendation)*



*Ann Intern Med.* 2017;166(7):514-530.

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## CHRONIC BACK PAIN APRIL 2017 ACP GUIDELINES (CONT.)

- Recommendation 2: *For patients with chronic low back pain, clinicians and patients should initially select nonpharmacologic treatment with exercise, multidisciplinary rehabilitation, acupuncture, mindfulness-based stress reduction (moderate-quality evidence), tai chi, yoga, motor control exercise, progressive relaxation, electromyography biofeedback, low-level laser therapy, operant therapy, cognitive behavioral therapy, or spinal manipulation (low-quality evidence). (Grade: strong recommendation)*



*Ann Intern Med.* 2017;166(7):514-530.

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## CHRONIC BACK PAIN APRIL 2017 ACP GUIDELINES (CONT.)

- Recommendation 3: *In patients with chronic low back pain who have had an inadequate response to non-pharmacologic therapy, clinicians and patients should consider pharmacologic treatment with nonsteroidal anti-inflammatory drugs as first-line therapy, or tramadol or duloxetine as second-line therapy. Clinicians should only consider opioids as an option in patients who have failed the aforementioned treatments and only if the potential benefits outweigh the risks for individual patients and after a discussion of known risks and realistic benefits with patients. (Grade: weak recommendation, moderate-quality evidence)*



*Ann Intern Med.* 2017;166(7):514-530.

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## INTEGRATIVE NON-PHARMACOLOGICAL APPROACHES

- Mind Body: MBSR, Biofeedback
- Nutritional: Anti-inflammatory Diet, Supplements, Medical Cannabis
- Body Based: Massage, PT, Osteopathy, Chiro
- Energy Based: Reiki, Tai Chi, Acupuncture
- Movement Based: Alexander, Yoga
- Interventional: Acupuncture, Trigger Points Injections



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## CHALLENGES

- Cost for patients on fixed income
- Medicare covers PT, Chiro, Osteopathy, Acupuncture
  - Massage, Cranial
  - Small Payments, draconian rules of documentation
- Lack of coverage for many well evidenced approaches
  - Alexander
  - Tai Chi/Yoga
- No coverage for nutritionists (except if end stage Renal Disease or Diabetes)
- Coordination of care by MD is covered but under very strict guidelines that are not defined for integrative providers.
- Medical Shared Group is one possible solution



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## ALEXANDER TECHNIQUE - AT (MOVEMENT EDUCATION)

Invented and popularized by Frederick Mathias Alexander 1869-1955.

First used for voice artists to strengthen and straighten posture to improve voice projection and stage appearance

Subsequently used as performance enhancement tool for better breathing and only later moved to medical field.

<https://www.youtube.com/watch?v=niFdH63McSA>



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## CONCLUSIONS

One to one lessons in the Alexander technique from registered teachers have long term benefits for patients with chronic back pain. Six lessons followed by exercise prescription were nearly as effective as 24 lessons. – Based on this data UK is now covering AT for back and neck pain as part of their national health care system.



BMJ

RESEARCH

### Randomised controlled trial of Alexander technique lessons, exercise, and massage (ATEAM) for chronic and recurrent back pain

Paul Little, professor of primary care research,<sup>1</sup> George Lewith, reader,<sup>1</sup> Fran Webley, overall trial coordinator and trial manager for Southampton site,<sup>1</sup> Maggie Evans, trial manager for Bristol site,<sup>2</sup> Angela Beattie, trial manager for Bristol site,<sup>2</sup> Karen Middleton, trial data manager,<sup>1</sup> Jane Barnett, research nurse,<sup>1</sup> Kathleen Ballard, teacher of the Alexander technique,<sup>3</sup> Frances Oxford, teacher of the Alexander technique,<sup>3</sup> Peter Smith, professor of statistics,<sup>3</sup> Lucy Yardley, professor of health psychology,<sup>2</sup> Sandra Hollinghurst, health economist,<sup>4</sup> Debbie Sharp, professor of primary care<sup>5</sup>

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<sup>4</sup>Society of Teachers of the Alexander Technique, London  
<sup>5</sup>Academic Unit of Primary Health Care, Department of Community Based Medicine, University of Bristol

Correspondence to: P Little  
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 doi:10.1136/bmj.a884

#### ABSTRACT

**Objective** To determine the effectiveness of lessons in the Alexander technique, massage therapy, and advice from a doctor to take exercise (exercise prescription) along with nurse delivered behavioural counselling for patients with chronic or recurrent back pain.

**Design** Factorial randomised trial.

**Setting** 64 general practices in England.

**Participants** 579 patients with chronic or recurrent low back pain; 144 were randomised to normal care, 147 to massage, 144 to six Alexander technique lessons, and 144 to 24 Alexander technique lessons; half of each of these groups were randomised to exercise prescription.

**Interventions** Normal care (control), six sessions of massage, six or 24 lessons on the Alexander technique, and prescription for exercise from a doctor with nurse

**Trial registration** National Research Register

N0228108728.

#### INTRODUCTION

Back pain is a common condition managed in primary care and one of the commonest causes of disability in Western societies.<sup>1,2</sup> As yet few interventions have been proved to substantially help patients with chronic back pain in the longer term.

Supervised exercise classes—mainly strengthening and stabilising exercises—probably have moderate benefit for chronic pain.<sup>3,4</sup> A trial of advice from a doctor to take aerobic exercise showed short term benefit for acute pain,<sup>5</sup> but the evidence of longer term benefit for chronic or recurrent pain and for exercise “prescriptions” is lacking.<sup>6</sup>

BMJ first published as 10.1136/bmj.a884 on 19 August 2008. Downloaded from http://www.bmj.com/

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## CHRONIC PAIN CASE: 85 YEAR OLD WOMAN WITH PERIPHERAL NEUROPATHY

- PMH - HTN, CAD, PN developed after chemo for breast cancer years ago.
- Trial of Gabapentin leads to delirium and week-long hospital admission and does not relieve the pain.
- When you talk to the patient she clearly refuses to take any additional medications. Next best step is?



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## PERIPHERAL NEUROPATHY OFTEN NO EFFECTIVE MEDICAL TREATMENT

- Acupuncture
- Tai Chi
- Biofeedback
- Infrared Light
- Supplements
  - Benfotiamine (Fat Soluble form of Thiamine) 200-300mg/day
  - Alpha Lipoic Acid 600-1200mg/day
  - GLA 500-1500mg/day
- Medical Cannabis



Gandhi *et. al.* 2010, Whiting *et. al.* 2015, Harkless *et. al.* 2006,  
Schroder *et. al.* 2007, L Li *et. al.* 2010, Halat *et. al.* 2003


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## CASE CONTINUED

- On fixed budget could only afford few supplements and decided to try Cannabis tincture.
- Learned Self Reiki and Started free Tai Chi at Senior Center
- Tried Biofeedback and infrared light but did not like Biofeedback system and could not afford infrared light source
- At 3 months follow up – “Pain is a little better and I have better control and tolerance. I can do more things in life, more exercise and walking. I guess it is as good as it will ever be.”




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Contents lists available at ScienceDirect

# Explore

journal homepage: [www.elsevier.com/locate/jfsch](http://www.elsevier.com/locate/jfsch)



## The intersection between integrative medicine and neuropathic pain: A case report

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<sup>b</sup>George Washington University Medical Center, United States  
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**ABSTRACT**


**Introduction:** Neuropathic pain is a debilitating condition caused by lesion or disease of the somatosensory nervous system. Integrative modalities such as yoga, acupuncture, and massage are evidenced therapies for pain management. Additionally, medical cannabis and cannabinoids are emerging therapies for treatment of neuropathic pain (4,28). The authors of this study report a case of chronic neuropathic pain treated with integrative interventions.

**Case Presentation:** The patient is a 71-year-old female with a past medical history of chronic neuropathic pain in her lower back and legs, degenerative arthritis, restless leg syndrome, carpal tunnel syndrome, and severe, chronic anxiety, presenting with worsening neuropathic pain. After over a decade of unsuccessful allopathic treatment, the patient sought out a more integrative approach to her pain management. A regimen of acupuncture, massage, gentle yoga, and medical cannabis was recommended. During the COVID-19 pandemic, she was unable to continue



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K. Zarabian et al. / Explore 00 (2021) 1–5



**TIMELINE**

Chief Complaint: 71-yo female with history of chronic neuropathic pain, restless leg syndrome, carpal tunnel syndrome, degenerative arthritis, depression, chronic anxiety, anorexia, weakness, weight loss, and borderline low vitamin B12, p/w burning pain in both legs, restless leg syndrome, and worsening carpal tunnel syndrome. This timeline reports therapies, treatments, and patient evolution.

Patient History / Clinical Findings	Dates	Clinical Appointments / Recommendations
Patient first diagnosed with bilateral mild sensory neuropathy in Neurology.	August 2007	Shading: Pink- Allopathic medical visits; Green- Integrative medical visits Attempted therapies prior to Integrative Clinic.
MRI L-spine revealed moderate central spinal stenosis at L3-L4 related to disc protrusion, grade 1 spondylolisthesis, and posterior element degenerative change. Moderate right paracentral disc protrusion at L5-S1 minimally impinging on the right S1 nerve root.	October 2007	Therapies attempted by Neurology and Spinal Orthopedics include rofenidol, gabapentin, pregabalin, NSAIDs, Acetaminophen-Codine, and physical therapy; patient states all were temporary and ultimately unsuccessful. Injections were recommended but not pursued. X-Stop procedure was discussed but not recommended at that time.
MRI C-spine revealed degenerative arthritis with most prominent findings at C4-C5 that caused mild to moderate spinal canal narrowing, consistent with patient's age.	January 2013	
Initial Consult: Burning pain in bilateral lower extremities	March 2018	Follow-Up 1: Pt ceased Dronabinol use due to severe nausea. Pain still present. Recommendations: acupuncture, massage, and gentle yoga.
Lab Results: Borderline Low B12, patient given B12 injection. Recommendations: B12 complex with 2mg of Methylfolate and 1mg Methylcobalamin daily, Dronabinol, Fish oil Supplement, and Powdered Magnesium. Acetaminophen-Codine as needed.	May 2018	Follow-Up 2: Pt reports Acupuncture, massage, and yoga is effective. Pt wants to address history of anxiety, weakness, and fatigue. Recommendations: Discontinue propranolol, begin low dose CBD oil.
Follow-Up 3: Pt reports improved pain, decreased use of Acetaminophen-Codine. Pt changes state residency. Recommendations: Counselled patient on obtaining Medical Marijuana.	October 2018	Follow-Up 4: Pain well managed with massage, acupuncture, yoga. Pt cannot tolerate oral edibles. Recommendation: Switch from oral edibles to a BID sublingual tincture regimen of 20mg 10:1 CBD:THC in the AM and 6.5mg THC in 30:1:2:1 THC:CBD:CBG in the PM. Continue with Acetaminophen-Codine as needed.
Follow-Up 5: Pt ceased all Acetaminophen-Codine use. She reported that the medical cannabis tincture significantly reduced her symptoms. Recommendation: Continue current individualized, complex approach of integrative modalities.	January 2019	
Follow-Up 6: Due to the COVID-19 pandemic, the patient was unable to obtain integrative treatments, and reported significant pain and numbness in her feet and ankles.	June 2019	
Follow-Up 7: Integrative Clinic began weekly zoom-based Mind and Body Shared Medical Group visit to support patients with chronic symptoms and invited this patient to participate in the 6 week program.	December 2019	
	April 2020	Follow-Up 6: Due to the COVID-19 pandemic, the patient was unable to obtain integrative treatments, and reported significant pain and numbness in her feet and ankles.
	June 2020	Follow up 8: At week 4 of mind-body class, the patient began acupuncture again and reported significant improvement in the pain that had worsened due to Pandemic office closure. Patient stated that she felt more relaxed and much less anxious.
	July 2020	

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CASE REPORT

## Integrative Medicine Approach To Peripheral Neuropathy— Avoiding Pitfalls Of Ineffective Current Standards In Assessing Chronic Low-Grade Mercury Toxicity And Functional Musculoskeletal Lesions

Jené Andrea Carter, MD; Sachi M. Desai, MS, DO(c); Jessica Probst, PT, DPT, MTC;  
Mikhail Kogan, MD

**Abstract**

**Introduction:** Mercury is a toxic metal that exists in elemental, inorganic, and organic states. Humans are exposed to mercury through industrial sources, consumption of seafood, or healthcare. Over time, this compound can accumulate in the body and cause symptoms. The authors of this study report a case of mercury toxicity and the detoxification treatment regimen provided to the patient from a functional medicine standpoint.

**Case presentation:** The patient is a 62-year-old woman of Mexican descent with a past medical history of

fatigue, short term memory loss, and RUQ abdominal pain. She was found to have 10 aged mercury amalgams and elevated blood levels of inorganic mercury. Amalgam removal was recommended, in addition to dietary changes, a natural supplement regimen, and manual/physical therapy. After following the treatment for one year, the patient experienced a 70% decrease in total blood mercury levels and a dramatic improvement of all her symptoms.

**Discussion:** This patient's chronic mercury toxicity from dental amalgams was effectively treated using a



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# MERCURY TOXICITY AS ONE OF CAUSES OF PAIN?

Table 5.


	Results (ng/mL)			Reference Ranges						
	9/21/2017	3/23/2017	% Change	Source	Range	Average	50th	75th	90th	95th
Methylmercury— MeHg	3.46	11.3	-69	QS	<0.003 to 23.3	1.95	1.2	2.9	5.4	7.4
Inorganic Mercury— Hg <sup>i</sup>	0.135	0.495	-73	QS	<0.007 to 1.75	0.139	0.10	0.19	0.32	0.46
Sum— HgT	3.59	11.8	-70	CDC	0.038 to 9.96	0.833	0.7	1.7	3	4.6

**Blood Reference Values:** Quicksilver Scientific (QS) Data represents 1011 males and females that have utilized our testing. CDC data represents 1928 females, ages 16 to 49. QS blood Hg concentrations are higher than CDC because QS analyzes blood a population that already suspects mercury toxicity.

**Data and Analysis Information:** Mercury speciation was performed at Quicksilver Scientific, and all values are in concentrations of ng Hg per mL of blood




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**Patient Perspective**

It is also important to note that this patient, prior to her functional medicine and physical therapy regimen, endured years of treatment, with little to no benefit, and quite possibly, adverse effects, despite paying high medical fees with the expectation of improvements in her health. She states, “I am upset because despite the fact that mercury toxicity is a known cause of hypertension, the physicians I saw [...] just wanted to me to take pills to mitigate my symptoms without elucidating the cause. I could have lowered my blood pressure symptoms with pills. This would not only have exposed me to severe side effects, but more importantly, would have left unaddressed the underlying cause, mercury toxicity. Had this mercury toxicity continued to be unaddressed, I would have faced numerous health risks...I have concluded that these physicians just treat symptoms and are unwilling to take the time to think of their patients’ health as a whole system. When I look back...I see missed opportunities for those physicians to think a bit out of the box and move beyond their basic checklist. I also see a negative impact on my health and quality of life. Many thanks [to her functional medicine and physical therapy providers] for helping me to restore my health and my quality of life. I feel so much healthier and stronger than I did before...”




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## INSOMNIA IN OLDER ADULTS

- The prevalence is 30-50% making it one of the most common diseases of aging
  - Difficulties maintaining sleep 50-70%
  - Difficulties falling asleep 30-50%
- Insomnia increases risk of:
  - CVD
  - Cognitive Decline
  - Depression
  - Metabolic Syndrome
  - Overall mortality
- There is massive increase in direct and indirect costs to health care system



*J Clin Sleep Med.* 2018;14(6):1017-1024. Published 2018 Jun 15

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## INSOMNIA – VERY POORLY MANAGED

- Gold Standard and First line of therapy – NON-PHARMACOLOGIC Cognitive Behavioral Therapy for Insomnia (CBT-I)
  - Covered by Medicare
  - Rarely available
  - Most practitioners don't accept insurances
  - It also does not work well for at least 30-40% of patients
- Group CBT-I is a new approach but underutilized
- Mind Body Group Classes (MBGC) and MBSR may be as effective but also underutilized (we have done RCT showing that MBGC was equally effective and had better adherence compared to Group CBT-I \*)
- Melatonin 3-10mg is often not effective but should be tried due to low cost and strong anti-inflammatory effects
- Unfortunately most patients end up on hypnotic agents ALL OF WHICH ARE on Beer's list and increase mortality!



*J Clin Sleep Med.* 2018;14(6):1017-1024. Published 2018 Jun 15  
 \* *J Altern Complement Med.* 2019;25(8):840-844

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## INSOMNIA AND MEDICAL CANNABIS

- In my experience 8-9/10 patients benefit and many feel it is best thing that ever happened to their insomnia
- Most of my patients have multiple comorbidities and I almost always start with insomnia treatment
  - Medical Cannabis being 1<sup>st</sup> or 2<sup>nd</sup> line depending on what patient already tried.
  - About 60% of patients with chronic pain have some sleep disturbances.
  - And about 80% of patients with chronic pain who use it for pain also use it for sleep disturbances.
- Start with low dose sublingual *indica* based FECO oil low dose 1-3mg. My preference is 1:1 THC:CBD or THC:CBN but others work too. Often patients like capsules or edibles, lasts longer and preferred for patients who can't stay asleep.
- With edibles and capsules watch out for morning lethargy and dizziness upon awakening



*Drug Alcohol Depend.* 2017;180:227-233.

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## CASE STUDY - INSOMNIA

- 78 year old woman with insomnia that started after adding Tamoxifen 3 years prior
- Must rely on Benadryl or Ambien to sleep
- 3 falls in last 6 months
- Referred by PCP for better treatment to wean off both Benadryl and Ambien
- Medicaid unable to afford any integrative approaches
- DC medical Card cost \$25 (discounted)
- Referred to dispensary that offers Medicaid patients discounts
- Dose 5mg of THC sublingual at bedtime – off both medications in 3 months
- Monthly out of pocket expense \$30



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## TAKEAWAYS

- Many of our elder patients are overmedicated and experience variety of iatrogenic complications.
- Our elders lifestyle does matter and clearly is one of the most important quality of life and longevity predictors.
- Most common geriatric conditions have effective nonpharmacological, integrative treatments that can be successfully applied, often as 1<sup>st</sup> line therapy.
- When treating patient think about drivers to each problem and try to address them. Don't stop at diagnosing the problem, think why it appeared, what is the underlying cause of the diagnosis.



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QUESTIONS?

PH PERQUE INTEGRATIVE HEALTH ACADEMY

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THANK YOU!

PH PERQUE INTEGRATIVE HEALTH ACADEMY

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