

Integrative Oncology

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MEDICAL CENTER





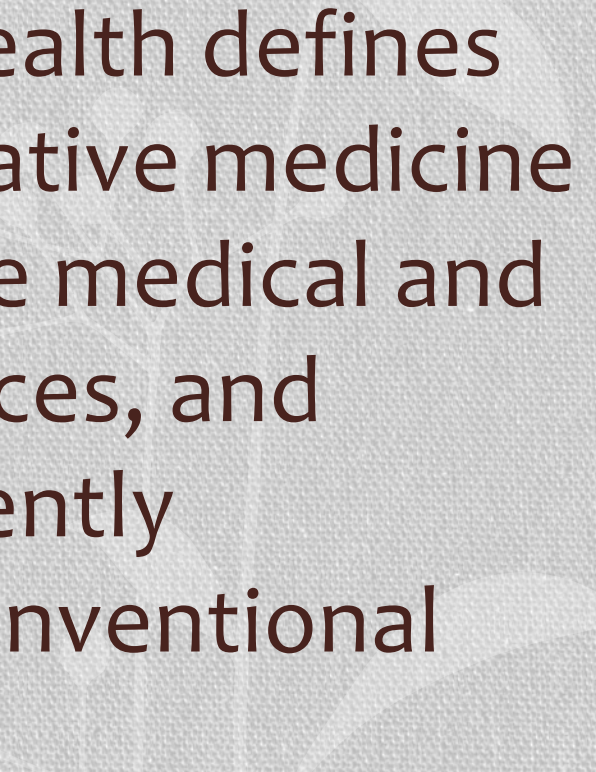
“ The good physician treats the disease;
the great physician treats the patient
who has the disease.”

~ Sir William Osler (1849-1919)

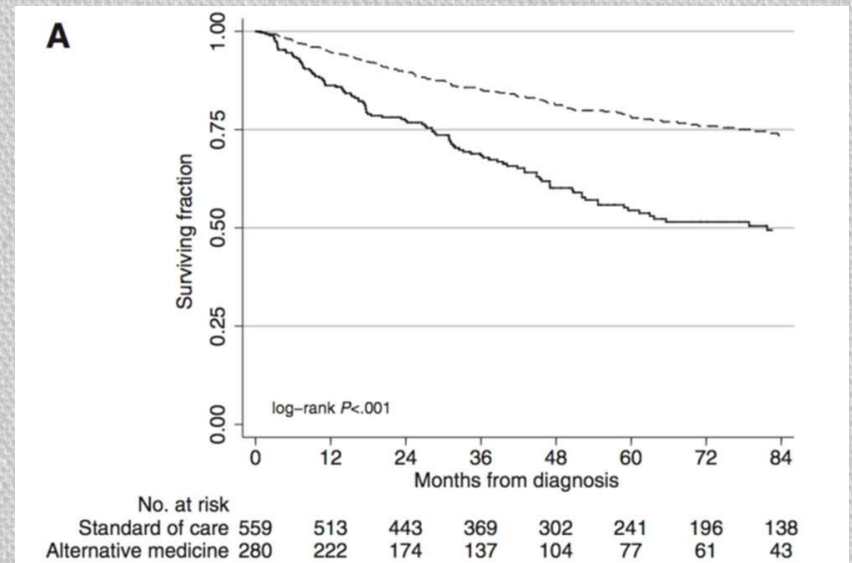


The physician is only nature's
assistant.

~ Galen



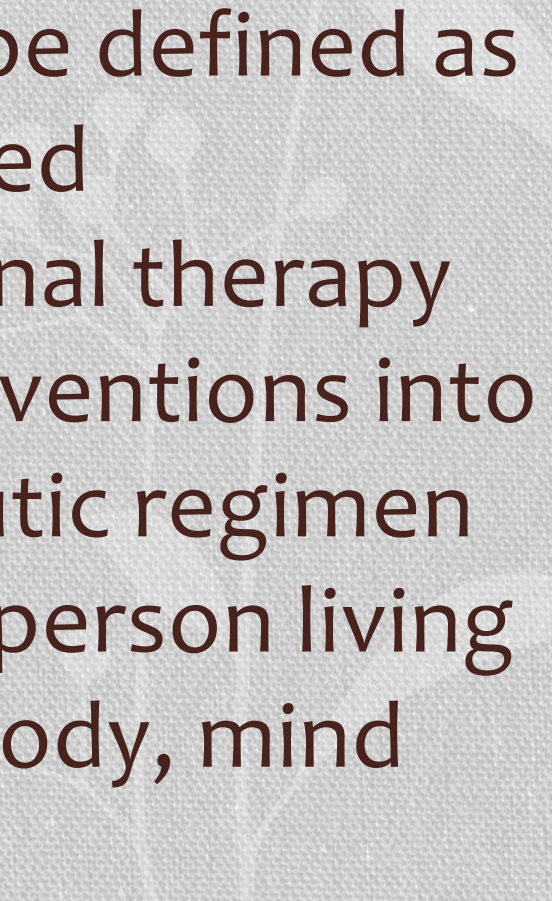
The National institute of Health defines complementary and alternative medicine (CAM) as a group of diverse medical and health care systems, practices, and products that are not presently considered to be part of conventional medicine.



JNCI: Journal of the National Cancer Institute, Volume 110, Issue 1, 1 January 2018

Integrative Medicine

uses all appropriate therapies, both conventional and alternative, to facilitate the body's innate healing response. IM neither rejects conventional medicine nor accepts alternative therapies uncritically.



Integrative oncology can be defined as the rational, evidence-based combination of conventional therapy with complementary interventions into an individualized therapeutic regimen that addresses the whole person living with or beyond cancer—body, mind and spirit.

- "Everyone has a doctor in him or her; we just have to help it in its work. The natural healing force within each one of us is the greatest force in getting well."

~Hippocrates (460-377 B.C.)

Alternative Therapies



Legal implications

- "In the treatment of all the patients in this case, [petitioner] demonstrated that he lacked the basic understanding of the disease from which all the patients were suffering."
- "it is well settled that a patient's consent to or even insistence upon a certain treatment does not relieve a physician from the obligation of treating the patient with the usual standard of care."

Gonzalez v. New York State Department of Health, 232 A.D.2d 886 (1996).

FDA

- oversees the labeling of drugs and dietary supplements; manufacturing standards (GMPs), testing and drug approval process; and standards for devices and clinical laboratory practices. FDA is a REGULATORY AGENCY

FTC

- controls the **marketing** and **advertising** of foods, drugs and dietary supplements. FTC is an ENFORCEMENT AGENCY.

- Nutrition
- Mind-body practices
- Manipulation practices
- Spirituality
- Energy practices
- Whole body system practices



Nutrition Facts

Serving Size: 1 Meal
Servings Per Container: 1

Amount Per Serving

Calories 1330 Calories from Fat 550

% Daily Value*

Total Fat 61g 94%

Saturated Fat 21.5g 108%

Trans Fat 2.5g

Cholesterol 155mg 52%

Sodium 1665mg 69%

Total Carbohydrate 146g 49%

Dietary Fiber 8g 32%

Sugars 67g

Protein 52g 104%

CHEMICAL ADDITIVES:

ethylenediaminetetraacetic acid, date, ethoxylated monoglycerides, enzymes, tertiary butylhydroquinone, sodium acid pyrophosphate, dimethylpolysiloxane, azodicarbonamide, sodium stearoyl lactylate, monocalcium phosphate, thiamin mononitrate, mono/diglycerides, potassium benzoate, ammonium chloride, ammonium sulfate, aspartame, sodium erythorbate, annatto, artificial color, high fructose corn syrup, ascorbic acid, autolyzed yeast extract, sodium phosphate, sodium propionate, calcium carbonate, calcium chloride, calcium peroxide, calcium propionate, calcium silicate, calcium sulfate, caramel color, citric acid, dextrose, dried beef extract, guar gum, lactic acid, maltodextrin, polysorbate 80, sodium benzoate, sodium citrate, sodium nitrite, caffeine, phosphoric acid, sorbic acid, soy lecithin, wheat gluten, yeast extract

If you can't pronounce it, don't eat it.

35% of all cancers in the United States may be related to diet

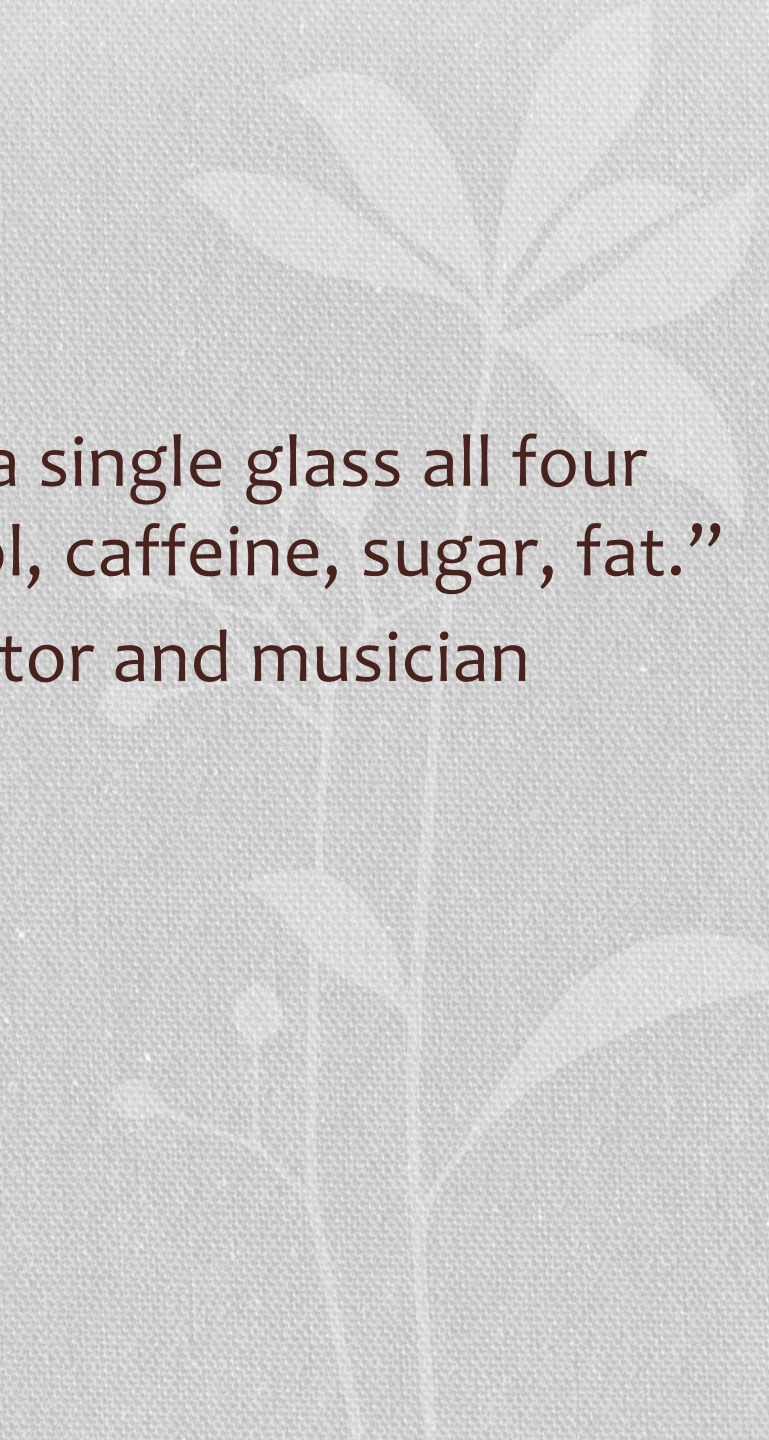
Both what we eat and what we don't

Modern Kitchen.

Kikor.COM
COMMERCIAL PHOTOGRAPHY

- "No illness which can be treated by the diet should be treated by any other means."

~ *Moses Maimonides (1135-1204)*

A faint, stylized illustration of a plant with several leaves and a small flower, positioned on the right side of the slide.

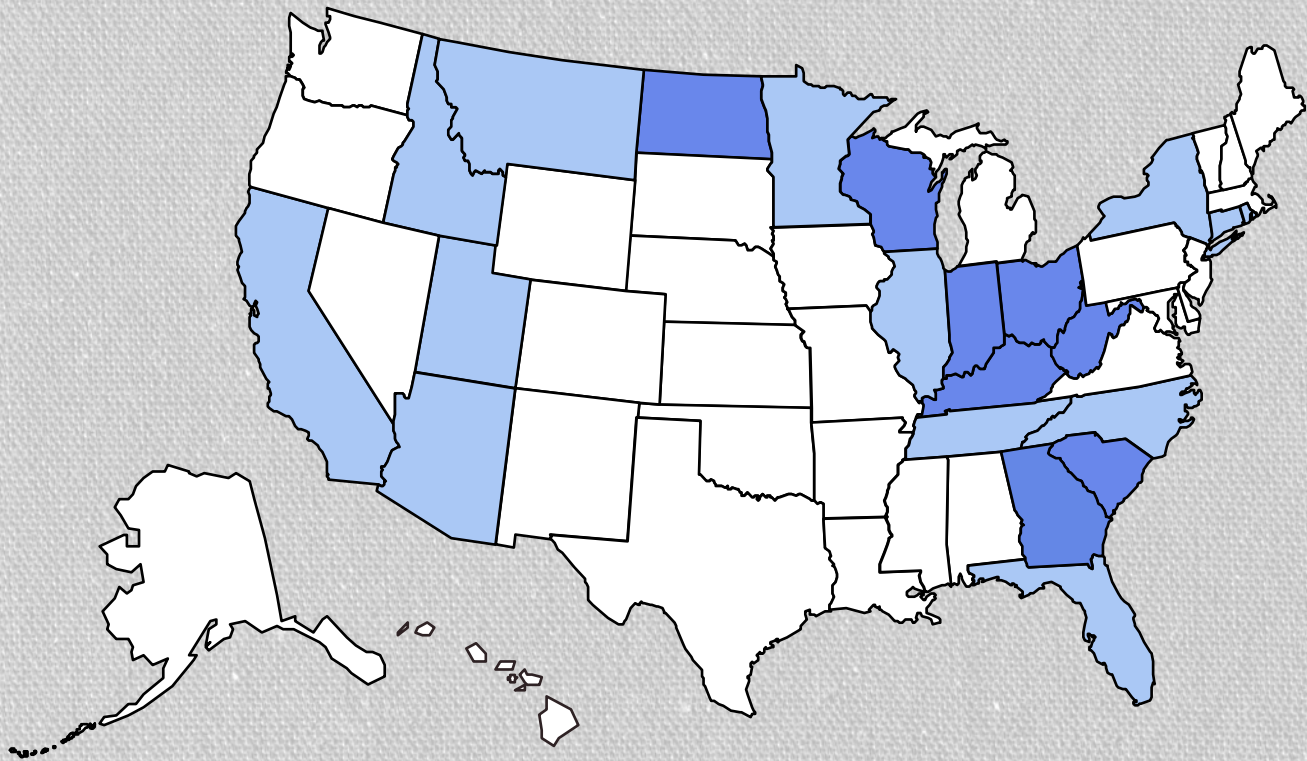
Only Irish Coffee provides in a single glass all four essential food groups: alcohol, caffeine, sugar, fat.”

—Alex Levine – Irish actor and musician

Obesity Trends* Among U.S. Adults

BRFSS, 1985

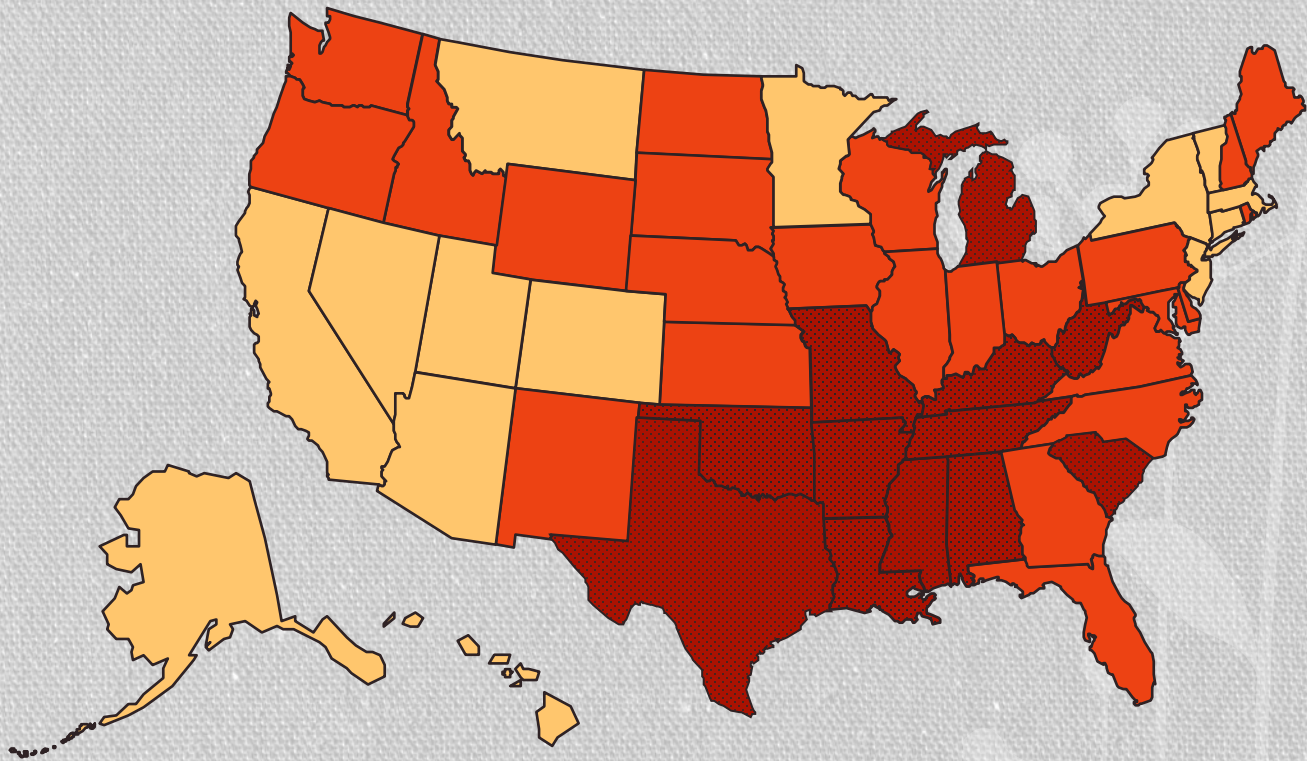
(*BMI ≥ 30 , or ~ 30 lbs. overweight for 5' 4" person)



Obesity Trends* Among U.S. Adults

BRFSS, 2010

(*BMI ≥ 30 , or ~ 30 lbs. overweight for 5' 4" person)



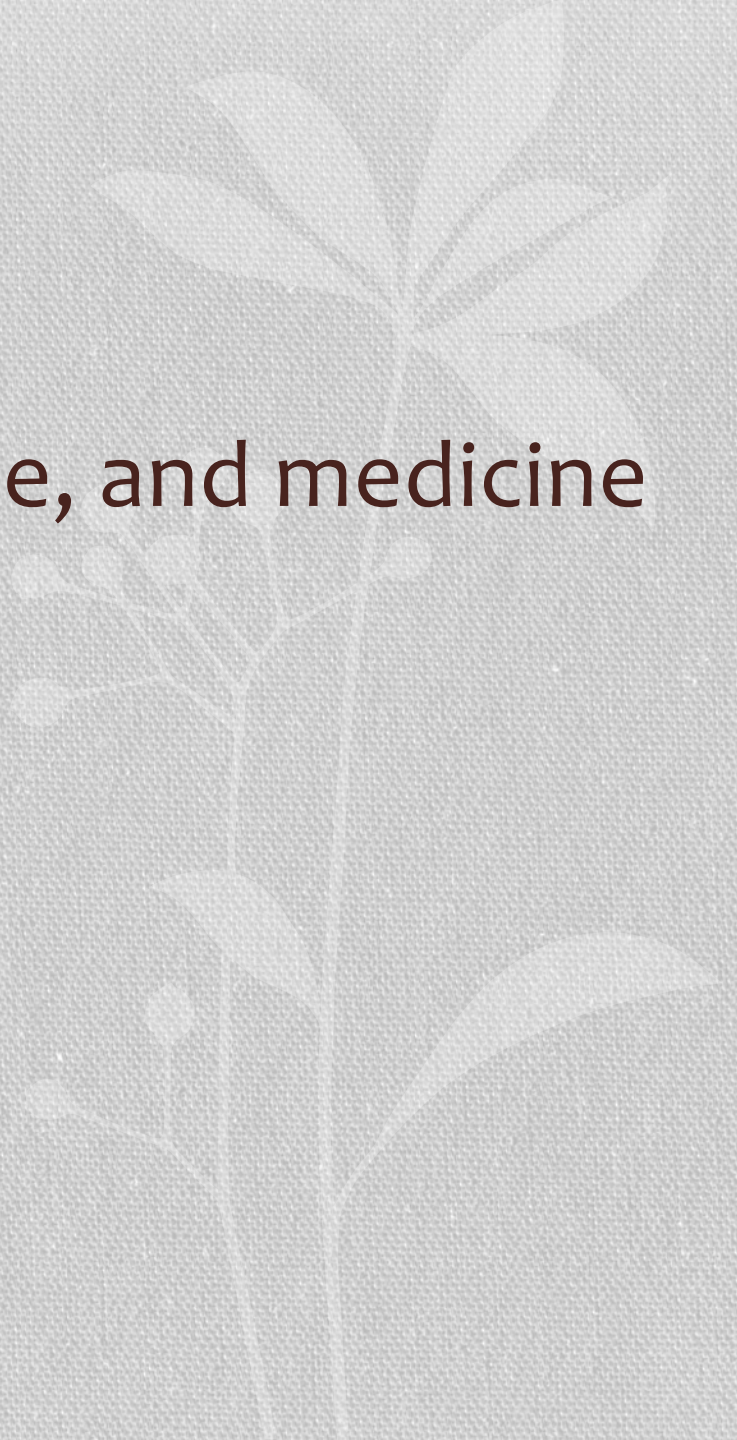
SAD diet

- Standard
- American
- Diet



Let food be your medicine, and medicine
be your food.

Hippocrates



Mind – Body Medicine

- NCCAM defines mind-body medicine as "...practices (that) focus on the interactions among the brain, mind, body, and behavior, with the intent to use the mind to affect physical functioning and promote health. “

“ For this is the great error of our day in the treatment of the human body, that physicians separate the soul from the body”.

Plato 380 B.C.



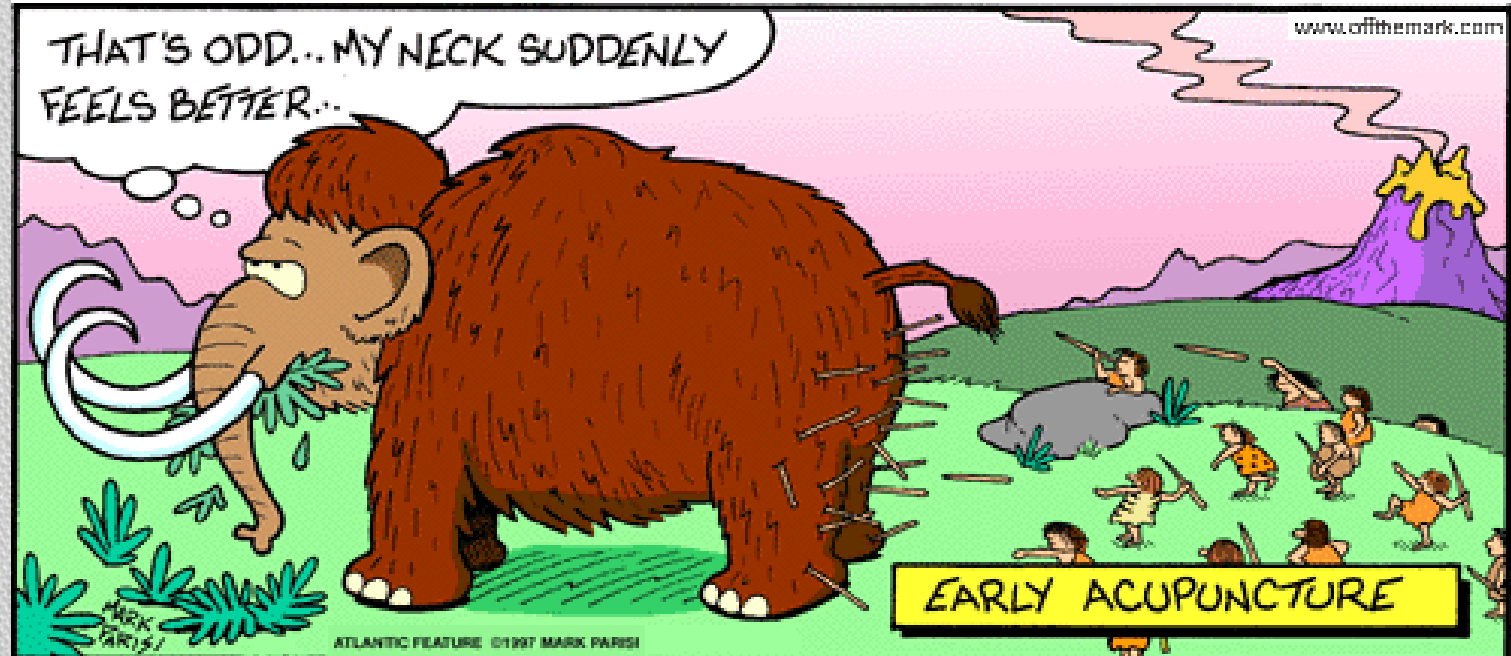
- Relaxation
- Mediation
- Guided Imagery
- Biofeedback
- Hypnosis
- Cognitive Behavioral therapy
- Psycho educational approaches



off the mark

by Mark Parisi

www.offthemark.com

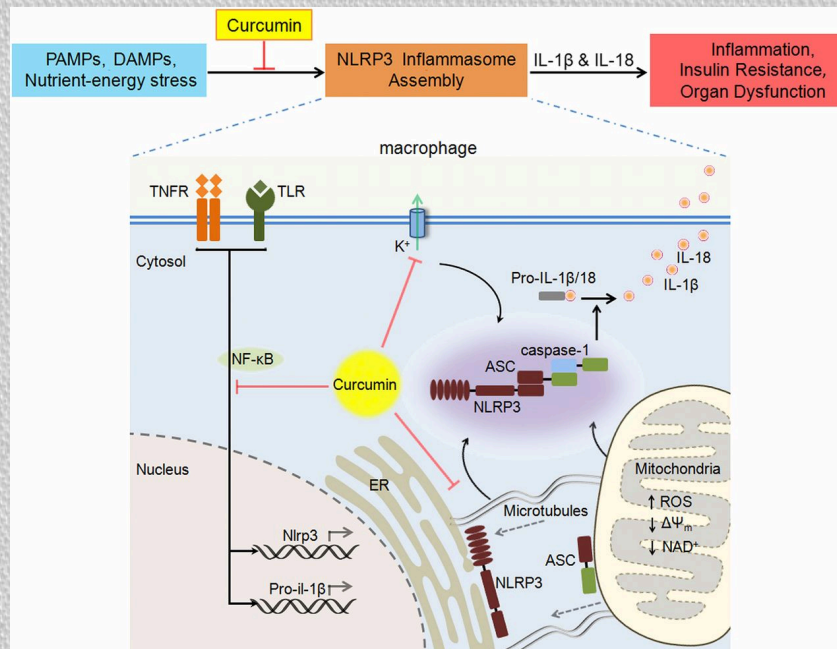


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Limitations of Botanical Research

- Lack of standardization
- Similar names with very different plants
- Part of the plant used
- Type of extract
- Concentrations
- Doses
- Difficulty in controlling placebo group





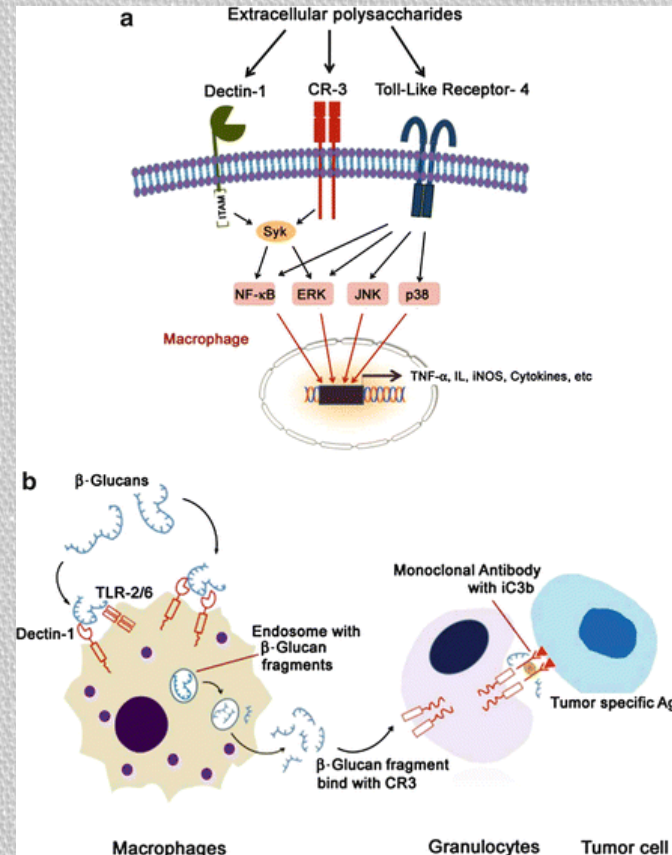
Vitamina D ????

J Immunol, 200 (8) (2018), p. 2835

Grifola Frondosa



Polysaccharides pp 2179-2214



Trametes Versicolor



Biomedicines **2020**, *8*(5), 135;
<https://doi.org/10.3390/biomedicines8050135>

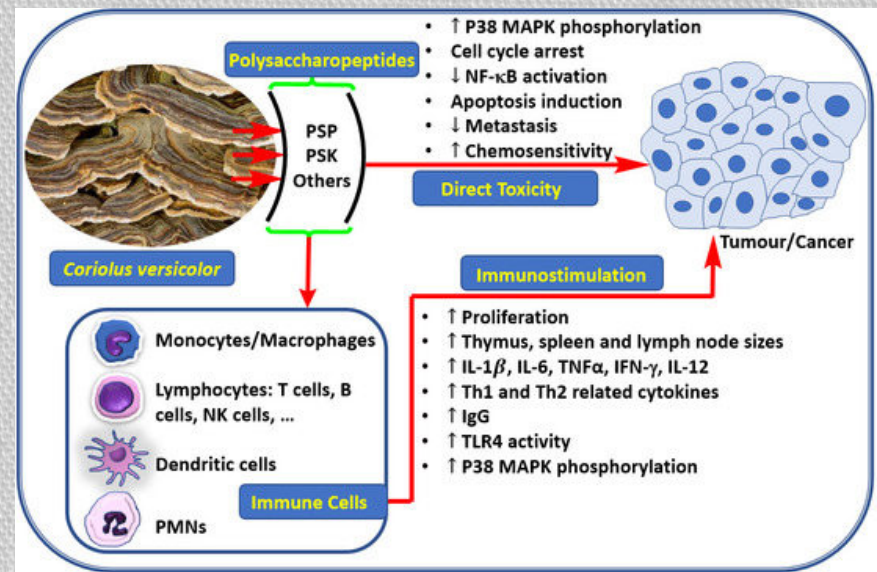


Fig. 1. The Influence of the Gut Microbiota on Local and Systemic Immune Function

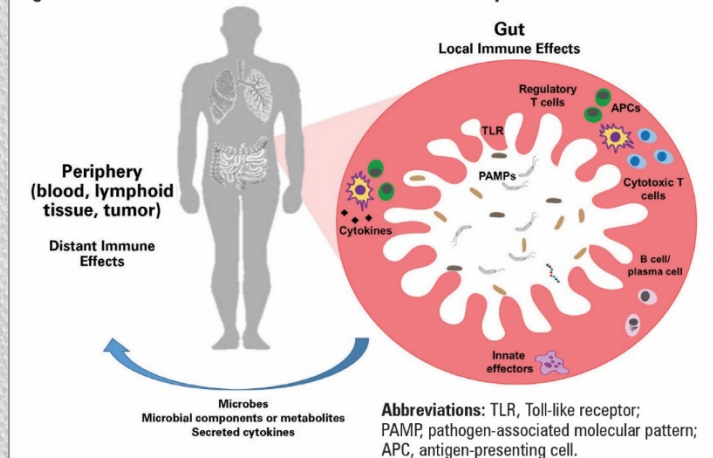
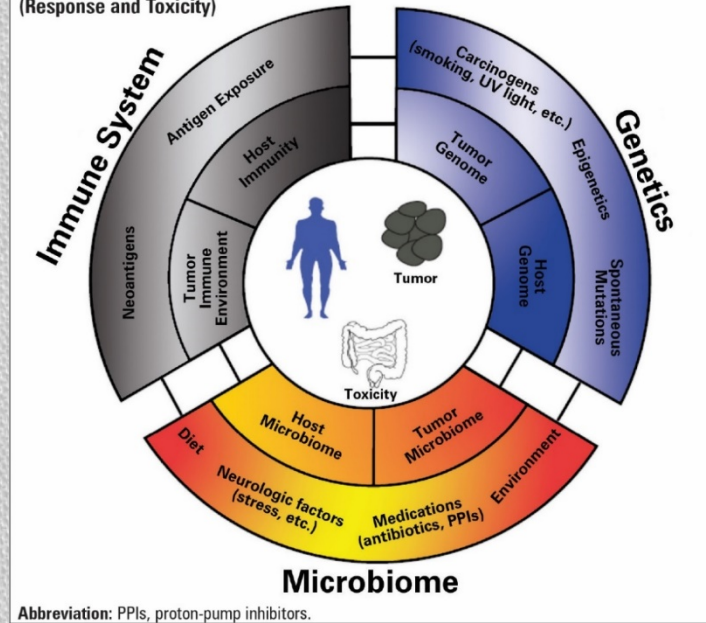


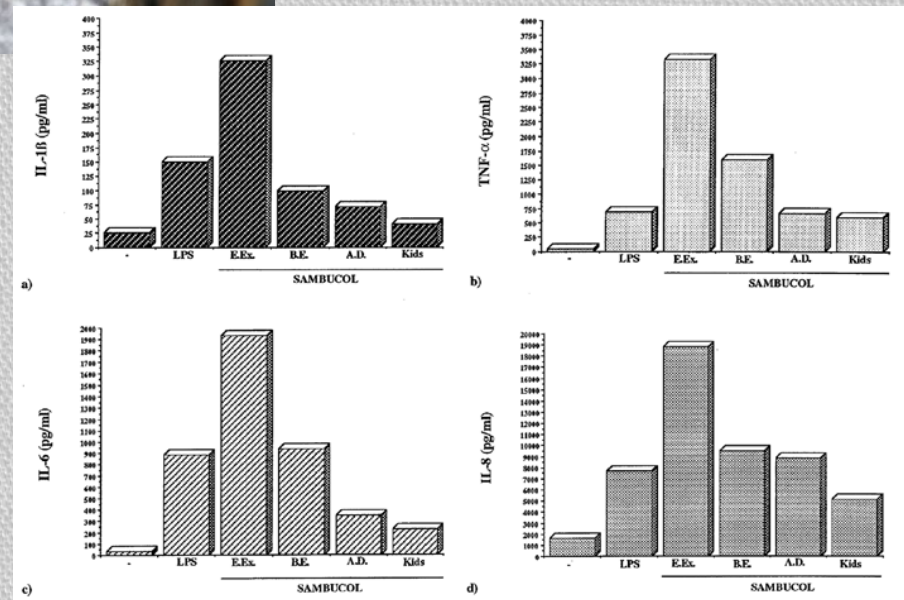
Fig. 2. The Microbiome as a Critical Consideration in Cancer Treatment (Response and Toxicity)



<https://dailynews.ascopubs.org/doi/10.1200/ADN.19.190276/full/>



Elderberries & the Coronavirus



European Cytokine Network Volume 12, Issue 2,
2001, Pages 290-296

off the mark

by Mark Parisi

www.offthemark.com



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Da-ma

大麻

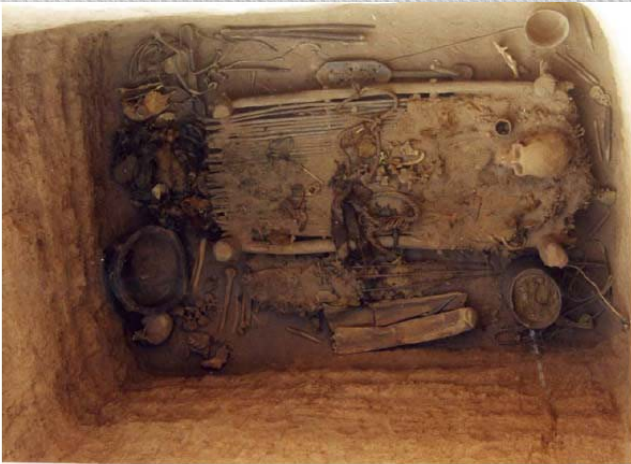


Fig S3B.

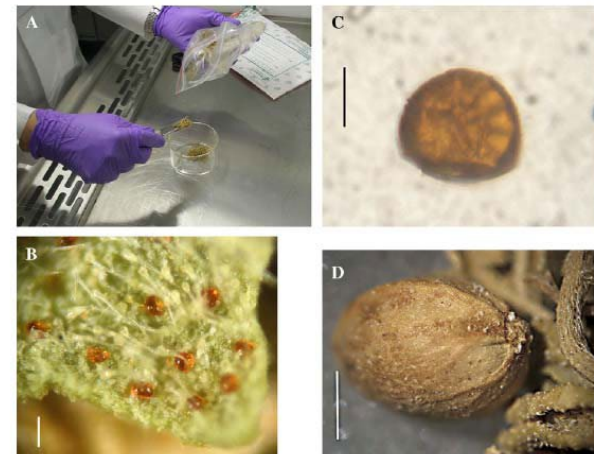
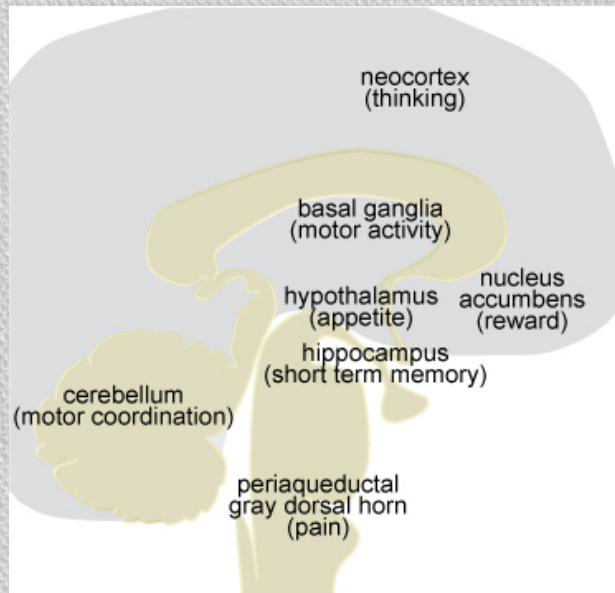


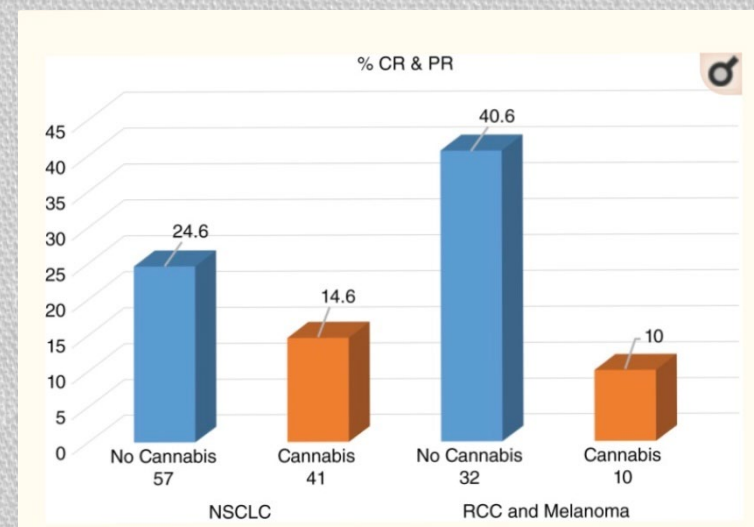
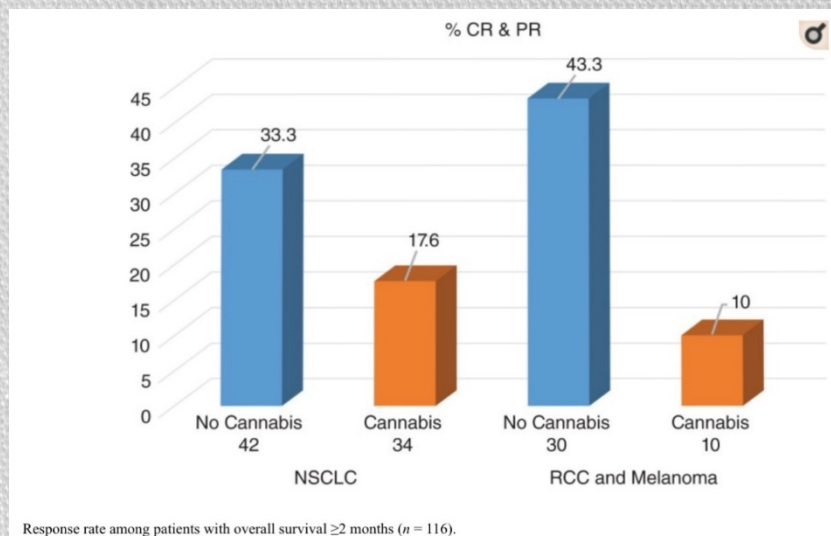
Fig. 2. Photomicrographs of ancient cannabis. (A) Photograph of the whole cannabis sample being transferred in laminar flow hood. (B) Photomicrograph of leaf fragment at low power displaying non-glandular and amber sessile glandular trichomes. Note retention of chlorophyll and

Distribution of CB1 & CB2 receptors

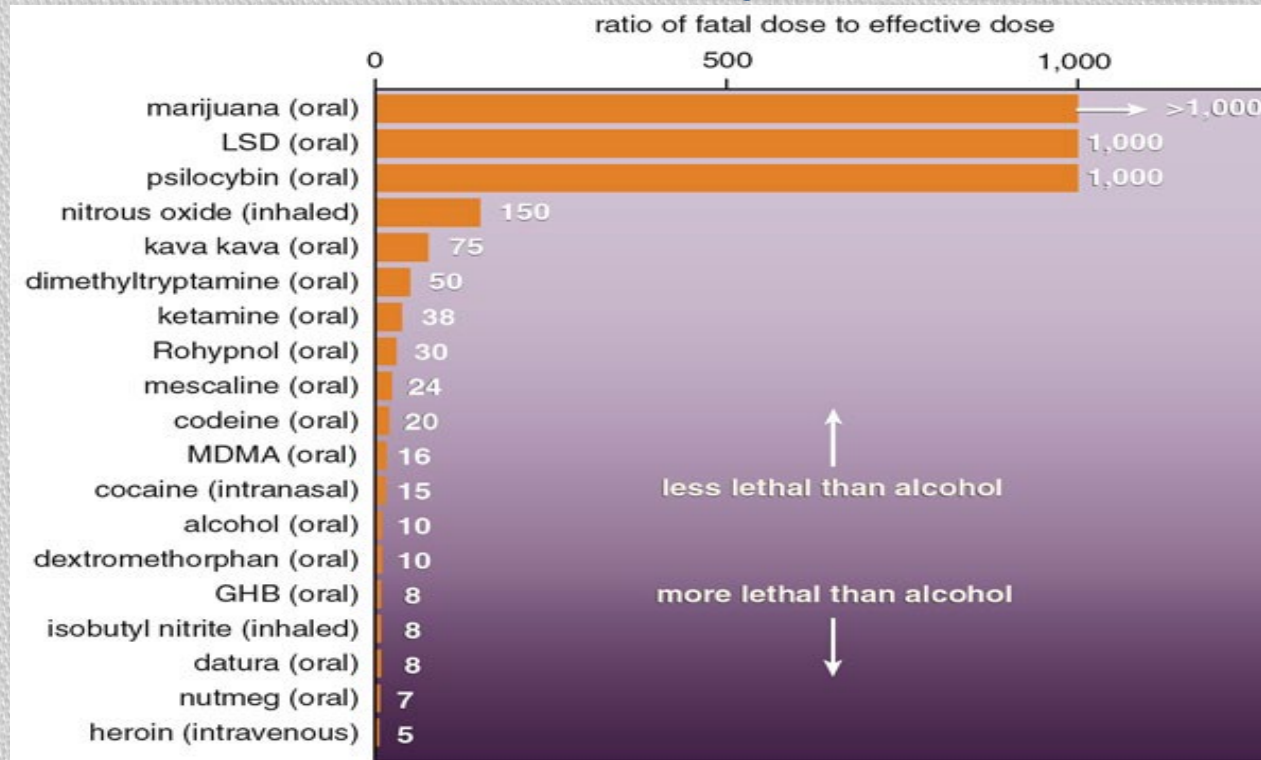


CB2

- immunologic cells (modulation cell migration)
- microglia (possible role in Alzheimer's?)



Toxicity



- Hallucinations
- Tachycardia
- Labored breathing
- Obtundation

Wang GS JAMA Pediatrics, 2013

http://opiophilia.blogspot.com/2013_04_01_archive.html

Gable (2006) *Amer Scientist* 94:206.

STAR TRIBUNE gagleCartoons.com

DEATHS FROM ALCOHOL



DEATHS FROM CIGARETTES



DEATHS FROM MARIJUANA



Marijuana Abuse/Dependency

DRUG	LIFETIME RISK OF DEPENDENCE
Nicotine	32%
Heroin	23%
Cocaine	17%
Alcohol	15%
Marijuana	9%

SOURCE: Bostwick, 2012 (reference list).

Marijuana's Medical Potential: Research Evidence

- Reduces nausea
- Stimulates appetite
- Pain relief
- Controls muscle pain, spasms
- Reduces tics (Tourette's Syndrome)
- Reduces convulsions (epilepsy)

SOURCE: Ben Amar, 2006 (reference list).

Research

- Cannabis 16919 articles
- Cannabis Cancer 517
- Cannabis Cancer (Clinical Trial) 19



Control weight



Healthy eating



Appropriate use of
supplements



Regular physical
activity



Breathing and stress
reduction



Guided imagery or
self-hypnosis



Connect with family
and friends



Engage in spirituality
and religion

Categories	Biologically Based Therapy	Mind-Body Therapy			Manipulative Therapy		Bioenergetic Therapy
		Relaxation techniques	Yoga	Tai chi	Massage therapy	Manipulation	
Examples	Natural compounds						Acupuncture
Types and styles	Glucosamine hydrochloride, chondroitin sulfate	Diaphragmatic breathing exercises, guided imagery, mindfulness meditation, mindfulness-based stress reduction, cognitive behavioral therapy, progressive muscle relaxation	Classic viniyoga, Hatha yoga	Yang style, Sun style	Structured, relaxation, Swedish	Osteopathic, spinal	Meridian channels and collaterals acupuncture microsystems, auricular acupuncture

Study	N	Diagnosis	Treatment Type	Follow-up	Outcome Measures	Study Type	Study Information
Leffler et al ¹⁰ (1999)	34	DJD of knee or low back	Combination of glucosamine hydrochloride (1500 mg/d), chondroitin sulfate (1200 mg/d), and manganese ascorbate (228 mg/d)	16 wk	% pain relief, VAS, physical examination score, patient assessment	Randomized, double-blind, placebo-controlled crossover trial	The combination therapy relieved symptoms of knee OA. A larger dataset is needed to determine the value of this therapy for spinal DJD. Weak evidence.
McAlindon et al ¹³ (2004)	205	Knee OA	Glucosamine hydrochloride (1500 mg/d)	12 wk	Change in pain score, stiffness, physical function, and analgesic use	Double-blind, randomized, placebo-controlled trial	Results suggest that although glucosamine appears to be safe, it is no more effective than placebo in treating the symptoms of knee OA. No evidence.
Clegg et al ¹⁴ (2006)	1583	Knee OA	Glucosamine hydrochloride (1500 mg/d) and chondroitin sulfate (1200 mg/d)	24 wk	VAS, SF-36, Health Assessment Questionnaire, acetaminophen use	Multicenter, double-blind, placebo- and celecoxib-controlled trial	Glucosamine and chondroitin sulfate alone or in combination did not reduce pain effectively in the overall group of patients with OA of the knee. No evidence.
Fransen et al ¹⁵ (2015)	605	Knee OA	Glucosamine sulfate (1500 mg/d) and chondroitin sulfate (800 mg)	2 y	Change in pain score and JSN	Randomized, double-blind, placebo-controlled trial	Glucosamine-chondroitin combination resulted in a significant reduction in JSN at 2 y. All groups had pain reduction, but treatment group had no significant symptomatic benefit above placebo. No evidence.

Abbreviations: DJD, degenerative joint disease; JSN, joint space narrowing; OA, osteoarthritis; SF-36, 36-item short-form survey; VAS, visual analog scale.

Study	N	Diagnosis	Treatment Type	Follow-up	Outcome Measures	Study Type	Study Information
Sherman et al ¹⁸ (2011)	228	CLBP	Viniyoga, stretching, or self-care book	6, 12, 26 wk	RMDQ, symptom bothersomeness, patient satisfaction	Randomized controlled trial	Yoga classes were more effective than a self-care book, but not more effective than stretching classes, in managing CLBP, with benefits lasting at least several months. Weak evidence.
Saper et al ¹⁹ (2013)	95	CLBP	Hatha yoga	12 wk	RMDQ	Randomized, parallel-group, dosing trial	Patients with CLBP attending once- or twice-weekly yoga classes experienced similar improvements in pain and back-related function. Weak evidence.
Carson et al ²² (2010)	53	FM	Yoga	8 wk	Standardized questionnaires, physical tests, and daily diaries	Randomized controlled trial	This trial reported 30% improvement in overall symptoms. Women in the yoga group showed significantly greater improvements on FM symptoms and functioning. Weak evidence.

Abbreviations: CLBP chronic low back pain; FM, fibromyalgia; RMDQ, Roland-Morris Disability Questionnaire.

Study	N	Diagnosis	Treatment Type	Follow-up	Outcome Measures	Study Type	Study Information
D'Souza et al ²³ (2008)	141	Tension or migraine headaches	Relaxation training versus written emotional disclosure	2 wk, 1, 3 mo	Immediate mood, headache frequency and severity, physical symptoms	Randomized controlled trial	A brief relaxation training was effective for tension headaches, compared with written emotional disclosure, which had no effect on health status for headaches. Strong evidence.
Kabat-Zinn et al ²⁴ (1985)	90	Chronic pain	MM	10 wk	Pain score, activity levels, pain-related drug use	Randomized controlled trial	Statistically significant reductions were observed in pain, symptoms, and mood disturbance. Pain drug use decreased and activity levels and self-esteem increased. Weak evidence.
Cherkin et al ²⁷ (2016)	342	CLBP	MBSR, CBT	4, 8, 26, 52 wk	RMDQ, self-report pain, bothersomeness	Randomized, interviewer-blind, clinical trial	Among adults with CLBP treatment with MBSR or CBT, compared with usual care, resulted in greater improvement in back pain and functional limitations at 26 wk, with no significant differences in outcomes between MBSR and CBT. Strong evidence.
Zgierska et al ²⁸ (2016)	35	CLBP	MM	8, 26 wk	Adherence to protocol, treatment satisfaction, experience evaluations	Randomized controlled trial	17 patients evaluated the intervention, indicating satisfaction; their qualitative responses described the course as useful for pain management and for improving pain coping skills. MM-based intervention is feasible, acceptable, and safe in opioid-treated CLBP Weak evidence.

Abbreviations: CBT, cognitive behavioral therapy; CLBP chronic low back pain; MBSR, mindfulness-based stress reduction; MM, mindfulness meditation; RMDQ, Roland-Morris Disability Questionnaire.

Study	N	Diagnosis	Treatment Type	Follow-up	Outcome Measures	Study Type	Study Information
Lauche et al ³¹ (2016)	114	Chronic neck pain	Tai chi	12 wk	VAS	Randomized controlled trial	Results indicate that tai chi exercises and conventional neck exercises are equally effective in improving pain and quality of life. Weak evidence.
Tsai et al ³² (2013)	55	Knee osteoarthritis and CI	Sun style tai chi	20 wk	WOMAC, physical function, stiffness score, mini-mental state examination	Pilot cluster randomized trial	All measures improved significantly more over time in the tai chi group than in controls. Practicing tai chi can be efficacious in reducing pain and stiffness in elders with knee OA and CI. Weak evidence.
Wang et al ³⁴ (2010)	66	Fibromyalgia	Yang style tai chi	12, 24 wk	FIQ, SF-36, quality of life	Single-blind, randomized controlled trial	The tai chi group had clinically important improvements in the FIQ total score and quality of life. Tai chi may be a useful treatment for fibromyalgia. Weak evidence.
Jones et al ³⁵ (2012)	101	Fibromyalgia	Yang style tai chi	12 wk	FIQ, BPI, sleep, self-efficacy for pain control	Parallel-group randomized controlled trial	Tai chi group compared with the education group demonstrated clinically and statistically significant improvements in FIQ, BPI, and sleep. Tai chi appears to be a safe and an acceptable exercise modality that may be useful as adjunctive therapy for fibromyalgia. Strong evidence.

Abbreviations: BPI, Brief Pain Inventory; CI, cognitive impairment; FIQ, Fibromyalgia Impact Questionnaire; SF-36, 36-item short-form survey; VAS, visual analog scale; WOMAC, Western Ontario and McMaster Universities Osteoarthritis Index.

Study	N	Diagnosis	Treatment Type	Follow-up	Outcome Measures	Study Type	Study Information
Liang et al ⁵⁸ (2011)	178	Chronic neck pain	Acupuncture	1, 3 mo	Northwick Park Neck Pain Questionnaire, VAS, SF-36, doctors' judgment	2-arm, randomized, sham-controlled and single-blinded clinical trial	Traditional acupuncture relieved pain intensity and improved quality of daily life with relative long-term clinical efficacy in patients with chronic neck pain. Strong evidence.
MacPherson et al ⁶⁰ (2017)	517	Chronic neck pain	Acupuncture, Alexander technique, or usual care alone	3, 6, 12 mo	Pain disability scores, self-care, self-efficacy, lifestyle	3-arm, randomized controlled multicenter trial	Patients in the acupuncture group showed improved self-efficacy and significant reductions in pain and disability scores at 12 mo. Strong evidence.
Haake et al ⁶¹ (2007)	1162	CLBP	Verum acupuncture, sham acupuncture, or conventional therapy	1.5, 3, 6 mo	Von Korff chronic pain grade scale, Hanover Functional Ability Questionnaire	Double-blinded randomized controlled trial	LBP improved after acupuncture treatment for at least 6 mo. Effectiveness of acupuncture, either verum or sham, was almost twice that of conventional therapy. Strong evidence.
Cherkin et al ⁶² (2009)	638	CLBP (mechanical)	Individualized/standardized/simulated acupuncture, or usual care	8, 26, 52 wk	RMDQ, symptom bothersomeness	Randomized controlled trial	Although acupuncture was found effective for CLBP, tailoring needling sites to each patient and penetration of the skin appeared to be unimportant in eliciting therapeutic benefits. Weak evidence.
Wang et al ⁶⁸ (2009)	159	Low back and posterior pelvic pain associated with pregnancy	Auricular acupuncture	1, 2 wk	VAS, disability rating index	Randomized controlled trial	Pregnant women who received a 1-wk continuous auricular acupuncture treatment reported significantly less pain compared to other groups. However, the reduction of pain was not sustained for every participant. Weak evidence.
Berman et al ⁶⁴ (2004)	570	Knee osteoarthritis	Acupuncture	8, 12, 26 wk	WOMAC, SF-36, patient global assessment, 6-min walk distance	Randomized controlled trial	At 26 wk, the true acupuncture group experienced significantly greater improvement than the sham group in the WOMAC scores and patient global assessment. Strong evidence.

Abbreviations: CLBP, chronic low back pain; LBP, low back pain; RMDQ, Roland–Morris Disability Questionnaire; SF-36, 36-item short-form survey; VAS, visual analog scale; WOMAC, Western Ontario and McMaster Universities Osteoarthritis Index.

Absence of evidence is not evidence
of absence

The risk of the intervention is what
should drive the required level of
evidence

