



# Integrative & Lifestyle Medicine: Why It's Important in Lupus

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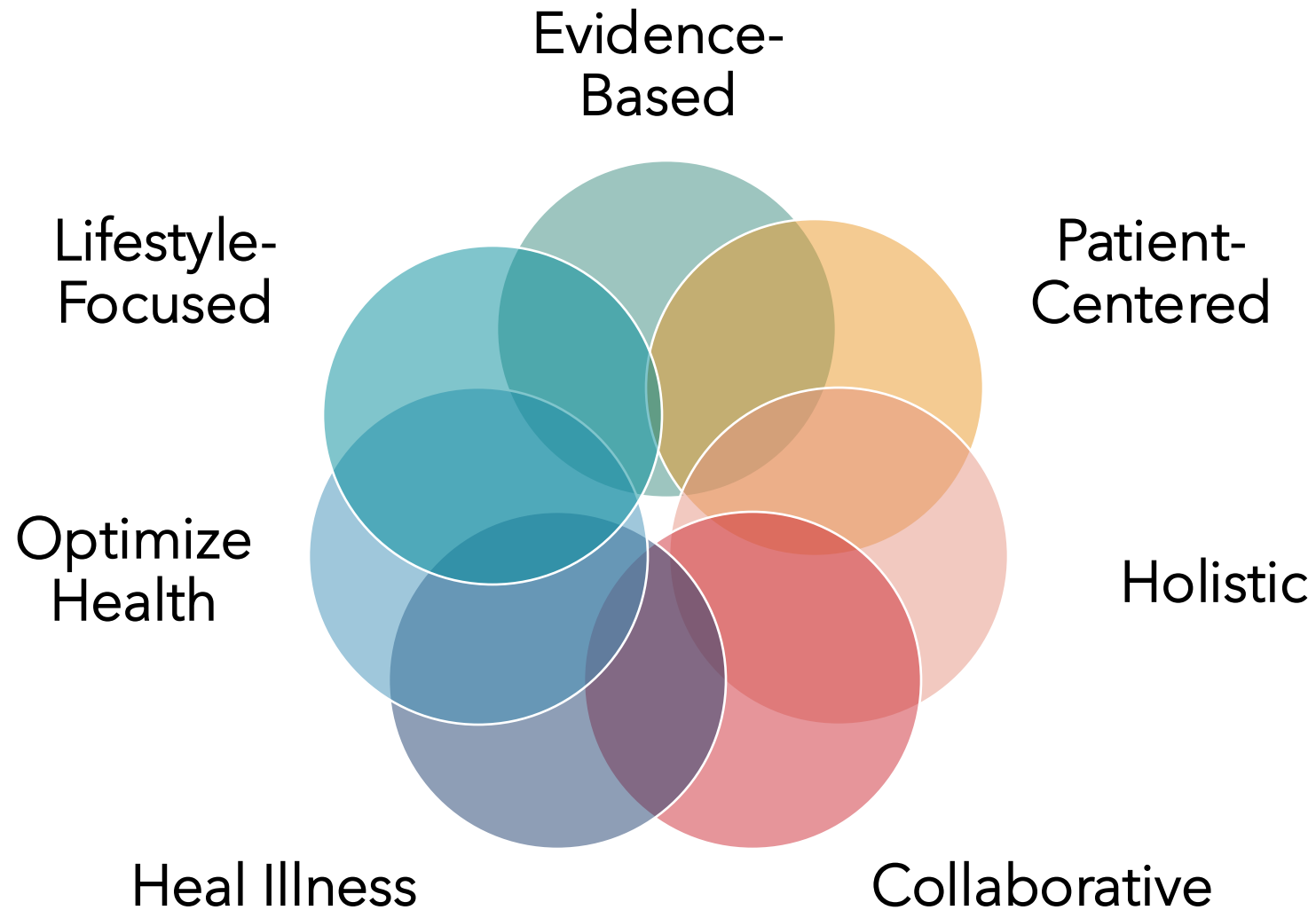
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# Disclosures

- Beyond Meat – unrestricted seed grant through the Stanford Plant Based Diet Initiative
- Impossible Foods
- Upside Foods
- Oura Ring

# What is Integrative<sup>?</sup> Medicine?



# Why Integrative Medicine?

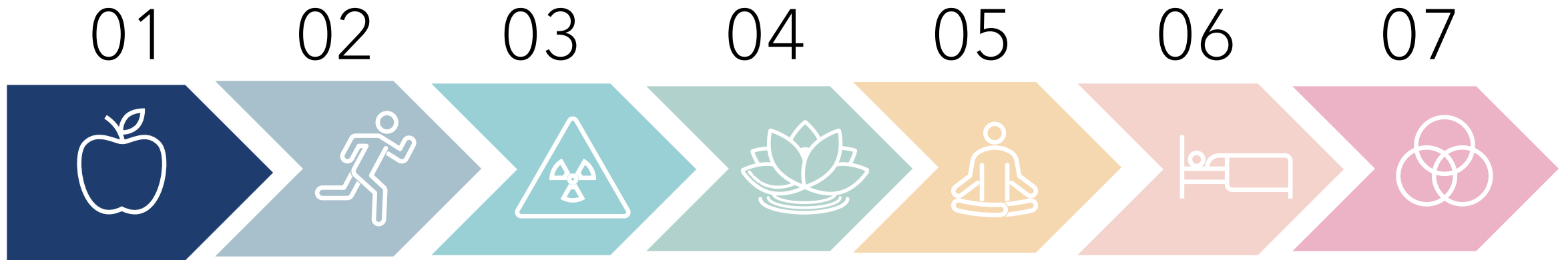




# Agenda



# Eat to Treat



# Summary of Dietary Studies in SLE

- **Mediterranean Diet** - ↓ disease activity, ↓ damage accrual, ↓ cardiovascular risk factors
- **Plant-Based Diet** - improvement in symptom severity
- **Vegetarian Diet** - ↓ prevalence of SLE
- **Excess weight** - ↑ disease activity, ↑ nutrient deficiencies of vit E, Omega 3 fatty acids, and vit D.
- **Added Sugar** - ↑ disease activity, ↑ dyslipidemia
- **Nut/Legume Intake** - ↓ risk of SLE
- **Ultraprocessed Food** - ↑ risk of SLE, ↑ positive dsDNA



Pocovi-Gerardino G, et al. Beneficial effect of Mediterranean diet on disease activity and cardiovascular risk in systemic lupus erythematosus patients: a cross-sectional study. *Rheumatology (Oxford)*. 2021 Jan 5;60(1):160-169

Knippenberg A, et al. Plant-based dietary changes may improve symptoms in patients with systemic lupus erythematosus. *Lupus*. 2022 Jan;31(1):65-76.

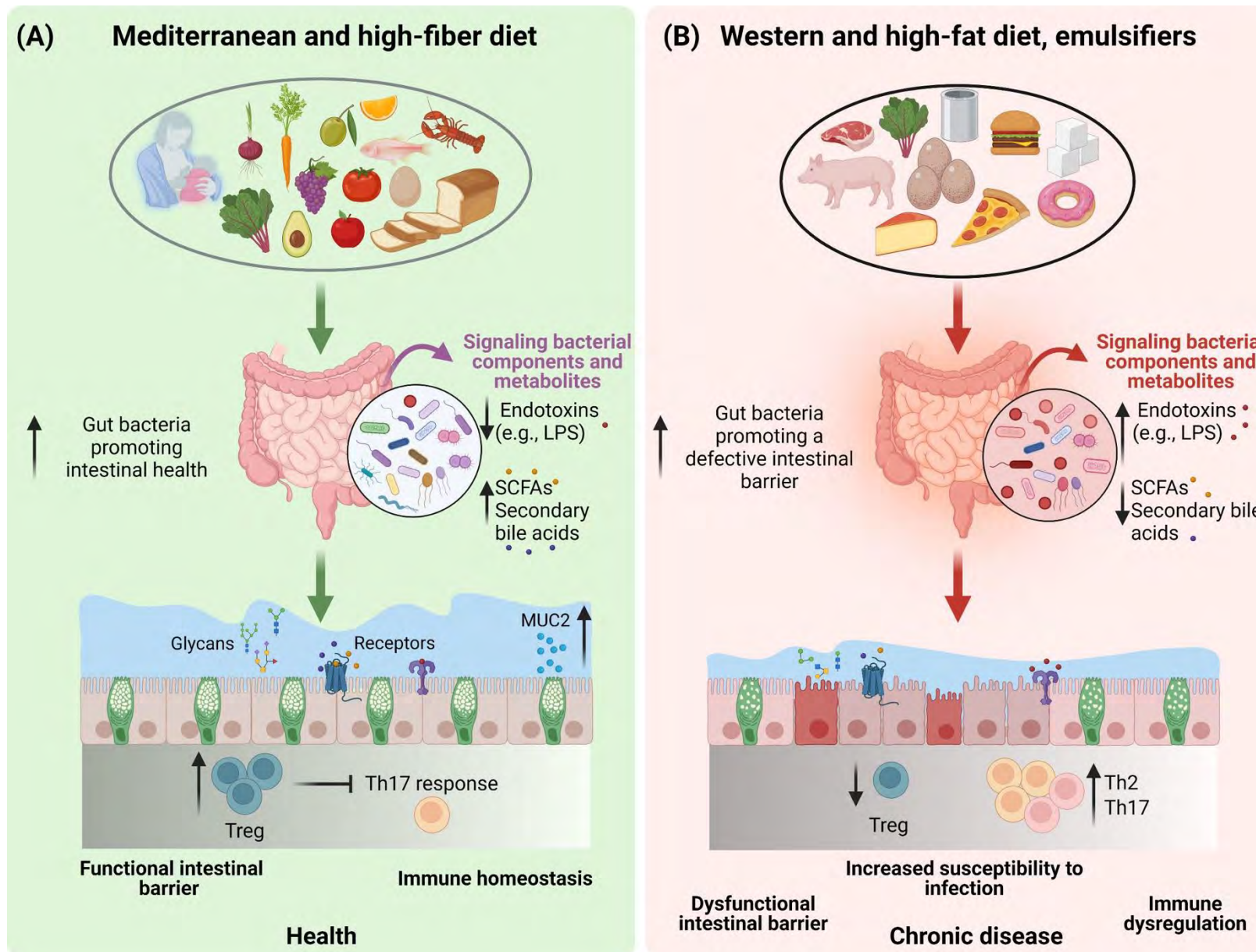
Oh J, et al. The association between dietary patterns and a doctor diagnosis of systemic lupus erythematosus: the Adventist Health Study-2. *Lupus*. 2022 Oct;31(11):1373-1378.

Correa-Rodríguez M, et al. Dietary Intake of Free Sugars is Associated with Disease Activity and Dyslipidemia in Systemic Lupus Erythematosus Patients. *Nutrients*. 2020 Apr 15;12(4):1094.

Barbhaiya M et al. Association of Dietary Quality With Risk of Incident Systemic Lupus Erythematosus in the Nurses' Health Study and Nurses' Health Study II. *Arthritis Care Res (Hoboken)*. 2021 Sep;73(9):1250-1258.

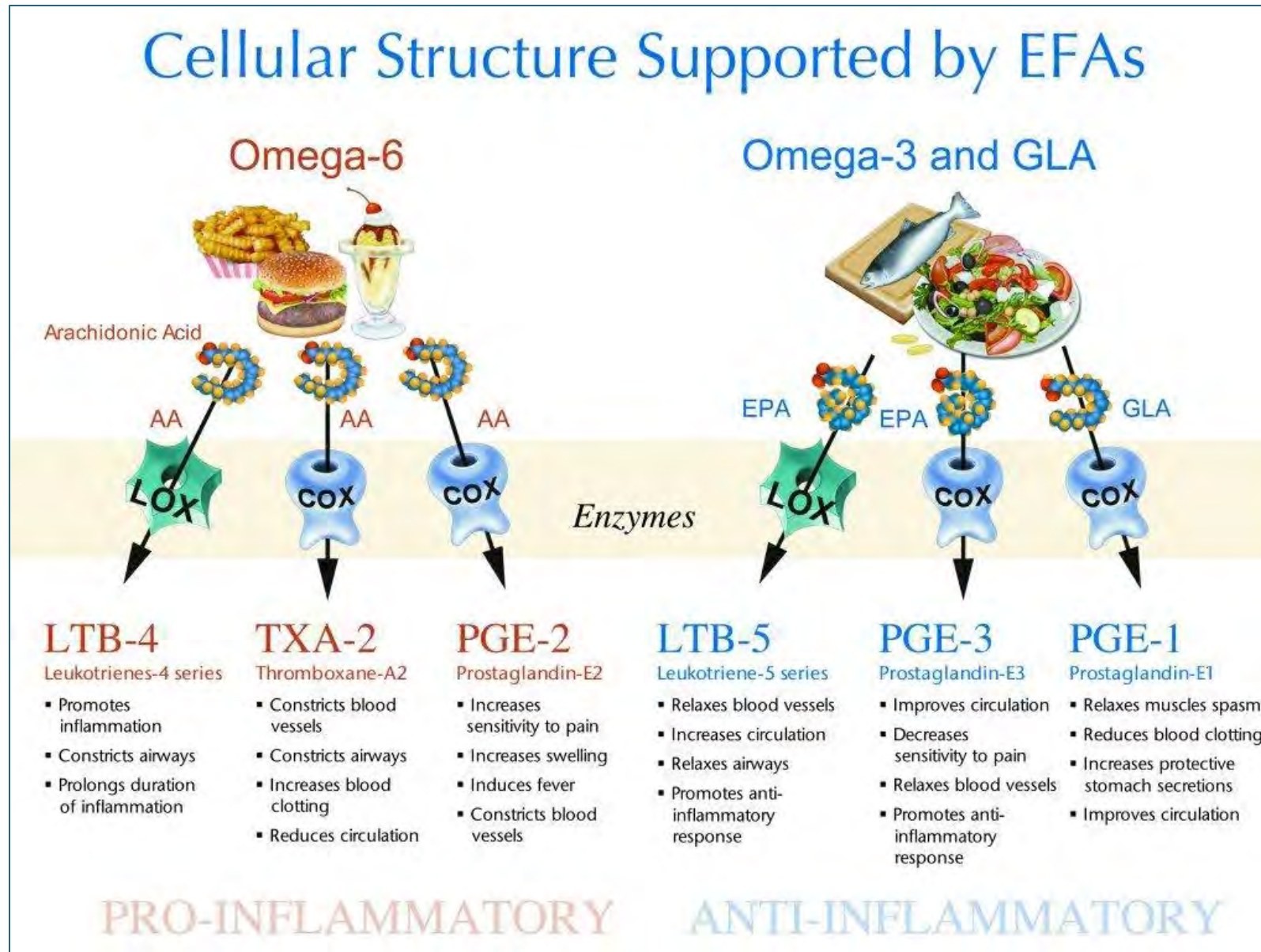
Rossato S, et al. Ultraprocessed Food Intake and Risk of Systemic Lupus Erythematosus Among Women Observed in the Nurses' Health Study Cohorts. *Arthritis Care Res (Hoboken)*. 2025 Jan;77(1):50-60.

# Mediterranean vs SAD Diet

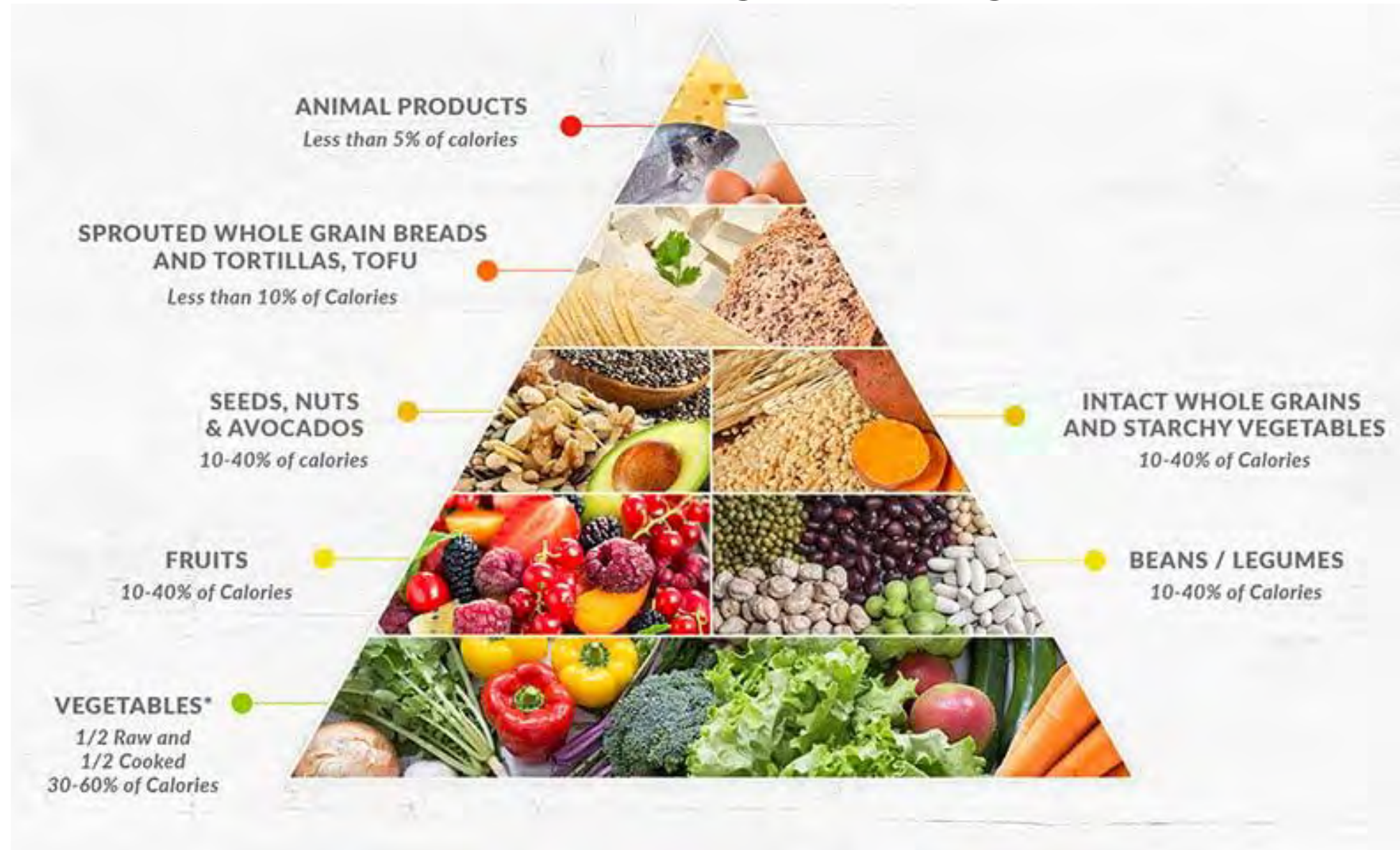




# Anti- vs Inflammatory Precursors



# Anti-Inflammatory Food Pyramid



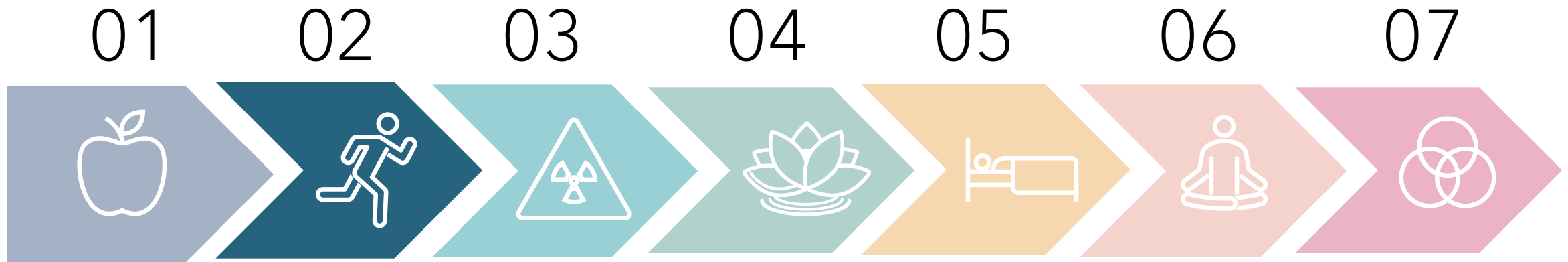


# Dietary Guidelines

- **Mediterranean-style diet** - high intake of vegetables, fruits, whole grains, legumes, nuts, seeds, and olive oil; low amounts of dairy and fish; and limited added sugars, excess sodium, ultraprocessed foods, refined carbohydrates, meat and saturated fats
- **Fermented Food** - Consider foods with live culture such as yogurt/kefir (non-dairy available), miso, sauerkraut, kombucha, kimchi, apple cider vinegar, etc. to support the microbiome
- **Spices** - Add more species to your diet for their antioxidant/anti-inflammatory activity, especially turmeric and ginger
- **Elimination Diet** - Keep food journal to monitor effects of diet on symptoms, and consider an elimination diet to identify specific food triggers such as gluten, dairy, sugar, meat, etc. (if not at risk for eating disorders)



# Move More





# Summary of Movement Studies in SLE



- **Aerobic and Resistance Training** - ↑ aerobic capacity, strength, function, health-related quality of life; ↓ fatigue, cardiovascular risk, and depression
- **Aerobic Exercise** - ↓ inflammatory markers
- **Telehealth-Supervised Exercise** - ↑ emotional well-being, fatigue, and upper body endurance
- **Aerobic Exercise** - ↓ general and physical fatigue
- **Combined Aerobic and Resistance Training** - ↑ physical and executive functions
- **Supervised Physical Exercise** - ↑ endothelial function and aerobic capacity
- **Sedentary Lifestyle** - ↑ inflammatory immune cells

Blaess J, et al. Benefits & risks of physical activity in patients with Systemic Lupus Erythematosus: a systematic review of the literature. *Semin Arthritis Rheum*. 2023 Feb;58:152128.  
Perandini LA, et al. Exercise training can attenuate the inflammatory milieu in women with systemic lupus erythematosus. *J Appl Physiol* (1985). 2014 Sep 15;117(6):639-47.  
Frade S, et al. Telehealth-supervised exercise in systemic lupus erythematosus: A pilot study. *Lupus*. 2023 Apr;32(4):508-520.  
Gavilán-Carrera B, et al. Effects of 12-week aerobic exercise on patient-reported outcomes in women with systemic lupus erythematosus. *Disabil Rehabil*. 2022 May;44(10):1863-1871.  
Kao VP, et al. Combined aerobic and resistance training improves physical and executive functions in women with systemic lupus erythematosus. *Lupus*. 2021 May;30(6):946-955.  
dos Reis-Neto ET, et al. Supervised physical exercise improves endothelial function in patients with systemic lupus erythematosus. *Rheumatology (Oxford)*. 2013 Dec;52(12):2187-95.  
Patterson SL, et al. Physical inactivity exacerbates pathologic inflammatory signalling at the single cell level in patients with systemic lupus. *EBioMedicine*. 2024 Dec;110:105432.

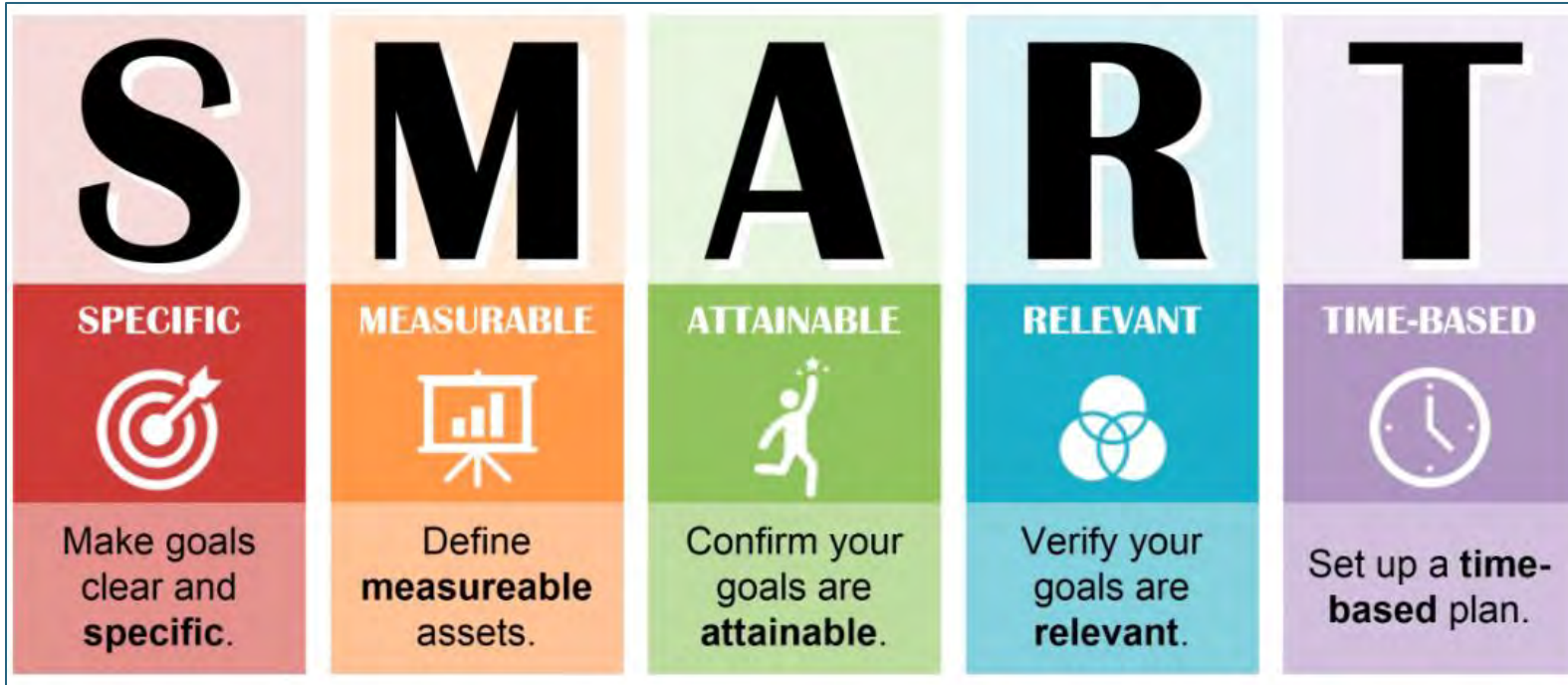
# Movement Guidelines

- **Cardio** – 150-300 min/week of moderate or 75-150 min/week of vigorous exercise
- **Strength** - 2-3 times/week on non-consecutive days
- **Balance** - 20 – 30 min/session of motor skill and proprioceptive skill training for cumulative 60 min/week
- **Stretching** – at least 10 min, 2-3 days/week, with greatest benefits if done daily \*
- **AVOID Sedentary Lifestyle** - If the above cannot be attained, **do as much as you can tolerate** in a slow, graded and paced manner, especially older adults or those with physical limitations
- **Pain management** – Rx meds, topicals (arnica, CBD, diclofenac gel, Salon Pas, etc), ice/heat, acupuncture, cane, supportive braces, massage
- **OT/PT engagement**

\*Though stretching/flexibility has been removed from the official USDHSS guidelines, engaging in such movement likely is beneficial.



# Movement Rx



**FUN!**

- Cardio
- Strength
- Balance
- Stretching\*

- Grading
- Pacing
- Managing pain

- Say NO to sedentary lifestyle

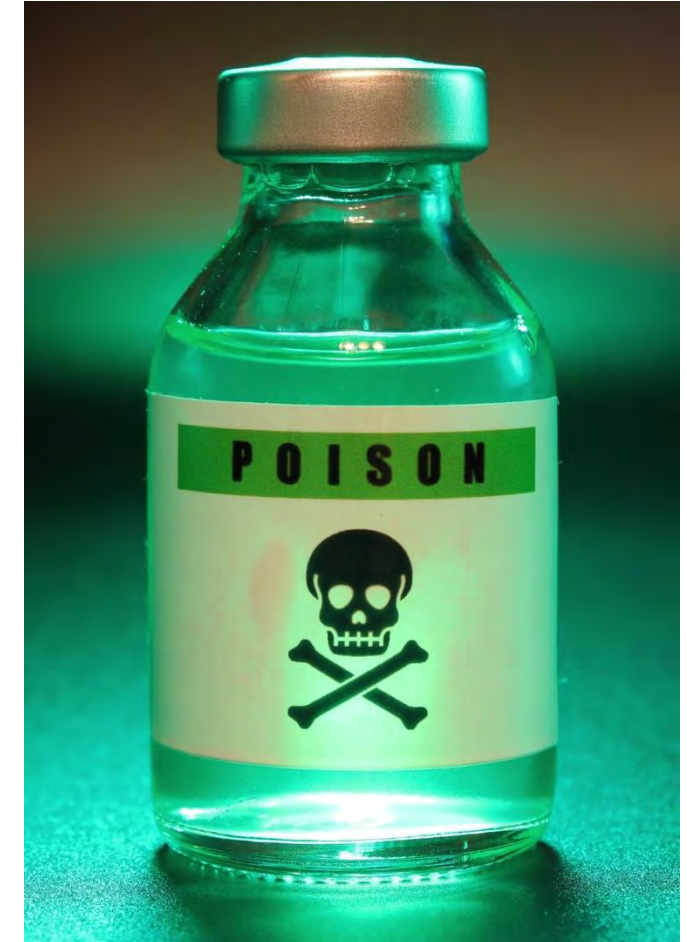
# Steer Clear





# Summary of Toxin Studies in SLE

- **UV exposure** – leads to DNA damage and oxidative stress, ↑ disease activity
- **Tobacco**: ↑ risk of SLE and ↑ disease activity
- **Phthalates** – possible immune dysregulation. ↑ phthalate metabolites in SLE patients
- **Polychlorinated Biphenyls (PCBs)** - implicated in immune system disruption, and the development of autoimmune diseases
- **Pesticides/Herbicides**: ↑ risk of SLE
- **Air Pollution** – ↑ risk of SLE



Woo JMP, Parks CG, Jacobsen S, Costenbader KH, Bernatsky S. The role of environmental exposures and gene-environment interactions in the etiology of systemic lupus erythematosus. J Intern Med. 2022 Jun;291(6):755-778.

Mak A, Tay SH. Environmental factors, toxicants and systemic lupus erythematosus. Int J Mol Sci. 2014 Sep 11;15(9):16043-56.

Parks CG, de Souza Espindola Santos A, Barbhaiya M, Costenbader KH. Understanding the role of environmental factors in the development of systemic lupus erythematosus. Best Pract Res Clin Rheumatol. 2017 Jun;31(3):306-320.

Barbhaiya M, Costenbader KH. Environmental exposures and the development of systemic lupus erythematosus. Curr Opin Rheumatol. 2016 Sep;28(5):497-505.

# Detox Guidelines

- **Sun Protection** – high SPF reef-friendly sunscreen, large brimmed hat, long sleeves, umbrella shade, tinted windows
- **Smoking Cessation** – engage with your PCP
- **Turn and Learn** – read labels
- **EWG Skin Deep** – to check ingredients of personal hygiene and beauty products
- **EWG Guide to Healthy Cleaning** - to check ingredients of cleaning products
- **EWG Clean 15/Dirty Dozen** – to check which fruits/vegetables have less pesticide/herbicide residues and which have more
- **Avoid Plastic** – stainless steel water bottles, glass food containers
- **Check Air Quality** – wear protective masks as needed that block particulate matter, and consider HEPA air filter in home if living in an area with poor air quality



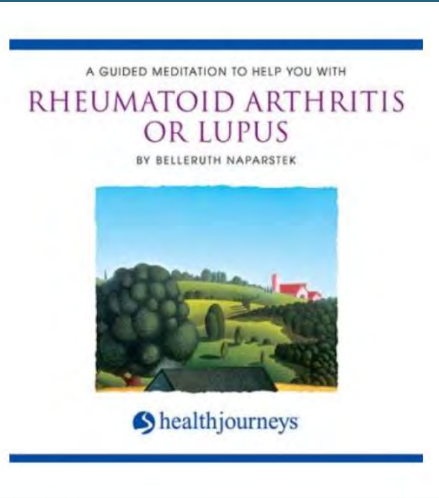
# Resources for Patients

Nutrition for People with  
Rheumatic Diseases



**UCSF** Osher Center for  
Integrative Health

<https://osher.ucsf.edu/patient-care/clinical-specialties/integrative-rheumatology/nutrition-and-rheumatic-diseasesj>



[www.hayhouse.com/shop/audio/health-journeys](http://www.hayhouse.com/shop/audio/health-journeys)



[www.lifestylemedicine.org/wp-content/uploads/2024/01/ACLM-Food-As-Medicine-Jumpstart-8.5x11.pdf](http://www.lifestylemedicine.org/wp-content/uploads/2024/01/ACLM-Food-As-Medicine-Jumpstart-8.5x11.pdf)

**healthyminds  
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<https://hminnovations.org/meditation-app>



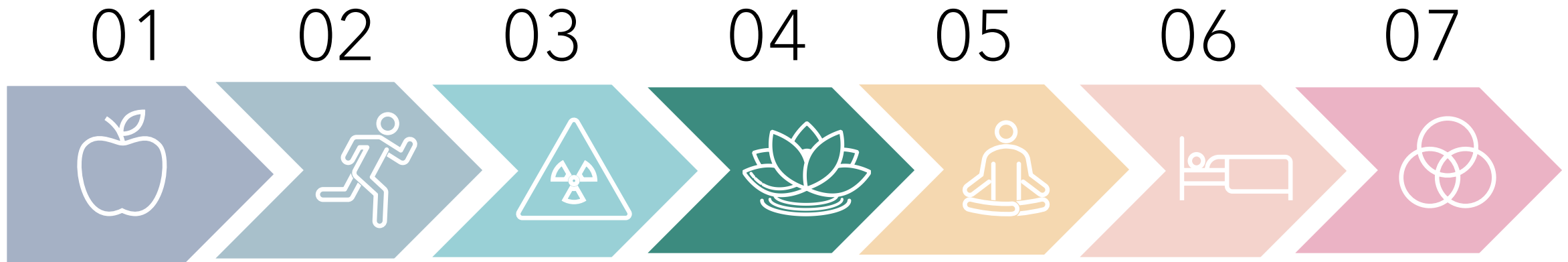
Know your environment.  
Protect your health.



[www.ewg.org](http://www.ewg.org)



# Ayurvedic Tools





# Abhyanga - Oleated Massage



- 51 RA patients
- 30 min/3x each week x 6 weeks of B knee aromatherapy massage vs. 40 min/1x each week of B foot reflexology vs no intervention
- Pain and fatigue scores significantly decreased in the aromatherapy massage and reflexology groups compared to the control group ( $p < .05$ ).
- [www.youtube.com/watch?v=ErSK70Bfx1o](https://www.youtube.com/watch?v=ErSK70Bfx1o)



# Kavala - Oil Pulling

- 12 SjS patients + 12 healthy controls
- oil-pulling for 15 min/day for 3 weeks in AM with various oils vs chlorhexidine (1 min/day, 2 weeks only) or distilled water.
- Virgin coconut oil reduced Strep. mutans and Candida sp., but no effect on lactobacillus in SjS
- Could reasonably use method in RA patients given link between RA and gingibal health
- [www.sjogrenscanada.org/living-with-sjgrens/blog.html/article/2022/07/01/what-s-old-is-new-again-the-story-around-oil-pulling](http://www.sjogrenscanada.org/living-with-sjgrens/blog.html/article/2022/07/01/what-s-old-is-new-again-the-story-around-oil-pulling)



# Warming Oils for Raynaud's



- N=1
- Applied olive oil on both hands first and several hours later applied rosemary essential oil, repeated x 3 days
- Circulation measured by thermography camera showed increased blood flow after rosemary essential oil compared to olive oil
- Patient also reported increased warmth in hands after rosemary essential oil
- Test patch skin for sensitivity. Can also consider mix of mustard oil and rosemary essential oil.



**Thank you and Namaste.  
Questions?**





# Lupus and Lifestyle Approaches

LFA LUPUS & YOU EVENT

2025.02.18

KAI SUN, MD, MS

# Agenda



Stress  
Management



Restorative Sleep



Social  
Connection

## Stress and lupus

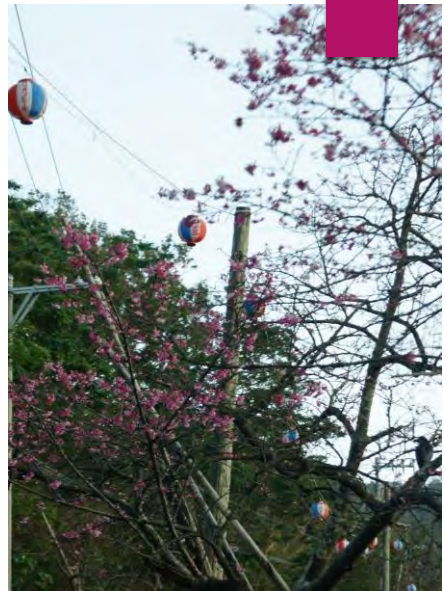
- ▶ Stress can keep your body in fight or flight response, which can harm physical and mental wellbeing
- ▶ High stress is associated with higher lupus disease activity, more pain, and more fatigue
- ▶ Mindfulness and relaxation can help decrease fatigue, pain, and improve mood, sleep, and thinking

Patterson, AC&R. 2022

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## Mindfulness & relaxation

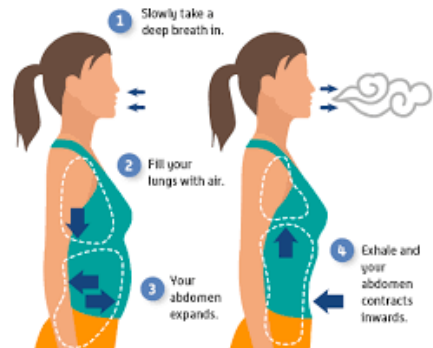
*We process the world through our minds, paying attention to how our minds are processing the world can change our experiences*





## Mindfulness and relaxation

- ▶ Techniques/exercises:
  - ▶ Diaphragmatic/deep breathing (4-7-8)
  - ▶ Guided imagery – use mental imagery of calm places to induce relaxation
  - ▶ Body scans – mentally scan your body for stress and decrease tension
  - ▶ Mindfulness Meditation – focus on the present moment, allow negative thoughts to flow through the mind without evoking stress
- ▶ Additional resources:
  - ▶ Relaxation apps
  - ▶ CDs, DVDs, or books from your library



For additional info

## Taichi

- ▶ Chinese martial art, combines meditation with slow, gentle movements, deep breathing & relaxation
- ▶ Can reduce pain & stiffness, improve physical function, mood and quality of life for osteoarthritis and fibromyalgia
- ▶ Some data for inflammatory arthritis and chronic low back pain
- ▶ Safe with minimal risks
- ▶ Best to learn in person (YMCA), there are also video options (Tai Chi Foundation)



# Yoga

- ▶ A mind-body practice derived from ancient Indian philosophy
- ▶ Includes physical poses, breathing techniques, relaxation, meditation
- ▶ Physical poses can improve strength, flexibility and balance, breathing and relaxation can reduce stress and anxiety
- ▶ Safe but should modify postures according to individual limitations
- ▶ Find a certified yoga school or instructor through [Yoga Alliance](#)
- ▶ Free online videos and yoga apps (e.g., [Yoga with Adriene](#))



## Sleep and lupus

- ▶ 55-85% of patients with SLE have a sleep disorder
  - ▶ Trouble falling asleep, staying asleep, poor sleep quality, short duration
  - ▶ Due to pain, stress, anxiety, medications (steroid)
- ▶ Poor sleep can lead to fatigue, brain fog, anxiety, depression
- ▶ Poor sleep can negatively impact immune system
  - ▶ Mouse studies showed that sleep deprivation led to earlier onset of lupus
  - ▶ Sleep disorders in patients with SLE are associated with higher disease activity



Palma, *Am J Physiology*. 2006  
Palagini, *Lupus* 2014



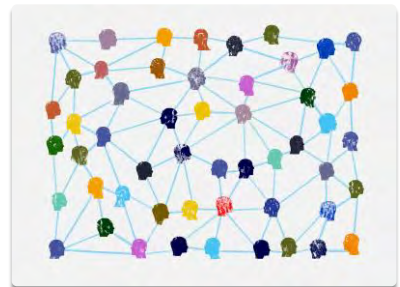
## Restorative sleep

- ▶ Sleep study
- ▶ Sleep hygiene
- ▶ Cognitive Behavioral Therapy for Insomnia (CBTI)
  - ▶ Worked better and lasted longer than sleep medicines alone
  - ▶ 4-8 sessions, help with difficulty falling & staying asleep
  - ▶ CBT-I Coach
- ▶ Medications
  - ▶ Affect of steroids
  - ▶ E.g., melatonin, trazodone
  - ▶ Best to avoid habit forming medications



## Social connections and lupus

- ▶ Social connections alleviate psychological stress, improve health behaviors, enhance a sense of control over disease
- ▶ Social support components: emotional, informational, tangible, social interaction
- ▶ Studies in SLE showed that psychosocial support correlates with lower lupus disease activity, less fatigue, better physical function and mental health.



Mazzoni, *Lupus*. 2011  
Lu, *Front Psychol*. 2024

## Social connections

- ▶ Participate in social activities
  - ▶ Family & friends
  - ▶ Religious community
  - ▶ Patient support groups
- ▶ Caregivers, friends and family members
  - ▶ Listen, validate, and understand
  - ▶ Help loved ones take their medications
  - ▶ Help them go to their appointments
  - ▶ Help them with lifestyle changes





Having a connection with something bigger than yourself

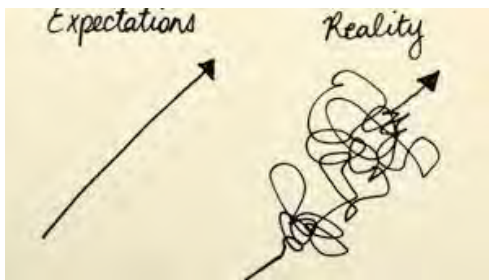
Practicing spirituality:

- ▶ Prayer, meditation, scripture reading
- ▶ Participate in activities that bring you joy
- ▶ Journaling, gratitude exercises

## Spirituality








Set goals &  
pace yourself



You are a member  
of your own  
healthcare team;  
you have an  
important role in  
your healing

## Additional resources





Questions/comments



# Thriving with Lupus

*A Holistic Path to Wellness*

**GENNY MACK**

HOLISTIC HEALING | LUPUS WARRIOR



What's one thing you do every day that helps you feel your best—physically, mentally, or emotionally?  
Drop it in the chat!

⚠ **For Educational Purposes Only** ⚠

This presentation is for **informational and educational purposes..**

- Always consult a **qualified healthcare professional** before making any changes to your diet, lifestyle, or treatment plan.
- The information shared is based on **personal experience, research, and holistic wellness principles**, but is **not a substitute for professional medical guidance**.
- No content here is meant to **diagnose, treat, cure, or prevent** any disease.

**Listen to your body. Work with your doctor. Prioritize your health.**

**2023 Lupus Flare**



**Flourishing**



# GENNY MACK

*Holistic Nutritionist & Lupus Warrior*



Genny Mack is a holistic nutritionist and lupus warrior who empowers her community to glow, live flare-free, and embrace abundance through natural, whole-body healing.

Genny specializes in helping women with autoimmune conditions, particularly lupus, regain control of their health and live vibrant, fulfilling lives.



## 🌿 What is a Holistic Lifestyle? 🌿

*"Holistic health emphasizes the integration of physical, mental, emotional, and social well-being, recognizing that optimal health comes from balance across all these areas."*

*— World Health Organization (WHO), "Constitution of the World Health Organization," 1948.*



# MINDSET Shift

Change how you view your body: shift from “attacking” illness to “supporting” your health.

Shifting your mindset helps you approach healing with patience and focus, allowing you to support your body instead of fighting against it.



# EAT Anti-Inflammatory Foods

- Lupus is an inflammatory condition; diet plays a key role in reducing inflammation.
- Eat more anti-inflammatory foods: leafy greens, berries, flaxseeds, walnuts.
- Cut out processed foods, soda, refined breads, cakes/cookies, refined sugars, and unhealthy oils that trigger inflammation.
- Eating anti-inflammatory foods can lead to less pain, more energy, and fewer flares.





## Top Anti-Inflammatory Foods

1. **Leafy Greens** (*kale, collards, arugula*)
  - Packed with vitamins, minerals, and fiber to support detoxification and reduce inflammation.
2. **Berries & Antioxidant-Rich Foods** (*blueberries, raspberries, pomegranates*)
  - Loaded with polyphenols and flavonoids that combat oxidative stress and support immune health.
3. **Omega-3 Rich Foods** (*nuts, seeds, fatty fish, algae*)
  - Essential fatty acids that help lower inflammation, improve heart health, and support brain function.
4. **Cruciferous Vegetables** (*broccoli, brussels sprouts, cauliflower, broccoli sprouts, microgreens*)
  - Rich in sulforaphane and fiber, promoting detoxification and cellular health.
5. **Hydrating Foods** (*cucumber, celery, watermelon*)
  - High water content helps maintain hydration, flush toxins, and support overall cellular health.

### 🌸 EAT SEASONALLY & MINDFULLY 🌸

Choose fresh, whole foods that align with the seasons to nourish your body, support digestion, and promote balance.

**Try This Today: Add one leafy green to your next meal or sip on cucumber-infused water for hydration!**

## 🧠 **The Gut-Immune Connection** 🧠

*Did you know 70-80% of your immune system lives in your gut?*

Research shows that gut health plays a key role in regulating inflammation, which is critical for people with lupus.

Imbalances in gut bacteria, known as dysbiosis (leaky gut), can trigger immune responses that affect lupus symptoms.



**Source:** <https://pmc.ncbi.nlm.nih.gov/articles/PMC9390838/>

## Gut Microbiome and Metabolites in Systemic Lupus Erythematosus: Link, Mechanisms and Intervention

Lingshu Zhang <sup>1</sup>, Pingying Qing <sup>1</sup>, Hang Yang <sup>1</sup>, Yongkang Wu <sup>2</sup>, Yi Liu <sup>1</sup>, Yubin Luo <sup>2</sup>

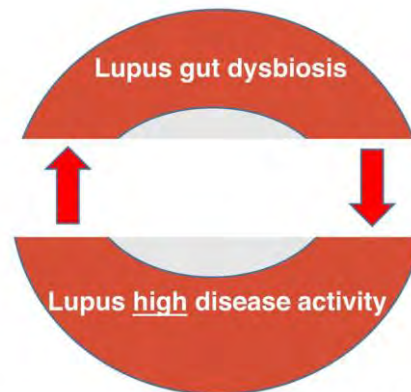
Affiliations + expand

PMID: 34335588 PMCID: PMC8319742 DOI: 10.3389/fimmu.2021.686501

### Abstract

Systemic lupus erythematosus (SLE), often considered the prototype of autoimmune diseases, is characterized by over-activation of the autoimmune system with abnormal functions of innate and adaptive immune cells and the production of a large number of autoantibodies against nuclear components. Given the highly complex and heterogeneous nature of SLE, the pathogenesis of this disease remains incompletely understood and is presumed to involve both genetic and environmental factors. Currently, disturbance of the gut microbiota has emerged as a novel player involved in the pathogenesis of SLE. With in-depth research, the understanding of the intestinal bacteria-host interaction in SLE is much more comprehensive. Recent years have also seen an increase in metabolomics studies in SLE with the attempt to identify potential biomarkers for diagnosis or disease activity monitoring. An intricate relationship between gut microbiome changes and metabolic alterations could help explain the mechanisms by which gut bacteria play roles in the pathogenesis of SLE. Here, we review the role of microbiota dysbiosis in the aetiology of SLE and how intestinal microbiota interact with the host metabolism axis. A proposed treatment strategy for SLE based on gut microbiome (GM) regulation is also discussed in this review. Increasing our understanding of gut microbiota and their function in lupus will provide us with novel opportunities to develop effective and precise diagnostic strategies and to explore potential microbiota-based

### Self-reinforcing Vicious Cycle



Current Opinion in Immunology

Source: <https://pubmed.ncbi.nlm.nih.gov/34335588/>

Source: <https://advancesinrheumatology.biomedcentral.com/articles/10.1186/s42358-021-00201-8>



## Learn to Say No (Reduce Stress)

- Stress is a major trigger for lupus flares.
- Protect your energy by setting boundaries and learning to say 'no' to avoid overcommitment.
- Prioritize rest and protect your well-being (e.g., work accommodations like FMLA).



## Move Your Body

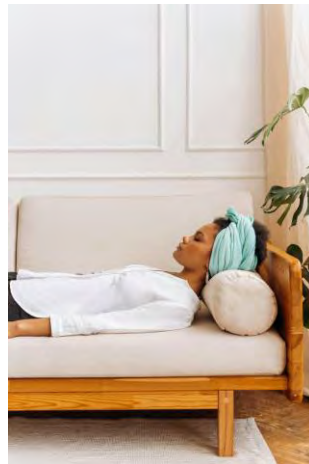
- Exercise helps reduce inflammation and support joint health.
- Start with gentle movement: walking, stretching, yoga.
- Connect with nature: Get fresh air and sunlight (safely).
- *Always consult your doctor to ensure your movement routine is safe for you.*



# Sleep Well

- **Prioritize Restful Sleep:** Aim for 7–9 hours each night to support recovery and healing.
- **Create a Calming Bedtime Routine:** Limit screen time, sip herbal tea, and practice breathing, prayer, or gentle stretching.

Quality sleep enhances your body's natural healing processes.

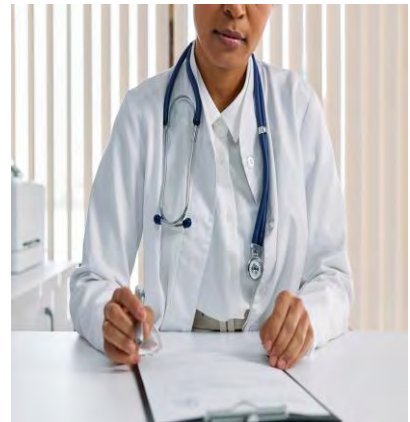


## Advocate for Your Holistic Wellness Journey

*with Your Care Team*

- **1. Build a Collaborative Care Team**  
Partner with integrative practitioners like functional medicine doctors, acupuncturists, and conventional providers to create a care plan that aligns with your body's needs, values, and long-term health goals.
- **2. Track Your Symptoms**  
Keep a detailed log of your symptoms to identify patterns and provide clear insights that guide your holistic care plan.
- **3. Understand Lab Results & Treatment Options**  
Ask clear questions about your lab results and treatment plans to ensure you understand how each approach supports your healing journey and overall well-being.

*Who's supporting your health journey right now?*



Holistic living is about making small and consistent choices that nourish your mind, body, and spirit. Start where you are, and let each step lead you to greater well-being.

Turn moments into momentum.





What's one small change you're inspired to try after today's talk?

# Let's Connect



[www.gennymack.com](http://www.gennymack.com)

hello@gennymack.com



HOLISTIC HEALING | LUPUS WARRIOR

**GENNY MACK**