

5 Key Elements of Exercise and Nutrition for Chronic Pain, Weight Loss, and Brain

Nutrition Keys	Systems Affected	Benefits or Reduces Symptoms
Omega-3 fats	Heart, brain, digestive system, immune system, blood clotting, brain development	Inflammation, weight loss, blood pressure, cardiovascular diseases, arthritis, diabetes
Antioxidants-fruits and vegetables	Brain, mitochondria - the cell's energy powerhouse	Detoxification from environmental toxins, stress reduction, Alzheimer's
Nutrients that support immune system and reduce inflammation	Immune system, lymphatic system, nervous system, joints	Inflammation, autoimmune diseases, asthma, fibromyalgia, chronic pain, weight loss
Nutrients that support digestion and bowel regularity	Digestion	Weight loss, colon, diabetes
Minerals and vitamins	Skeletal and muscular system, heart and brain	Body building, athletics, muscle strength, osteoporosis

Exercise Keys	Systems Affected	Benefits or Reduces Symptoms
Biomechanics for walking, sports, tai chi principles	Skeletal and muscular system, heart and brain	Movement disorders, chronic pain, diabetes, obesity
Balance training	Skeletal and muscular system, brain	Balance, chronic pain, MS, Parkinson's, foot problems, peripheral neuropathy
Bone strengthening	Skeletal and muscular system	Osteoporosis, balance, strength
Blood and lymph circulation qigong exercises	Immune system, brain, digestive system, hormones	Gastrointestinal disorders, cardiovascular, migraines, nervous system disorders
Meditation, sleep	Brain, heart, all systems	Stress reduction, anxiety, PTSD, chronic pain, inflammation, digestion, Alzheimer's

Nutrition and Exercise


Goals

- Optimize your diet
- Reduce inflammation
- Reduce toxicity
- Maintain bowel regularity
- Maintain bone health

Optimize your diet

Optimize your diet

HEALTHY EATING PLATE



Use healthy oils (like olive and canola oil) for cooking, on salad, and at the table. Limit butter. Avoid trans fat.

The more veggies—and the greater the variety—the better. Potatoes and french fries don't count.

Eat plenty of fruits of all colors.



STAY ACTIVE!

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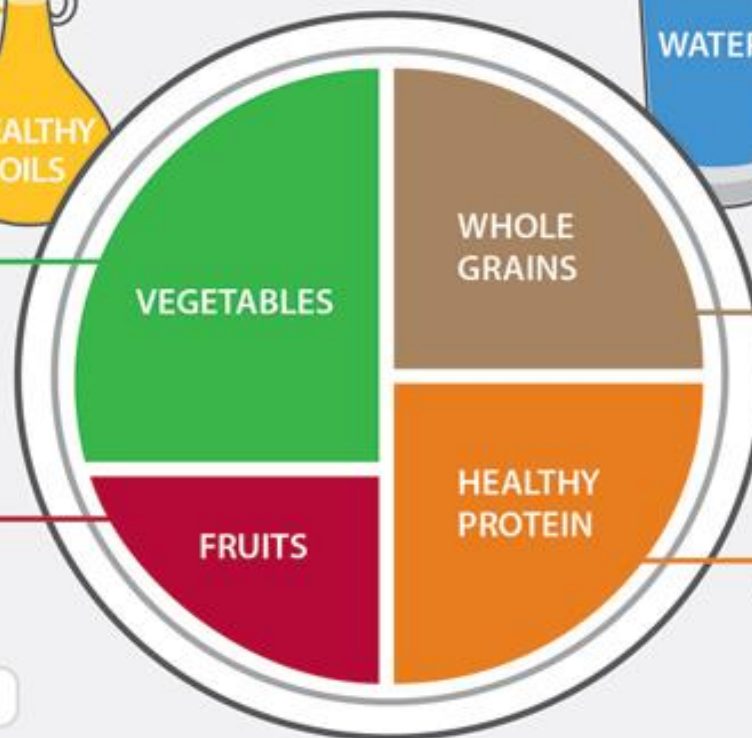
Harvard School of Public Health
The Nutrition Source
www.hsph.harvard.edu/nutritionsource



Drink water, tea, or coffee (with little or no sugar). Limit milk/dairy (1-2 servings/day) and juice (1 small glass/day). Avoid sugary drinks.

Eat whole grains (like brown rice, whole-wheat bread, and whole-grain pasta). Limit refined grains (like white rice and white bread).

Choose fish, poultry, beans, and nuts; limit red meat; avoid bacon, cold cuts, and other processed meats.



Harvard Medical School
Harvard Health Publications
www.health.harvard.edu



Diets versus Nutrition

- **Mediterranean**- Heart Health, Dementia, Chronic Pain,
 - Fish, nuts, seeds, fruits, vegetables, olive oil, poultry, minimize red meat, fresh unprocessed foods, foods from the sea, moderate dairy and wine
- **DASH**- Dietary Approach to Stop Hypertension
 - 8-10 servings fruits and vegetables, 2-3 low fat dairy, reduce sodium
- **Ketogenic Diet**- High fat, low carbohydrate, limited protein plus micronutrients remarkably reduces blood glucose in animal models of type 1 and type 2 diabetes and reverses diabetic nephropathy. Epilepsy, pain, ALS.
- **Record One Week of What You Eat**
- **BE NEW System – Fat Burning, Metabolism Boosting Program- Therapeutic life style change with nutrition and physical activity.**

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Reduce Inflammation

Key to reducing Chronic Pain, Brain Injury is to Reduce Inflammation

- Nutrition**
- Qigong Circulation Exercises**

Reduce Inflammation with Nutrition

- **Keep your blood sugar levels balanced.** Eat several small meals throughout the day. Glucose imbalance symptoms include fatigue, irritability, dizziness, insomnia, depression, excessive sweating (especially at night), poor concentration and forgetfulness. In addition, excess sugar in the blood contributes to inflammation. **Reduce craving is key message.**
- **Take in antioxidants from fresh fruits and vegetables.** Alcohol is a toxin. Antioxidants combat inflammation and support your body's detoxification pathways.
- **Increase omega 3 fats.** The omega-3's are **anti-inflammatory** which may be beneficial as brain-inflammation is a feature of neurodegenerative disorders like PD, Alzheimer's, dementia, stress-related and stroke. Mood problems are also a common feature and there has been a lot of research into the **mood-boosting properties** of the omega-3 essential fats. A small placebo-controlled pilot trial reported significantly greater improvement of depression in Parkinson's patients treated with omega-3 fatty-acid supplementation versus placebo. The precise cause(s) of Parkinson's Disease is unknown, but there is consensus that an inflammatory event or episode is involved in the initiation of neurodegeneration.
- Aloe Vera is an excellent supplement to reduce inflammation, try Body Balance.



Reduce inflammation by increasing omega fats.

Omega-3 Fatty Acids

- Group of polyunsaturated fatty acids
- Essential – must be obtained in the diet
- Component of cell membranes
- Mediate inflammation, regulate blood clotting and contraction/relaxation of arterial walls
- May be helpful in relieving symptoms in rheumatoid arthritis and age-related macular degeneration

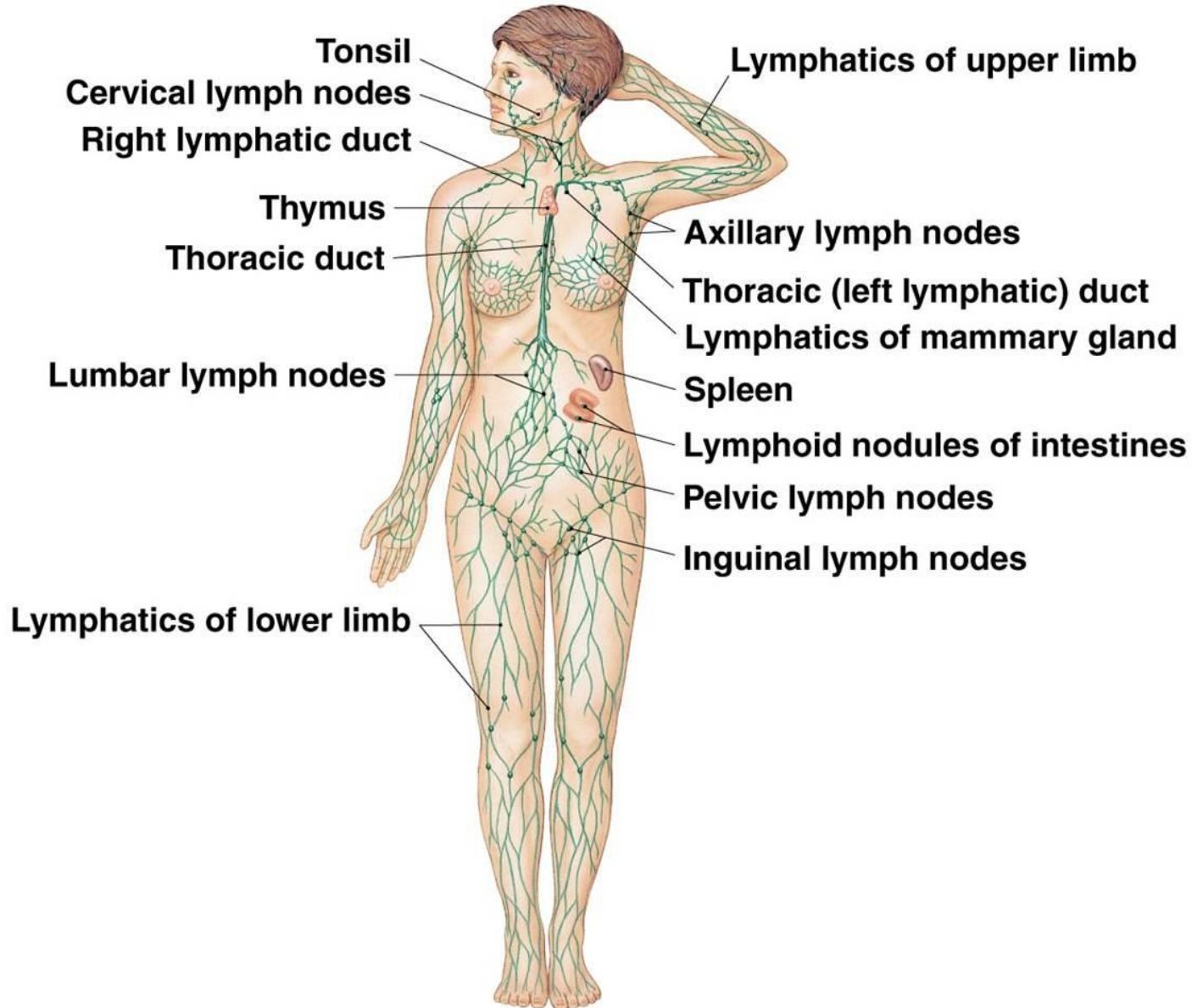
World's Healthiest Foods ranked as quality sources of omega-3 fats

Food	Serving Size	Cals	Amount (g)	DV (%)	Nutrient Density	World's Healthiest Foods Rating
Flax Seeds, ground	2 tbs	74.8	3.19	132.9	32.0	excellent
Walnuts	0.25 cup	163.5	2.27	94.6	10.4	excellent
Salmon	4 oz-wt	244.9	1.47	61.2	4.5	very good
Sardines	3.20 oz-wt	188.7	1.34	55.8	5.3	very good
Beef, grass-fed	4 oz	175.0	1.10	45.8	4.7	very good
Cloves	2 tsp	13.6	0.18	7.5	9.9	very good
Soybeans	1 cup cooked	297.6	1.03	42.9	2.6	good
Halibut	4 oz-wt	158.8	0.62	25.8	2.9	good
Scallops	4 oz-wt	127.0	0.41	17.1	2.4	good
Shrimp	4 oz-wt	112.3	0.37	15.4	2.5	good
Tofu	4 oz-wt	86.2	0.36	15.0	3.1	good
Tuna	4 oz-wt	157.6	0.33	13.8	1.6	good
Cod	4 oz-wt	119.1	0.32	13.3	2.0	good
Winter Squash	1 cup baked	75.8	0.19	7.9	1.9	good
Collard Greens	1 cup cooked	49.4	0.18	7.5	2.7	good
Spinach	1 cup cooked	41.4	0.17	7.1	3.1	good
Raspberries	1 cup	64.0	0.15	6.2	1.8	good
Kale	1 cup cooked	36.4	0.13	5.4	2.7	good
Mustard Seeds	2 tsp	20.3	0.11	4.6	4.1	good
Romaine Lettuce	2 cups	16.0	0.11	4.6	5.2	good
Turnip Greens	1 cup cooked	28.8	0.09	3.8	2.3	good
Strawberries	1 cup	46.1	0.09	3.8	1.5	good
Brussels Sprouts	1 cup raw	37.8	0.09	3.8	1.8	good
Miso	1 tbs	34.2	0.08	3.3	1.8	good
Green Beans	1 cup raw	31.0	0.07	2.9	1.7	good
Summer Squash	1 cup raw	18.1	0.06	2.5	2.5	good

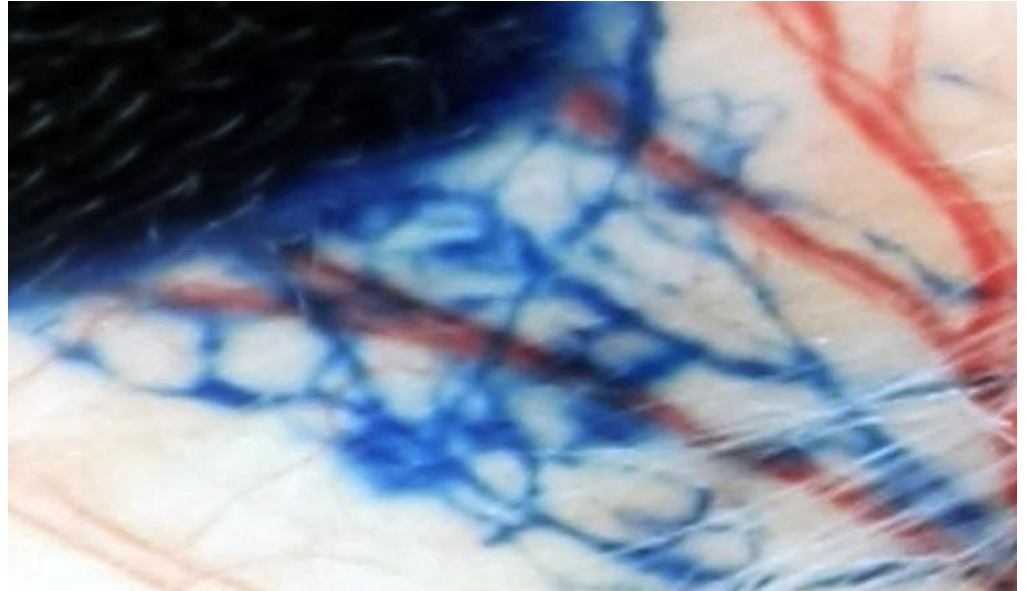
Reduce Inflammation with Qi Circles

**Blood, Lymph and Energy
Circulation Exercises**

Lymphatic System



Body Wraps



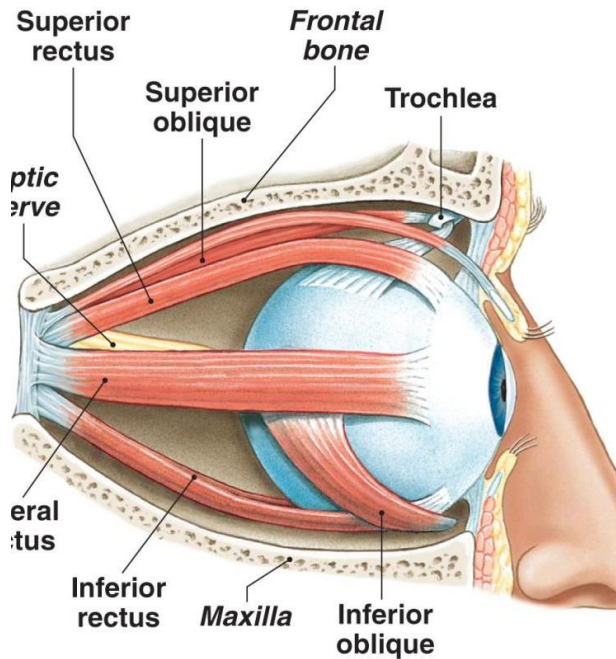
Lymph drainage in ear of mouse. Red are BV, blue is lymph.

- Detoxify the body
- Soothe and relax the mind and body
- Promote healthier, smoother skin
- Potential reshaping, and a more toned and firmed appearance

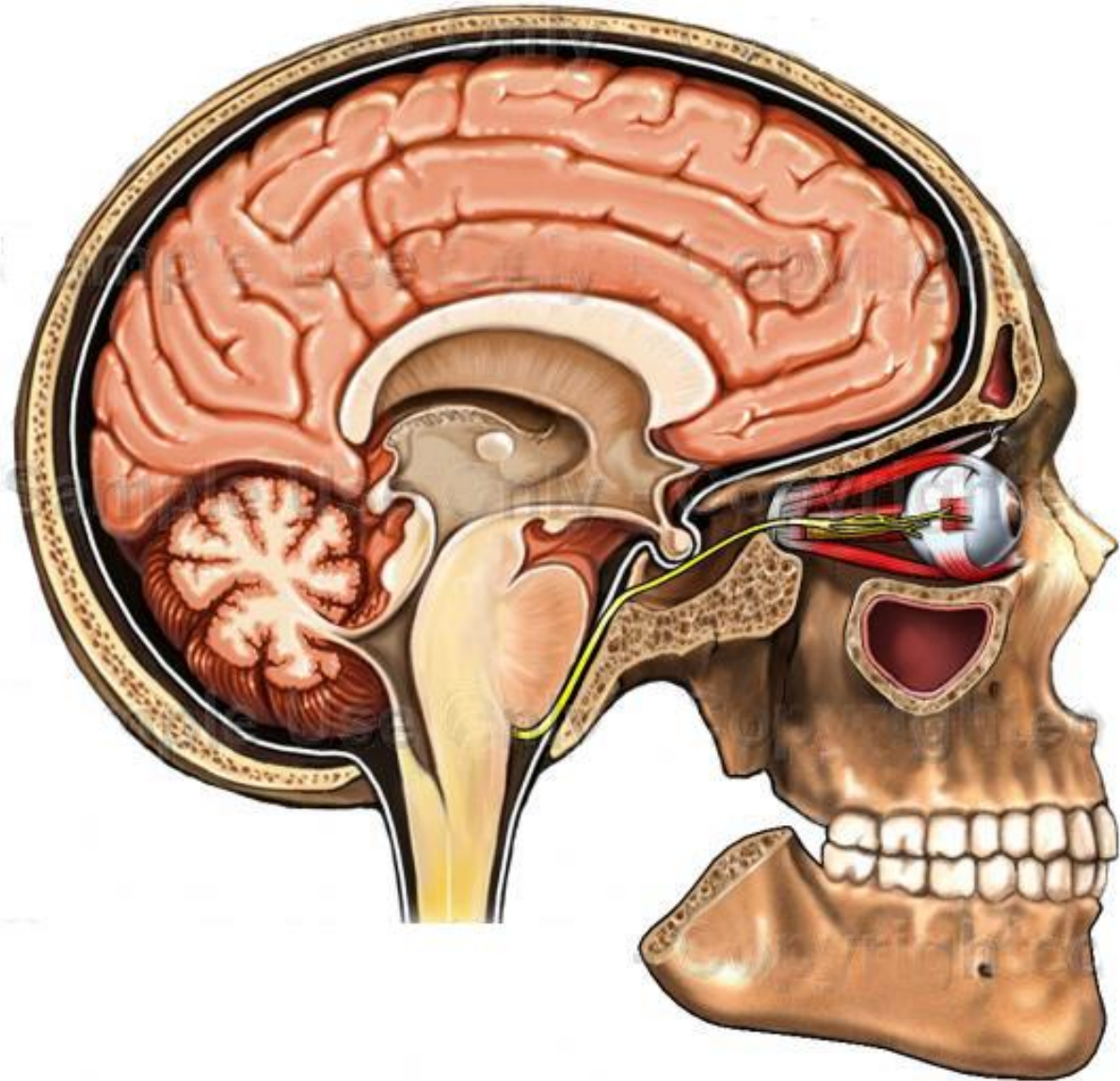
Reduce Stress with Visualization/Meditation, Mindfulness, Relaxation



Brain Circulation

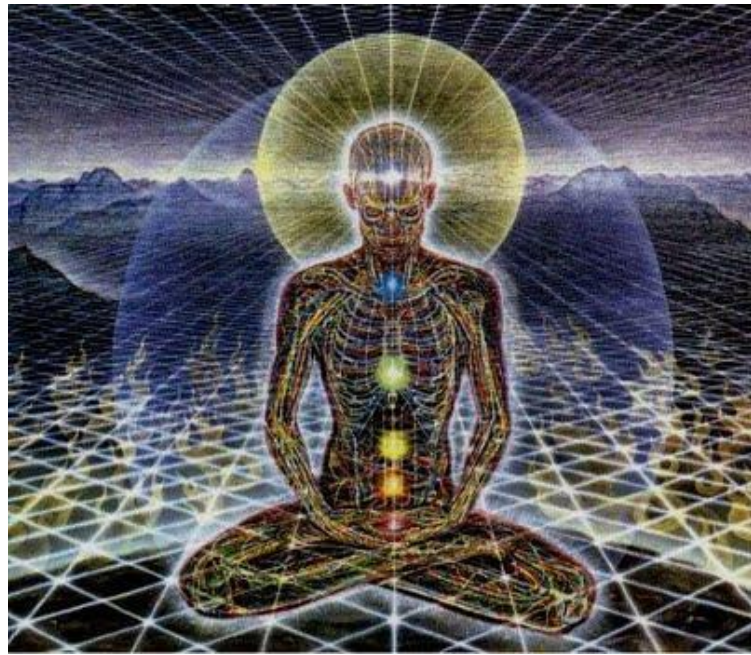
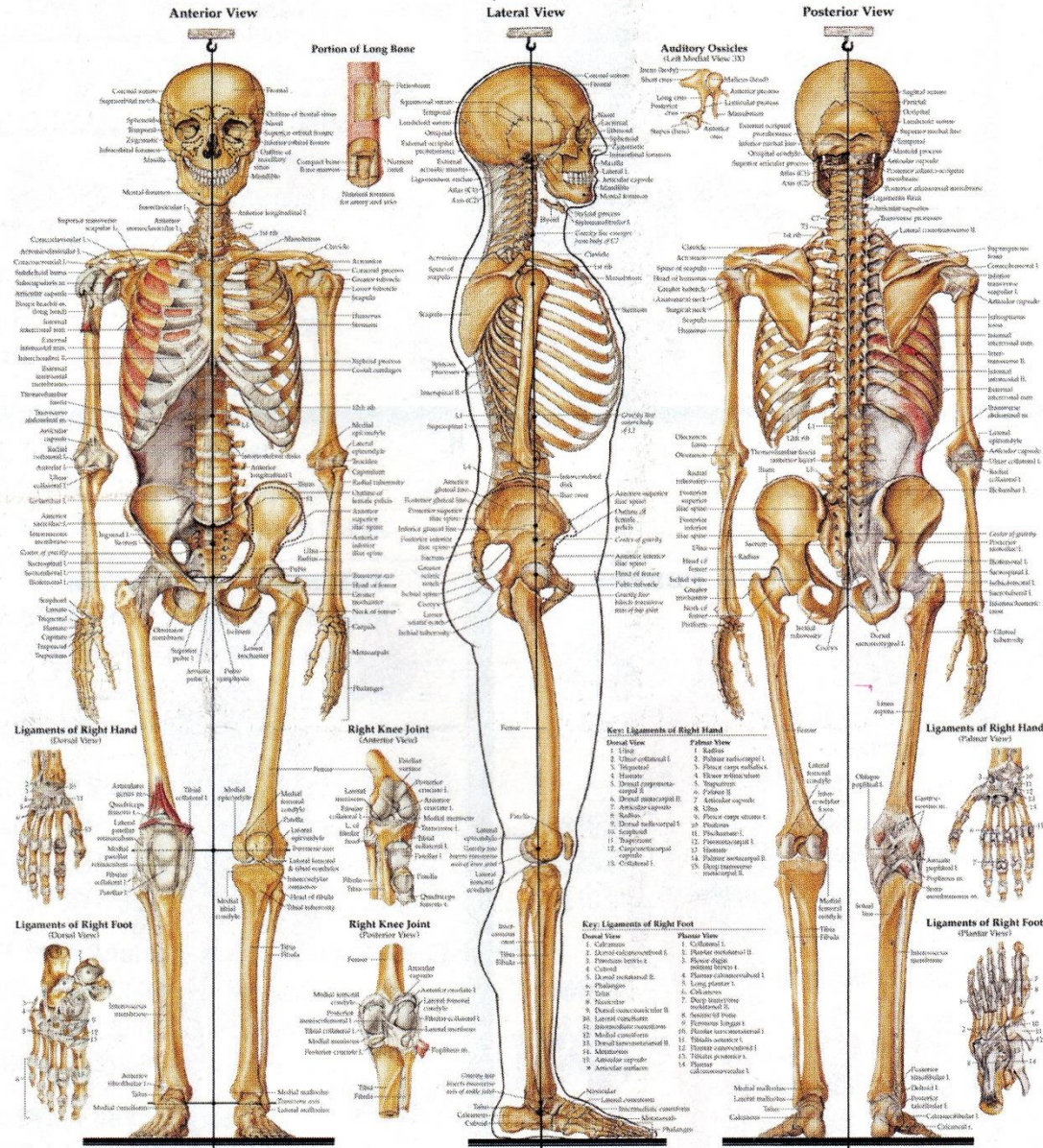


(a) Lateral surface, right eye



Central Equilibrium Line – Zhong Ding

THE SKELETAL SYSTEM



Key Abbreviations:
 Ligament—L
 Ligament—M
 Muscle—m
 Nerve—n
 Bone—B
 Cartilage—C
 Spine—S
 Tendon—T
 Joint—J
 Canal—C
 Foramen—F
 Foramen—F
 Canal—C

Reduce Toxicity to Reduce Inflammation

- **Avoid environmental toxins.** Pesticides and herbicides in foods, in the environment, as well as occupational and household chemicals are implicated.
- Toxic proteins build up in neurodegenerative disorders. Copper and iron in Alzheimer's causes tau protein to aggregate, heavy metals in general.
- **Take in antioxidants from fresh fruits and vegetables.** Alcohol is a toxin. Antioxidants combat inflammation and support your body's detoxification pathways. Antioxidants help rid body of harmful free radicals. (Consider supplementing with Vitali-C Plus)
- **Identify any food intolerances** and avoid these foods, or you could avoid some of the key culprits (gluten, casein, dairy, soya, yeast) for a trial period. (poor digestion, constipation, bloat, allergies, asthma, skin, gout)
- **Body Wraps** can remove toxins directly from skin.

Avoid environmental toxins.

EWG's 2012 *Dirty Dozen*™ *Plus*

Shoppers' Guide to Pesticides in Produce™

Buy these organic

■ Domestic
■ Imported

- Apples
- Bell Peppers
- Blueberries**
- Celery
- Cucumbers
- Grapes
- Lettuce
- Nectarines**
- Peaches**
- Potatoes
- Spinach
- Strawberries
- Plus**
- Green Beans**
- Kale/Greens**

Pesticides residues of special concern.
Questions? foodnews.org

EWG's 2012 *Clean Fifteen*™

foodnews.org

Shoppers' Guide to Pesticides in Produce™

Lowest in pesticides

- Asparagus**
- Avocado**
- Cabbage**
- Cantaloupe**
- Corn**
- Eggplant**
- Grapefruit**
- Kiwi**
- Mangoes**
- Mushrooms**
- Onions**
- Pineapples**
- Sweet Peas**
- Sweet Potatoes**
- Watermelon**



Antioxidants

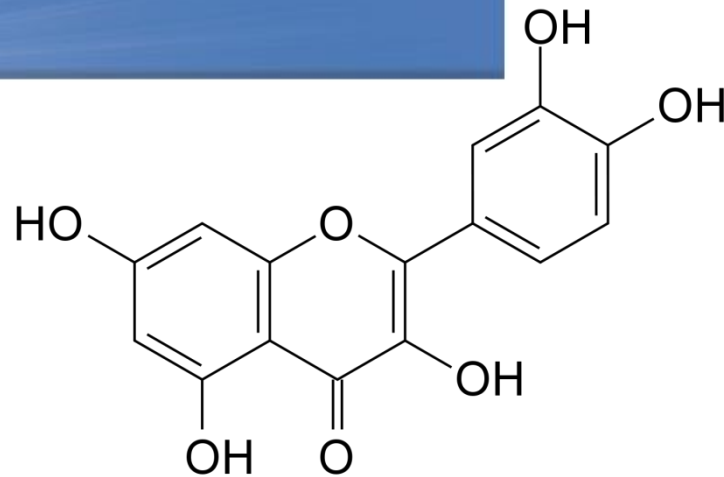
- Very small chemical changes to dietary **flavonoids** cause very large effects on the human immune system.
- The protective effect of **berries** against inflammation has been documented in many studies. Diets supplemented with blueberries and strawberries have also been shown to improve behavior and cognitive functions.
- Eating whole **fruits** linked to lower risk of Type 2 diabetes.
- **GREEN TEA LEAVES**
Polyphenols found in green tea has the ability to protect brain cells, inhibit the growth of cancer cells without harming healthy tissues. It also may be useful in lowering LDL cholesterol levels.

Take in antioxidants from fresh fruits and vegetables.

Colorful foods contain color molecules that are ANTIOXIDANTS. They are BIOFLAVONOIDS or POLYPHENOLS (many Oxygen/Hydrogen groups attached to a carbon ring structure). They come from plants so they are called phytochemicals.

Phytochemicals

- Beta carotene
- Ascorbic acid (vitamin C)
- Vitamin E
- Folic acid



Quercetin -Apples, onions, teas, red wine

Anthocyanidins -Purple grapes, eggplant, red cabbage, radishes, berries, strawberries



In Vitali-C

Maintain bowel regularity

Maintain bowel regularity

- **Reduce Stress with visualization/meditation, Exercise-Walking, Tai Chi, Qigong**
- **Chew your food 100 times.**
- **Soluble Fiber:** Dissolves in water, forms gel-like substance. Slows Gastric Emptying. Soluble fiber-containing foods take longer to digest. Reduces cholesterol production in liver. Good sources include oats, oatmeal, oat bran, beans, peas, rice bran, barley, citrus fruits, strawberries, apple pulp.
- **Insoluble Fiber:** Promotes motility and increased stool bulk. Sources include whole-wheat flour, wheat bran, nuts, beans and vegetables.
- Drink plenty of **fluid**.
- **Magnesium** is a mineral that acts as a natural relaxant. Some indications of deficiency are: muscle tremors or spasm, muscle weakness, insomnia or nervousness, high blood pressure, irregular heartbeat, constipation, hyperactivity, depression. Magnesium's role in supporting good sleep may also be quite important here, since many people with Parkinson's experience poor sleep patterns. (Osteo Pro Care is a great source of Mg)



Bones, Biomechanics, and Balance

Maintain Bone Health with Nutrition

Risk factors for osteoporosis include older age, low body weight, smoking, excessive alcohol intake, limited exposure to sunlight, inadequate intake of vitamin D and calcium and lack of weight-bearing exercise, common in mobility disorders.

- **Calcium:** Milk and milk products are the richest; there are other calcium-containing foods e.g., tofu, calcium-fortified soy-based beverages, orange juice and dark leafy greens, dulse. (Osteo ProCare is a great source of Ca and Vit D)
- **Vitamin D,** in the brain, enhances BDNF – a growth hormone for neurons that is anti-inflammatory. This nutrient is mainly provided by the action of sunlight on the skin. **Vit. D Levels have been associated with severity of symptoms in PD and MS.**



Minerals and Vitamins

- Liquid Whole-Food Nutrition
- Rich in ultra-trace minerals and phytonutrients
- Combines all three varieties of sea vegetables; red, green, and brown
- Cold-processed to preserve nutritional profile
- Promotes increased energy
- Supports overall wellbeing
- Daily foundation for optimum health

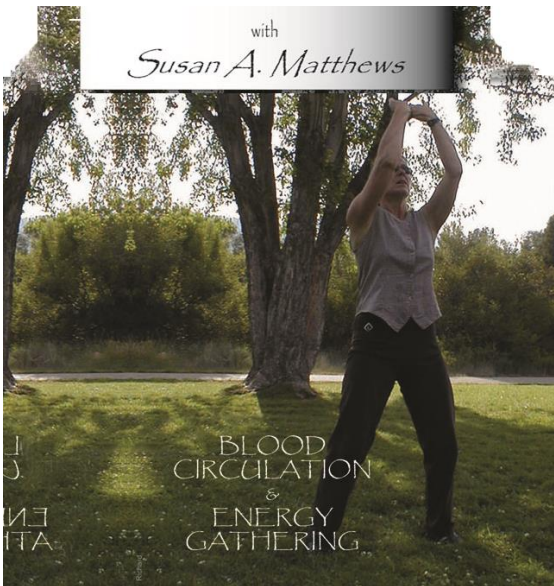
The pairing of SeaNine with Aloe is dynamic. Aloe vera alone contains over 75 nutrients and 200 active compounds, including 12 vitamins, 20 minerals, and 18 amino acids. The inner leaf fillet Aloe vera used in Body Balance is carefully harvested under low temperatures to protect the key polysaccharides.



Biomechanics and Balance

- **Exercise regularly.** Movement with mindfulness, walking, tai chi, qigong, swimming, every brisk minute counts. Rhythmic, left/right cycling for the brain and for balance.
- **Central Equilibrium Line – Zhong Ding**
- **Posture.** Upright posture in gravity builds bones; bent posture weakens bones, causes pain, and degrades **balance**.

Compliance



- Small effort can get big rewards. One day per week may be enough.
- Set goals.
- Motivation, imagine a future enjoyable event.

Summary

Relax

Visualize Energy

Visualize Zhong Ding

Eat for Super-Nutrition

Detox

Move – Tai Chi - Walk