

Complementary and Alternative Therapies for Arthritis

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Definition

- Complementary and Alternative medicine includes all those types of medicine that, when mentioned by a patient, elicit a blank look from their physicians, and cause the physician to leave the room in a hurry.

NCCAM Definition

- Complementary and alternative medicine, as defined by the National Center for Complementary and Alternative Medicine (NCCAM), is a group of diverse medical and health care systems, practices, and products that are not presently considered to be part of conventional medicine.

Classification of Alternative medical modalities

- Alternative medical systems
- Mind body interventions
- Biologically based therapies
- Manipulative and body based therapies
- Energy therapies

Usage

- 4 out of 10 Americans used CAM for chronic conditions
- 629 million visits with \$27 billion being spent in year
- Estimated that 60-90% of patients with Arthritis have used CAM.

CAM usage in SLE

- About 65% of SLE patients have been reported to have used CAM in some studies
- Lupus patients who use CAM tend to be younger and better educated
- They seem to report poorer self-rated health status, and less satisfaction with healthcare. However, when objective measures of disease activity are looked at, these patients are not sicker.

CAM therapies used by lupus patients

- Relaxation techniques
- Massage therapy
- Herbal medicine
- Lifestyle diets
- Self-help groups
- Imagery
- Folk remedies
- Spiritual healing
- Chiropractic
- Megavitamin therapy
- Homeopathy
- Energy healing
- Acupuncture
- Hypnosis
- Copper bracelets/magnets

Topics of discussion

- Difference between approaches
- How does one choose- Role of Science
- CAM therapies that have some clinical trial data for use in lupus patients
- Other therapies
- How does one choose- the way forward
- Resources

Difference between approaches

- Case 1: Ms. A who has SLE
- Naturopath's opinion
- Traditional Chinese medicine
- Rheumatologist's opinion

How does one choose-the role of science

- 1992- establishment of office of alternative medicine
- The Randomized Controlled Trial- Gold standard of measurement
- Criticism of this approach
 - Only western medicine can be tested using this approach
 - What about experience gained over thousands of years?
 - How do you deal with thousands of therapies out there which have no scientific data, but are popular or have shown benefit in someone you know?

Evidence Based Medicine

- Grades of evidence
 - Case reports
 - Case series
 - Case controlled studies
 - Cohort studies
 - Randomized controlled trials

Nutritional studies

- Protein and caloric restriction has beneficial effects
 - Severe caloric restriction delays the onset of glomerulonephritis in rats
 - Protein restriction especially of casein, phenylalanine, and tryptophan have a beneficial effect on lupus in rats
 - diets rich in saturated fats and omega-6 fatty acids, and L-canavarine (alfalfa) have a deleterious effect on lupus in mice
 - Diets deficient in zinc were found to be beneficial in lupus rats
 - No human studies to date have confirmed these findings

Nutritional studies

- Vitamin E has been advocated for lupus patients since the 1940's.
- Several positive studies have been reported
- A closer look at the literature shows several negative studies as well
- A recent meta-analysis of literature showed that high dose vitamin over 400IU per day was associated with a higher mortality and higher incidence of heart attacks and strokes.

Nutritional studies

- Vitamin A has been reported to have beneficial effects in SLE
- 3 patients with skin lesions were given vitamin A in high doses. In 1 week all lesions cleared up
- Other researchers have reported an improvement in immune function parameters with vitamin A supplementation
- Caution advised to patients using vitamin A from animal sources as these are fat soluble and can accumulate and cause toxicity

Nutritional studies

- Selenium supplementation has been reported to be beneficial in lupus mice.
- No human studies
- Caution advised as excess selenium can cause diarrhea, vomiting, hair loss, skin lesions and nervous system dysfunction

Omega 3 fatty acids



Fats and fatty acids

Saturated fats

Animal fats, butter, lard

Unsaturated fats

Polyunsaturated fats

Monounsaturated fats

Omega 3 fatty acids

Eicosapentanoic acid:
fish, shellfish

Docosahexanoic acid:
fish, shellfish

α linolenic acid:
flaxseed, soybean,
walnut, rapeseed oils

Omega 6 fatty acids

Corn oil
Safflower oil
Sunflower oil

Omega 9 fatty acids

Olive oil
Avocados
Peanuts
Almonds

Metabolic pathways of Omega 3 and Omega 6 fatty acids

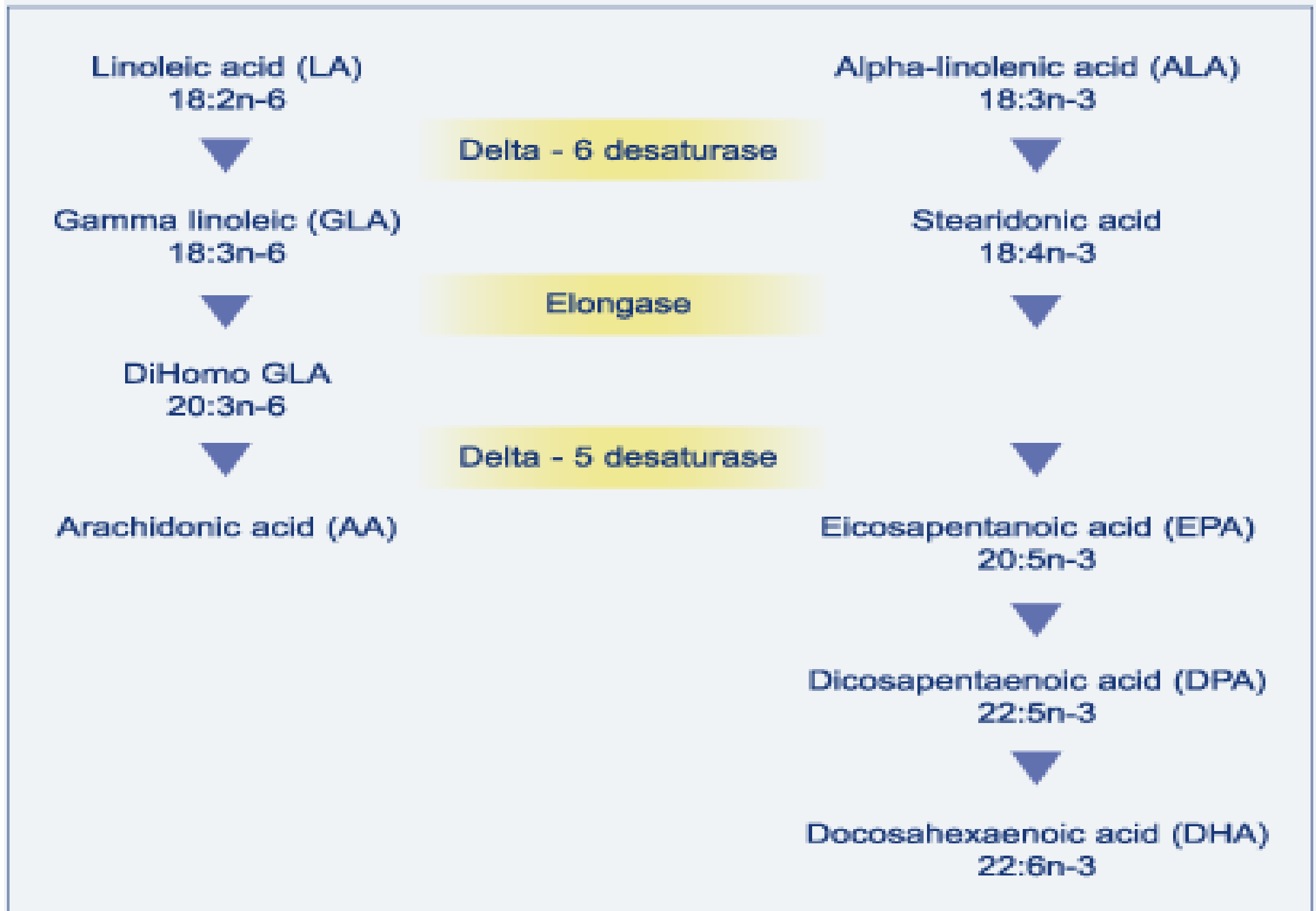
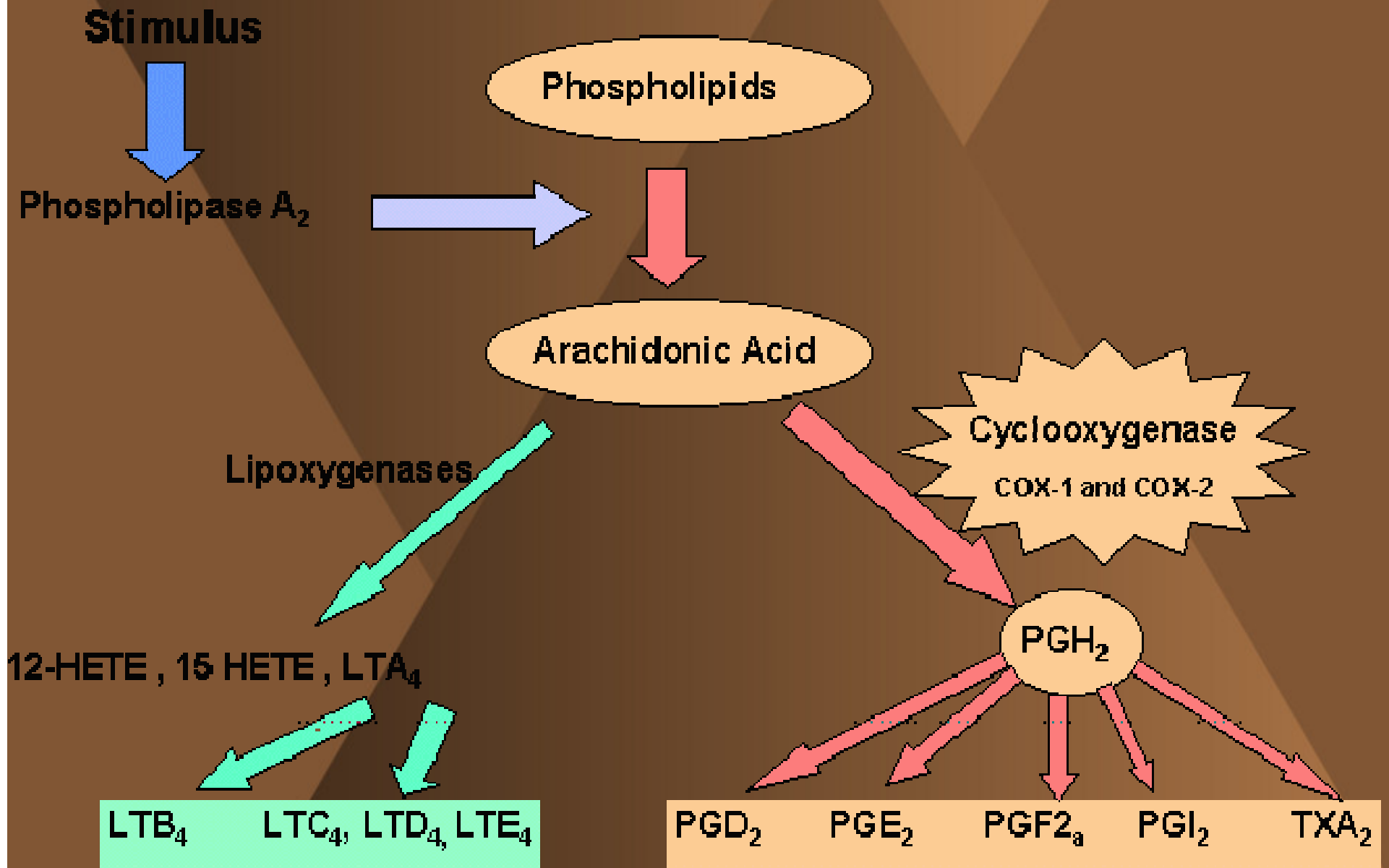


Figure 2 : Biosynthesis of eicosanoids



Foods That are Rich in Omega-3 Fatty Acids

- **Fatty Fish such as Salmon, Sardines, Mackerel, Herring, Trout and Pilchards, Bluefish, Tuna, Halibut**
- **Canola Oil, Flaxseed Oil, Hemp Oil, Soybean Oil, Walnut Oil**
- **Walnuts, Flaxseeds, Pumpkin Seeds**
- **Soy and Tofu**
- **Green Leafy Vegetables**
- **Venison and Buffalo**
- **Some eggs are enhanced with omega-3s**



Omega-3 in lupus

- Majority of mice studies show that fish oils retard the development of lupus in mice.
- Human studies show only modest results
- In 1 RCT, 8/17 lupus patients given 6-8 grams of fish oil per day improved compared with 2/17 given placebo
- In 2 other uncontrolled studies, patients given large doses of fish oil, did not show any improvements in DNA, immune complexes, or renal parameters
- In a double blind study of 26 lupus patients who were followed for 2 years, there was no improvement in renal parameters or DNA antibodies. However, lipids did improve in the treated group.
- In a small uncontrolled study of 9 patients with lupus, 30 grams of flax seed oil seem to confer some beneficial effects on renal parameters and atherogenesis.



Tripterygium Wifordii Hook F (TWHf)

- Herb known as “thunder god vine”
- Used for over 2000 years in Chinese medicine
- Thousands of patients have reportedly been successfully treated in China.
- Been used in 5 open trials- total of 249 patients with lupus
- Improved fever, rash, fatigue, lymphadenopathy and laboratory abnormalities
- Some serious side effects such as gastrointestinal upset, infertility, and suppression of lymphocyte proliferation. A young man reportedly died from cardiac toxicity, and teratogenicity has also been reported.

DHEA

- Naturally occurring adrenal steroid that is secreted mainly as DHEA-sulfate
- Works as a substrate for androgens and estrogens.
- Also has immunomodulatory effects, primarily upregulation of IL-2 and downregulation of IL-6

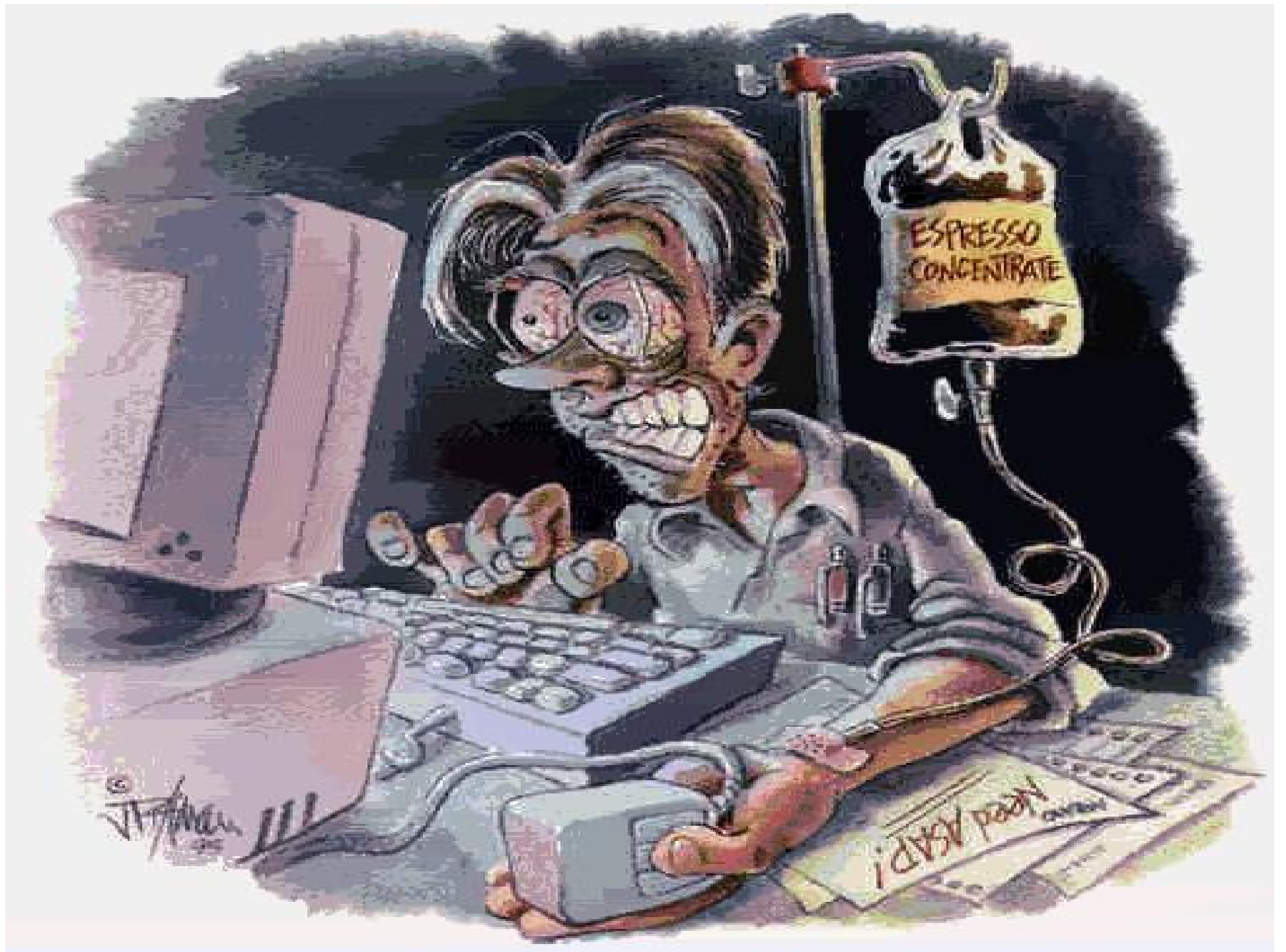
DHEA

- Van Vollenhoven RF, Engleman EG, McGuire JL. Dehydroepiandrosterone in systemic lupus erythematosus. Results of a double-blind, placebo-controlled, randomized clinical trial. *Arthritis Rheum* 1995; 38:1826-31.
- Petri MA, Lahita RG, Van Vollenhoven RF, et al. Effects of prasterone on corticosteroid requirements of women with systemic lupus erythematosus: a double-blind, randomized, placebo-controlled trial. *Arthritis Rheum* 2002; 46:1820-9.
- Chang DM, Lan JL, Lin HY, Luo SF. Dehydroepiandrosterone treatment of women with mild-to-moderate systemic lupus erythematosus: a multicenter randomized, double-blind, placebo-controlled trial. *Arthritis Rheum* 2002; 46:2924-7.

Dehydroepiandrosterone treatment of women with mild-to-moderate systemic lupus erythematosus: a multicenter randomized, double-blind, placebo-controlled trial.

- Large RCT, multi-center.
- 200mg prasterone per day
- 381 women enrolled
- 86/147 in the prasterone group v/s 65/146 in placebo group had either stabilization or improvement in their disease
- Muscle aches and oral ulcers were less frequent in the prasterone group
- The lipid profile improved significantly and complement levels decreased
- Acne and hirsutism were the most frequent side effects, but these were not severe
- In my practice I use it for symptoms of severe fatigue and for cognitive difficulties

Arthritis Rheum 2002; 46:2924-7



Fatigue in systemic lupus erythematosus: a randomized controlled trial of exercise

- 93 patients with lupus were randomly assigned to a graded exercise program, relaxation program or usual care
- 16/33 in the exercise group were “very much better”, compared with 8/29 in relaxation group and 5/32 in the usual care group.
- These results were statistically significant

Tench, CM. Rheumatology, 2003 - 171.66.120.158

The Effects of Daily Stress and Stressful Life Events on the Clinical Symptomatology of Patients With Lupus Erythematosus

- 46 patients with lupus were followed for 6 months. They kept a daily diary of events and had measurements of their lupus activity through complement and DNA levels
- High intensity stressful events were not associated with an increase in symptomatology
- On the other hand, daily stress was associated with worse symptoms and when objective measures were performed, a worsening of disease activity was noted.

Psychosomatic Medicine 66:788-794 (2004)

Treatment of systemic lupus erythematosus by acupuncture. A preliminary report of 25 cases.

- Acupuncture cannot alter the course of the disease, though for some patients, certain symptoms can be helped.

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Conclusions- Choosing the right practitioner

- Get an accurate diagnosis
- Ask your doctor.
- Get information.
- Check references.
- Check qualifications.
- Consider the cost.

Conclusions- Danger signs about a practitioner

- promises you can be "cured."
- tells you to stop or decrease prescription medications.
- advises a severely restricted diet
- insists you pay in advance for a series of expensive treatments
- cannot show you a license or a certificate from an approved school or organization in his or her specialty
- advises you to keep the treatment a secret from your doctor, or anyone else

Resources for more information

- Arthritis foundation: www.arthritis.org
- National Center for Complementary and Alternative Medicine: www.nccam.nih.gov
- The arthritis foundation's guide to alternative therapies
- Johns Hopkins review of alternative therapies for arthritis