

# The Management of Chronic Pain



On-line 16<sup>th</sup> October 2021

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## You will learn

- How to distinguish chemical pain from mechanical pain.
- All about the 5 chemicals that drive the inflammatory process
- All about the 7 chemicals that sensitise the nociceptors
- Nutritional intervention to modulate the inflammatory process
- Common foods that create inflammation
- Tissue repair and regeneration.
- Nutritional intervention to enhance synovial fluid production, collagen, elastin and cartilage
- Nutritional management of the common inflammatory joint diseases of rheumatoid and gouty arthritis
- Nutritional management of osteoporosis

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25<sup>th</sup> September 2021

More than 15% of people in England take five or more medicines a day.

Public Health England

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Nearly 12 million people – about one in four adults in England – are taking medicines for pain, depression or insomnia, which they can find hard to stop, according to a government review. Peter Burkinshaw at PHE, one of the authors said: “The long-term prescribing of opioid pain medicines and benzodiazepines is not supported by guidelines and is not effective.” Prof Helen Stokes-Lampard, the chair of the Royal College of GPs, said family doctors needed better access to alternatives to drug treatment. Most prescriptions were short-term and opioids were on the decline, but the review showed “the severe lack of alternatives to drug therapies for many conditions – and where effective alternatives are known and exist, inadequate and unequal access to them across the country”, she said.

### Millions of people in England taking medicines they can find hard to stop

The Guardian 10 September 2019

NHS must take action to avoid US-style opioid crisis, says co-author of government study



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**Pain** is the number one symptom that people complain of when visiting any health care practitioner.

Followed by –

**Lack of energy / stamina**

**Memory issues**



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## **Functional Testing**

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## **Functional Testing**

**Palpate the intensity of the Pain**

**Range of motion – active and passive**

**Pulse rate / Pupil constriction or dilation**

**Blood pressure**

**Vital capacity / Peak flow**

**O2 saturation**

**Body temperature**

**Leg / Arm length and rotation**

**Manual muscle testing**

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## **Kinesiology Manual Muscle Testing**

- 1. Therapy Localisation (a nociceptor challenge. Tells us something is wrong but not what)**
- 2. Challenge (one vector challenges then mechanical. None or all vectors challenge them chemical)**
- 3. Biomarkers (from strength or from weakness)**

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**There are 5 main neurological sensory receptors.**

1. Mechanoreceptors 90%
2. Nociceptors – transmit about inflammation
3. Thermoreceptors – transmit about temperature
4. Chemoreceptors – transmit about O<sub>2</sub> / CO<sub>2</sub> etc
5. Photoreceptors – transmit about light

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**Nociception** refers to the reception of signals in the CNS evoked by activation of specialised sensory receptors that provide information about tissue damage.

Not all noxious stimuli that activate nociceptors are necessarily experienced as **pain**.

Maybe heat, swelling, redness, loss of use.

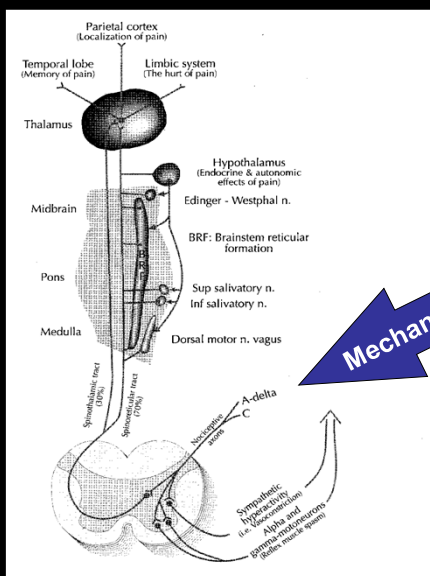
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Noci comes from the Latin “Nocere” which means to injure.



Injury is damage inflicted to the body by an external force.

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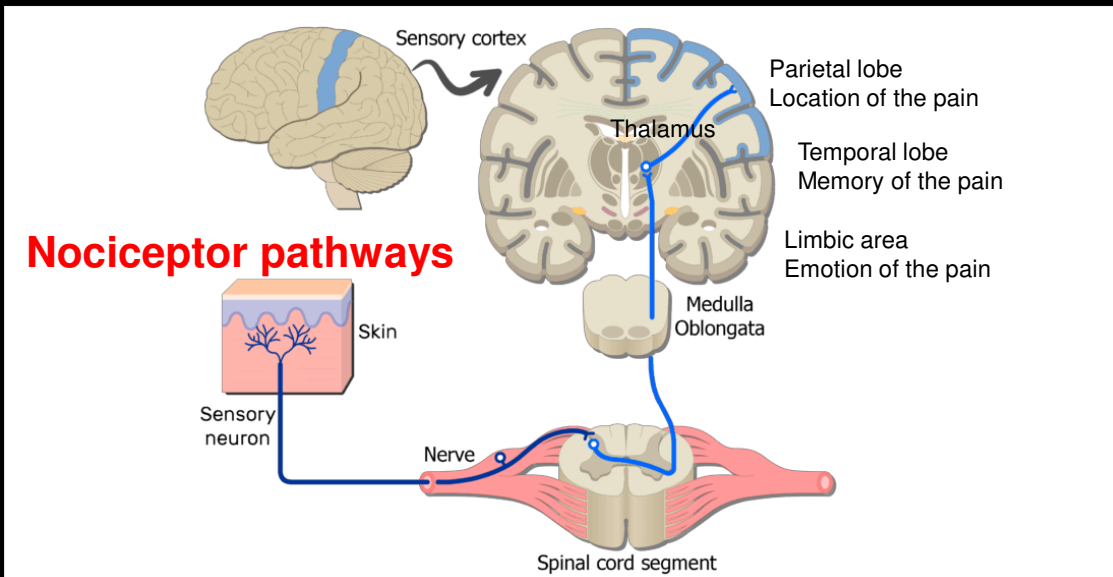
## Nociceptor pathways

**Mechanical and Chemical irritation**

*Mechanical pain varies with posture.  
Chemical pain is continuous.*

From Chiropractic and Pain control. Drs systems

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**Nociceptors are located in every tissue except**

1. Articular cartilage
2. Inner two thirds of the annulus fibrosus
3. Nucleus pulposus
4. Brain

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**Nociceptor** activity may result in

1. Sympathetic hyperactivity (vasoconstriction)
2. Reflex muscle spasm
3. Autonomic concomitants which may be vasomotor, trophic, visceral or metabolic in nature.
4. Pain

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**Inflammation** is the term given to describe the biological response that occurs as a result of tissue injury.

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## **It is initiated by**

- 1. Trauma**
- 2. Allergic immunological reactions**
- 3. Microbial infections**
- 4. Chemical toxins, toxic metal and ionising radiation**
- 5. Hypoxia**
- 6. Nutritional deficiency e.g. Essential fatty acid deficiency**

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## **The Chemicals that Sensitize the Nociceptors**

**Histamine**

**Bradykinin**

**Serotonin**

**Prostaglandins E2**

**Leukotriens B4**

} **Prostanoids**

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## The chemicals that drive the inflammatory process

Histamine

Bradykinin

Serotonin

Prostaglandins E2

Leukotriens B4

+ *LACTIC ACID* ★

Potassium excess  
or deficiency ★

} Prostanoids

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## Inflammation

Alteration to the microcirculation and accumulation of inflammatory cells are the hallmarks of inflammation.

**PAIN, REDNESS, OEDEMA, HEAT, LOSS OF USE.**

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**Acute inflammation** is the healing process.

It serves to destroy, dilute and wall off the injurious agent but leads to healing by repair and remodelling of damaged tissue.

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**Chronic inflammation** is unresolved acute inflammation.

It is always destructive to tissues and is equated with disease.

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## **Inflammation is divided into three stages**

1. The acute inflammatory phase (first 72 hours)
2. The repair phase (48 hours to 6 weeks)
3. The remodelling phase.

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## **Challenge for Inflammation**

1. Strong muscle goes weak when challenged with high sensitivity **C. Reactive Protein 6x.**
2. A weak associated muscle strengthens when challenged with high sensitivity **C. Reactive Protein 6x.**

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## **hsCRP** **(High Sensitivity C. Reactive Protein)**

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**High Sensitivity C. Reactive Protein – hsCRP**  
Found in blood plasma, whose circulating concentrations rise in response to inflammation. It is an acute-phase protein of hepatic origin that increases following **Interleukin-6** secretion by macrophages and T cells. Other inflammatory mediators that can increase CRP are **TGF- $\beta$  1**, and **Tumour Necrosis Factor- $\alpha$** .

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So our **hsCRP** marker is a composite of  
CRP + IL-6 + TGF- $\beta$  1 + TNF- $\alpha$ .

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**CRP** is a more sensitive and accurate reflection  
of the acute phase response than the  
**ESR\*** (Erythrocyte Sedimentation Rate).

ESR may be normal while CRP is elevated. CRP  
returns to normal more quickly than ESR in  
response to therapy.

\*Liu S, Ren J, Xia Q, Wu X, Han G, Ren H, Yan D, Wang G, Gu G, Li J (December 2013). "Preliminary case-control study to evaluate diagnostic values of C-reactive protein and erythrocyte sedimentation rate in differentiating active Crohn's disease from intestinal lymphoma, intestinal tuberculosis and Behcet's syndrome". *The American Journal of the Medical Sciences*. 346 (6): 467–72

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## Possible Anti inflammatory Remedies

### Nutrients

Vitamin A  
 Vitamin C  
 Vitamin K2  
 Vitamin D  
 Zinc (ideally with Quercitin)  
 Shark liver oil  
 Omega 3 or DHA  
 Resveratrol

### Spices –

Cloves  
 Cinnamon  
 Ginger  
 Fenugreek  
 Coriander  
 All spice  
 Turmeric

Also calorie restriction

### Herbs –

Echinacea  
 Artemesia annua  
 Garlic  
 Astragalus  
 Celery  
 Olive leaf  
 Oregano  
 Dong Quai.

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## Diagnostic Standard for hsCRP\*

hsCRP	Diagnosis
< 1.0mg/L	Low
1.0 – 3.0mg/L	Average
> 3.0mg/L	High

\* "Normal results". *C-reactive protein*. MedlinePlus. Retrieved 23 April 2015

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## **Challenging with the Chemicals of Pain Biomarkers**

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**1. Challenge the patient with a positive Therapy  
Localisation of the pain from strength to  
weakness**

**Or from weakness obtained by challenging with  
hs C-Reactive Protein 6x**

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**2. Cross challenge the weakness for strengthening against**

**Histamine 6x (pain, swelling, redness, itching)**

**Kinin 6x (key word is pain)**

**Serotonin 6x (hypersensitivity to pain)**

**Prostaglandins PgE2 6x (joint pains, vascular)**

**Leukotriens B4 6x. (most severe pains usually caused by allergy or parasites)**

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**The positive one(s) will also weaken a strong muscle in the clear.**

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### 3. Follow the Chemical Mediators of Inflammation chart and identify all negating nutrients, which will aid in the metabolism of the inflammatory mediating chemicals.

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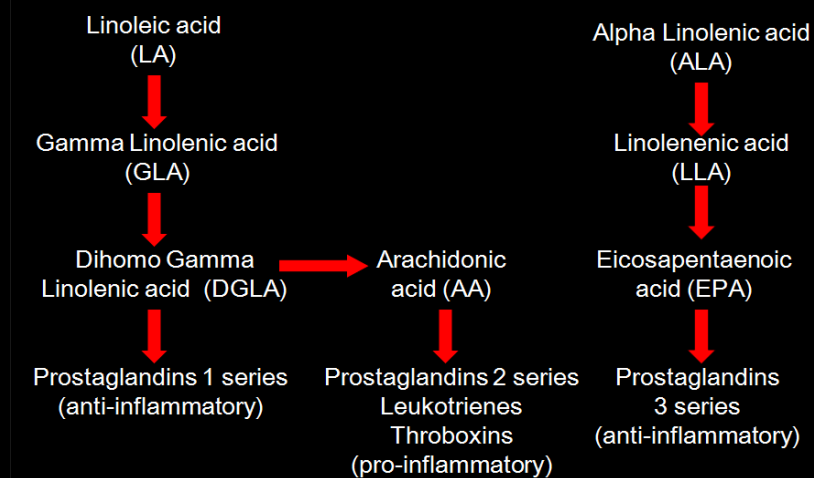
Chemical of inflammation	Nutritional support
Histamine	Vitamin C (as Ascorbic acid), S. Adenosyl methionine (SAME) Hesperidin, Bromelain Vitamin E, Magnesium (from Magnesium citrate) ATP, Vitamin B6 (from Pyridoxal-5-phosphate) Zinc , Riboflavin , Copper , Molybdenum
Serotonin (5HT)	Adenosyl methionine (SAME), Bromelain, Magnesium (from Magnesium citrate), Organic Turmeric, Organic Ginger, Riboflavin (from Riboflavin-5-phosphate), Copper (from Copper bisglycinate)
(Brady) Kinin	Bromelain, Hesperidin, Zinc, Riboflavin (from Riboflavin-5-phosphate) Copper
Prostaglandins PgE2	GLA, EPA, Zn, Mg, B6, Folic Acid, B3, Vit C and Vit A.
Leukotrien B4	GLA, EPA, Vit E, Se, Glutathione, Ginger, Turmeric (Curcumin), Silymarin (Milk thistle).

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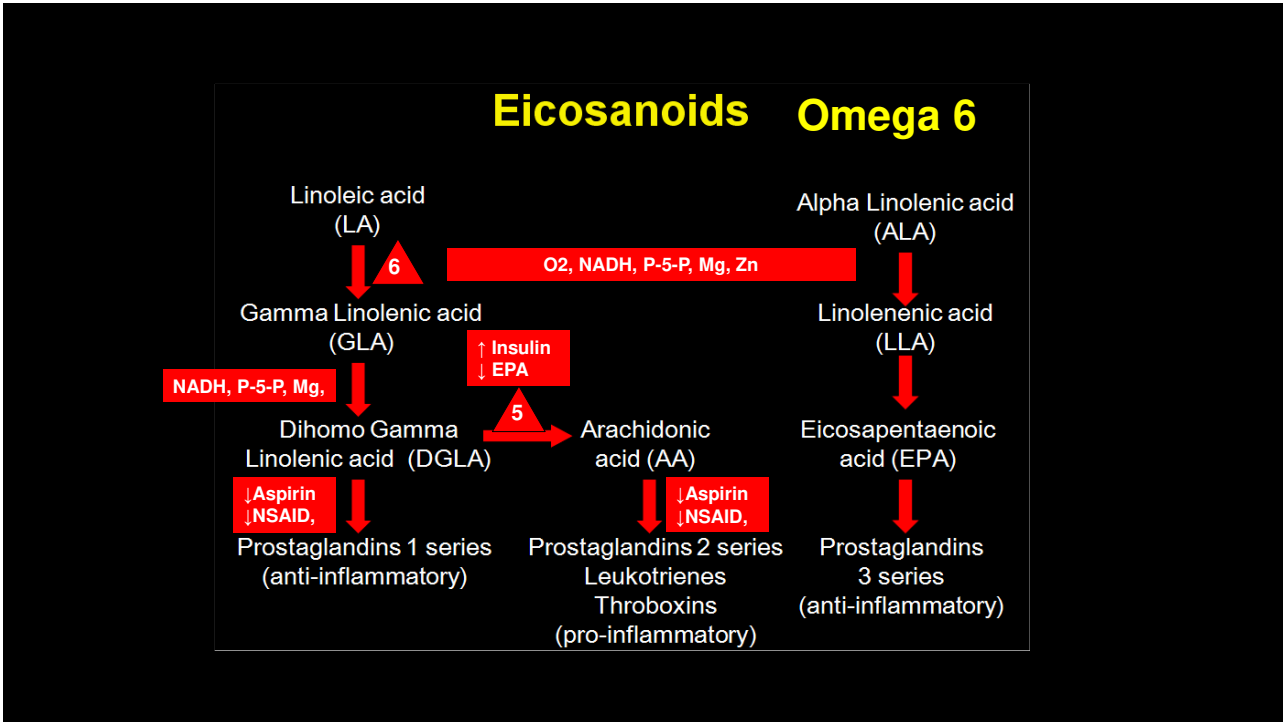
## Let's have a look at the Prostanoids

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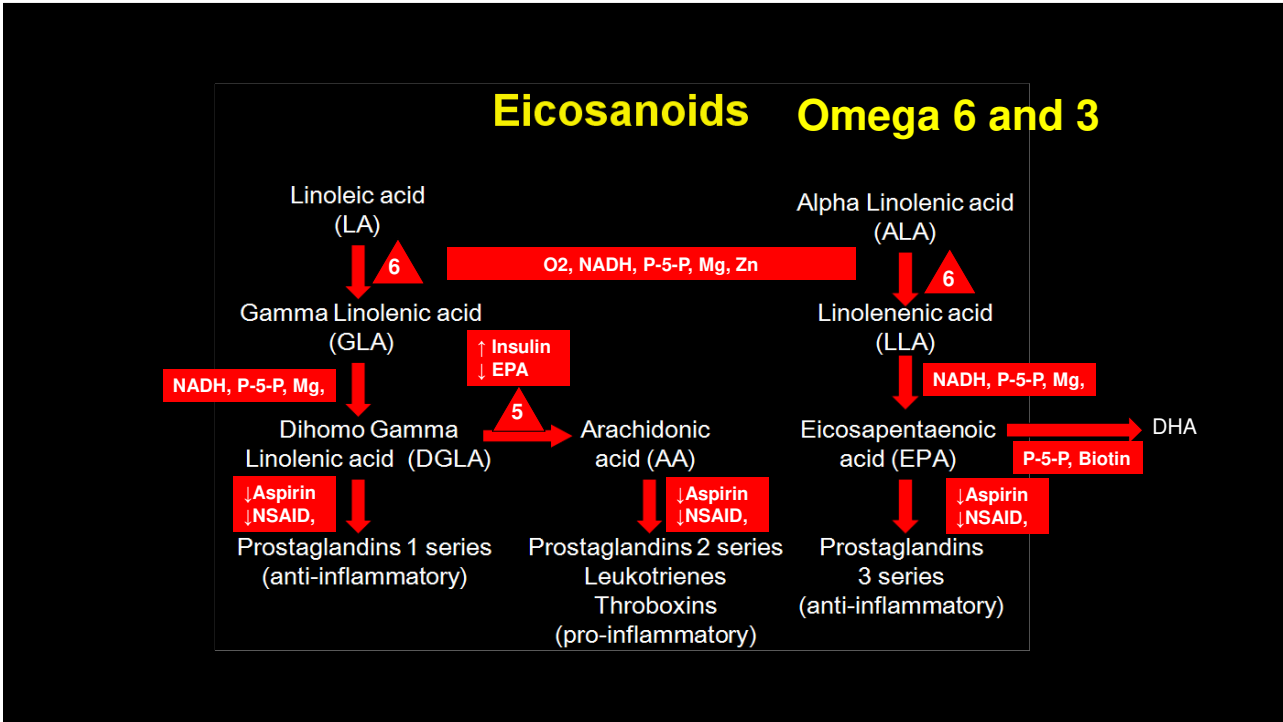
### Eicosanoids



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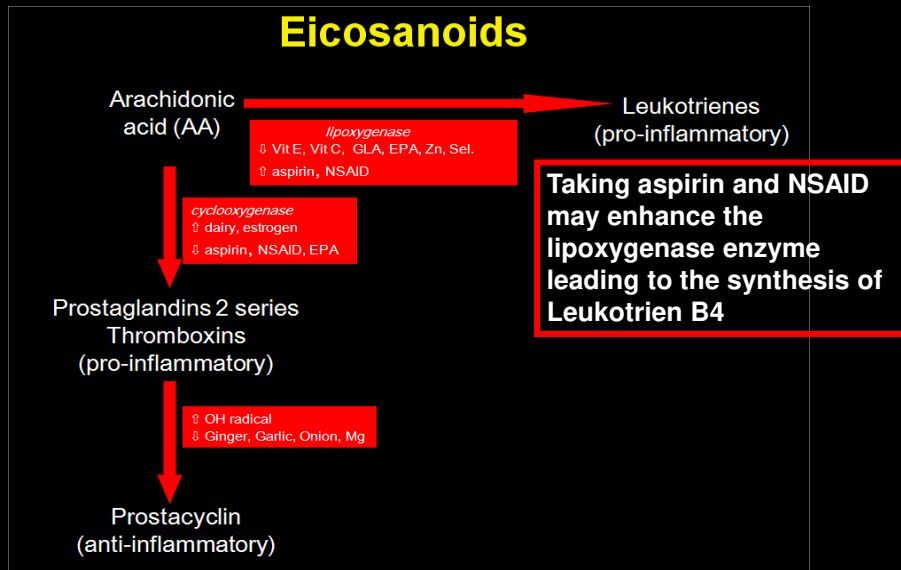


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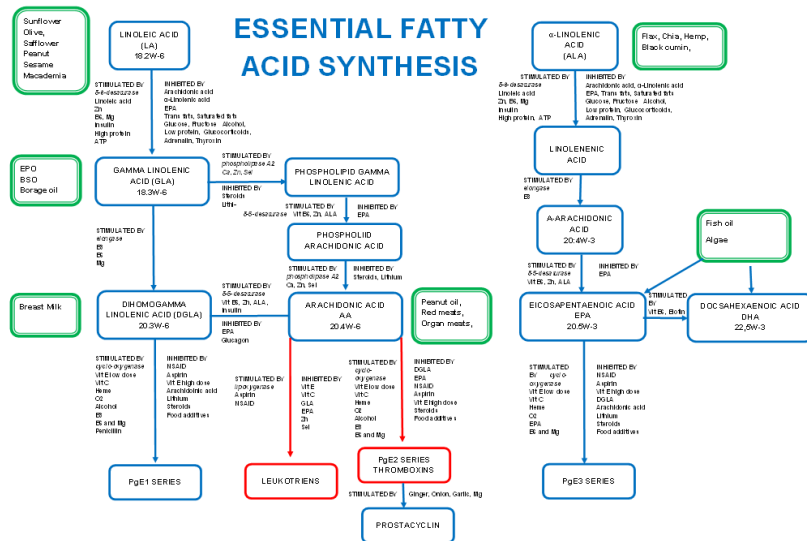
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# Eicosanoids



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# ESSENTIAL FATTY ACID SYNTHESIS



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## **Essential Fatty Acid Products**

### **Omega 6**

**Borage**

**Evening primrose**

### **Omega 3**

**Flaxseed oil**

**Omega 3**

**Omega 3/6/9**

**DHA**

**Blackcumin seed oil**

**Pumpkin oil 15%**

**Walnut oil 10%**

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## **Dosing**

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## Composite Nutrition Markers

Amino acids

Minerals

Water soluble vitamins

Fat soluble vitamins

Co-enzymes

Saturated Fatty acids

Unsaturated fatty acids

Digestive enzymes

Probiotics

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Amino acids

Minerals

Water soluble vitamins

Fat soluble vitamins

Co-enzymes

Unsaturated Fatty Acids

Saturated Fatty Acids

Saccharides

Digestive enzymes

Probiotics

## Composite Nutrition Markers

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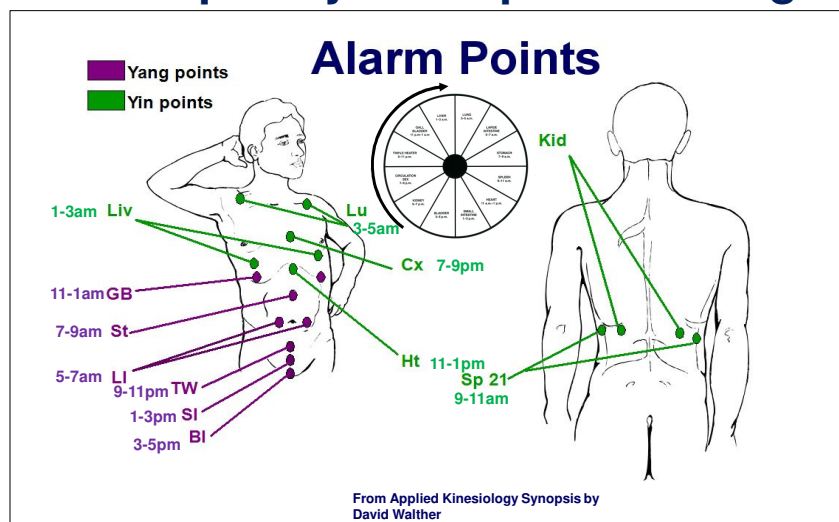
From weakness a simulated copy of a nutrient may strengthen.

This will tell you that the nutrient is **effective**.

The exact dose has to be assessed for by the amount of capsules / liquid that exactly negates the weakness.

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## Frequency and Optimal timing



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**With the remedy on the patient (from strength), cross challenge the **alarm points** for maintaining strength.**

**This / these are the optimal times to prescribe the remedy.**

**Food supplements are generally St, Sl, Cx**

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**Basically all nutritional supplements should be given with meals.**

**Oils with the evening meal.**

**Amino acids half an hour before breakfast.**

**Folic acid, CoQ10 and Probiotics last thing at night.**

**Fat soluble vitamins on a spoon 5 minutes before a meal.**

**Herbs in between meals.**

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Finally always test any nutrient / remedy for **tolerance**.

Take a strong muscle and challenge the remedy for weakening.

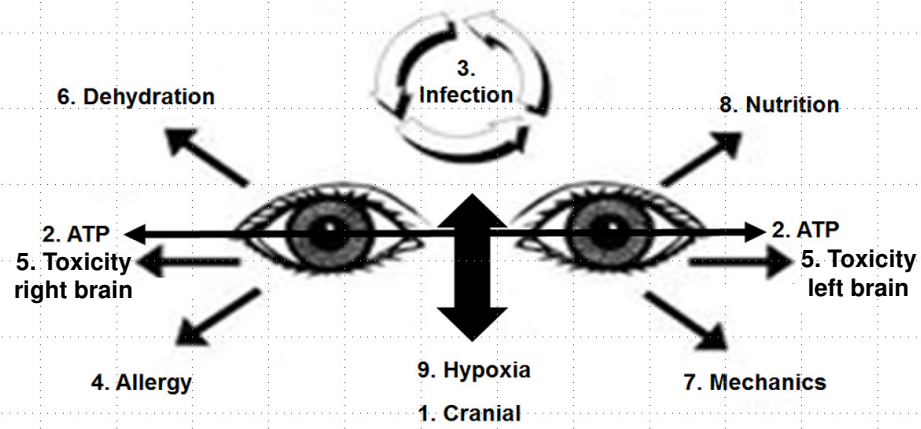
If weakens then the remedy is **intolerant** and should not be prescribed.

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**Alternative Diagnostic entry  
(best for systemic conditions)**

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## Eyes into Distortion (EID)



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## Cranial faults

Always think Zinc in recurrent  
cranial faults

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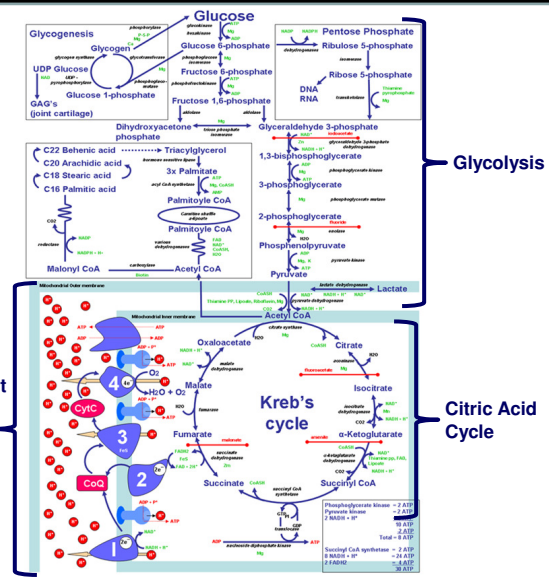
# Energy

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## Energy pathway Key Nutrients

**Magnesium**  
**Zinc**  
**B1, B2, B3, B5**  
**B12**  
**Biotin**  
**a-Lipoic acid**  
**Vitamin D**  
**Co-Q10**

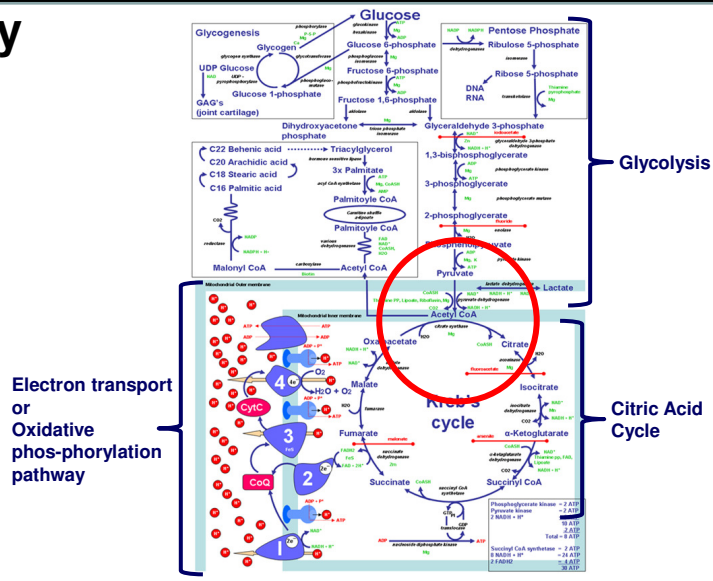
Electron transport  
or  
Oxidative  
phosphorylation  
pathway



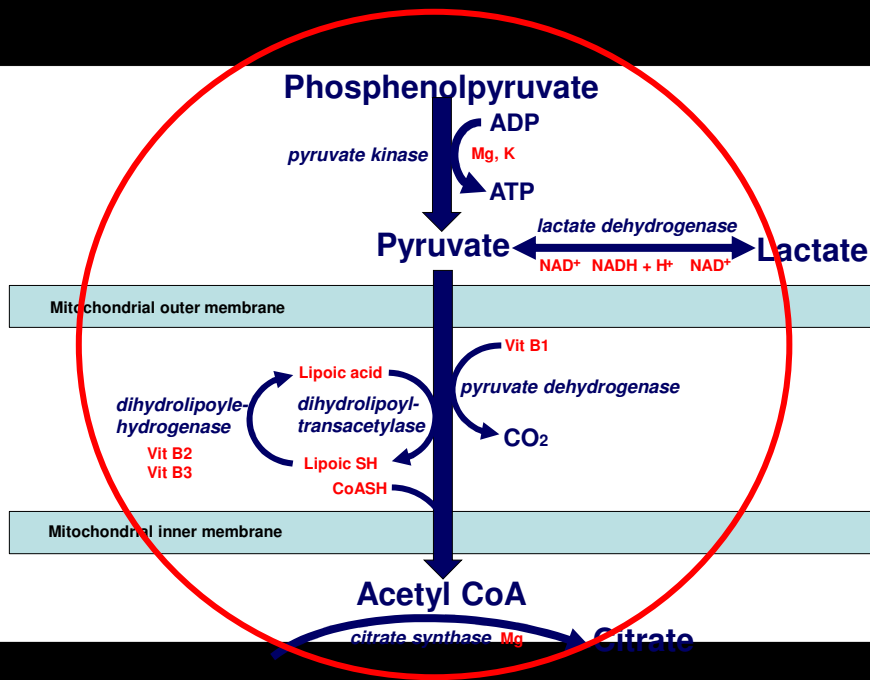
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# Energy pathway Key Nutrients

**Magnesium**  
**Zinc**  
**B1, B2, B3, B5**  
**B12**  
**Biotin**  
 **$\alpha$ -Lipoic acid**  
**Vitamin D**  
**Co-Q10**



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## Hypoxia

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Getting **Oxygen** to the cells requires mature red blood cells containing adequate amounts of haemoglobin.

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### Porphyrin and Hemoglobin Synthesis

## Key nutrients

**P-5-P**  
**Vit B12's**  
**Vit B2**  
**Folic acid (5MTHF)**  
**Essential fatty acids**  
**Vit A, Vit D and Vit K2**  
**Vit C**  
**Iron**  
**Magnesium**  
**Zinc**  
**Iodine and Selenium**

### Hemoglobin Synthesis Polymorphisms

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Thus a **function challenge** for hypoxia would be

1. A weak muscle strengthens to being challenged with oxygen.

2. EID – Up and Down

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## **Infection**

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### **Infection**

#### **Bacteria**

**Colloidal silver**

**Ginger**

**Goldenseal**

**Mannose**

**Probiotics**

### **Infection**

#### **Virus**

**Activator X**

**Astragalus**

**Colloidal silver**

**Echinacea**

**Ginger**

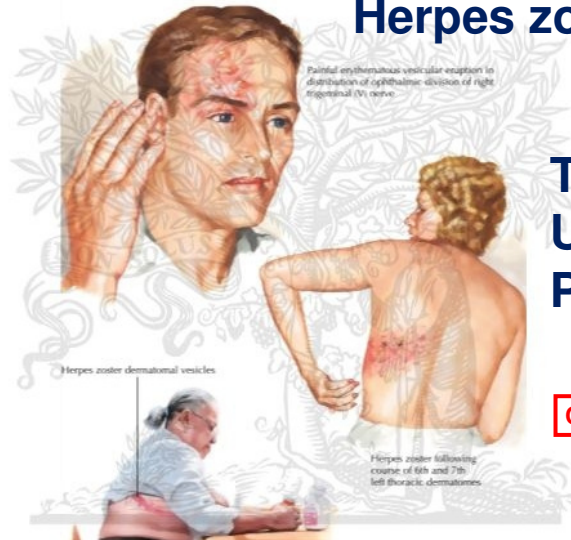
**Olive leaf**

**Probiotics**

**Turmeric**

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## Herpes zoster



**The Master Undercover Pain Agent**

**Challenge with B. Infantis**

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### **Infection**

### **Parasites**

AP formula

Artemesia annua

Black walnut

Cloves

Garlic

Wormwood

Wormwood Combination

### **Infection**

### **Fungus**

Caprylate C8

Coconut

Pau d'arco

Probiotics

Triple zinc

Yarrow

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## **Allergy Intolerance**

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A true **Allergy** is an immunoglobulin reaction to a protein within the food.

It will cross check to either IgE, IgG or IgM.

All other reactions are either lectin reactions or intolerances.

You cannot remove the offending food / drink but by using Yarrow you can continue with your examination.

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**ALLERGY**  
**Coombs and Gell immune**  
**inflammatory responses**

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**Type 1**

Allergic acute inflammation hypersensitivity is characterised by an allergic reaction that occurs immediately following contact with antigen, which is referred to as the allergen.

Activates on first time exposure to the antigen.

Mediated by **IgE**.

Duration **2-3 days**

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## **Type 2**

Acute inflammation mediated by cytotoxic antibodies or antibody-dependent cytotoxic hypersensitivity occurs when antibody binds to either self-antigen or foreign antigen on cells, and leads to phagocytosis, killer cell activity or complement-mediated lysis.

Activates on second time exposure.

Mediated by **IgG and IgM**

Duration **18-21 days**

71

## **Type 3**

Acute inflammation mediated by immune complexes. Hypersensitivity develops when immune complexes are formed in large quantities, or cannot be cleared adequately by the reticulo-endothelial system, leading to serum-sickness type reactions.

Activated on second time exposure.

Mediated by **IgG and IgM**

Duration **18-21 days**

72

## **Type 4**

**Chronic inflammation delayed-type of hypersensitivity reaction (DTH) is most seriously manifested when antigens (for example those of tubercle bacilli) are trapped in a macrophage and cannot be cleared. T cells are then stimulated to elaborate lymphokines, which mediate a range of inflammatory responses.**

**Mediated by ?**

**Duration ?**

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## **Diagnosis**

**CHALLENGE from strength or weakness against**

**IgE for Type 1 (half life of 2-3 days)**

**IgG for Type 11 and 111 (half life of 21 days)**

**IgM for Type 11 and 111 (often Lectins show as IgM responses).**

**IgA (may indicate possible gut parasitic infestation)**

**Cross challenge against all foods in the FOOD and LECTIN KIT or best to check the patient's own food and drink samples.**

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**“There is a food or drink that your are ingesting that is having a negative effect on your health.**

**It is a food. If yes – it is of animal origin. It is of plant origin. If yes – it is single plant or a family of plants. It is a vegetable. It is a fruit. It is a grain. The part you eat and are sensitive to grows above the ground. Grows below the ground. It is a drink. What drinks do you drink on a regular basis.”**

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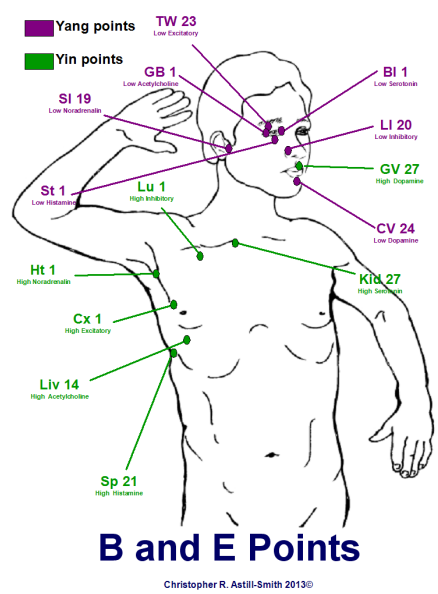
### **Treatment approach**

- 1. Challenge with the weakening food.**
- 2. Cross therapy localise to each B&E point. Usually only one will negate the weakness.**
- 3. Test for most optimal nutrient from the nutrients that synthesise or metabolise the associated neurotransmitter.**

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**Yang points indicate neurotransmitter deficiencies.**

**Yin points indicate neurotransmitter excesses**



## YANG

- BI 1 Low Serotonin  
Tryptophan, Vit B12, Folate, Vit B3, Fe, Vit B6, Zn, Mg, Vit D
- GB 1 Low Acetylcholine  
Choline, Vit B5, Vit B1, a-Lipoic, Mn
- LI 20 Low Inhibitory  
Glutamic acid, Vit B6, Mg, Zn
- CV24 Low Dopamine  
Tyrosine, Vit B12, Folate, Vit B3, Fe, Vit B6, Zn, Mg, Vit D
- TW 23 Low Excitatory  
Glutamic acid or Aspartic acid, Vit B6, Vit C, Mg, P, Vit B3
- St 1 Low Histamine  
Histidine, Vit B6, Zn, Mg
- SI 19 Low Noradrenalin  
Tyrosine, Vit B12, Folate, Vit B3, Fe, Vit B6, Zn, Mg, Vit D, Vit C, Cu

## YIN

- Kid 27 High Serotonin  
Cu, Vit B2, SAM, Mg, Zn, Vit B6, S, Vit C, Vit B5
- GV 27 High Dopamine  
Cu, Vit B2, SAM, Mg, Zn, Vit B6, S, Vit C, Vit B5
- Lu 1 High Inhibitory  
Vit B6, Zn, Mg
- Liv 14 High Acetylcholine  
Vit B2, Vit B3, Mn, Zn
- Cx 1 High Excitatory  
Mg, Vit B2, Fe, Vit B6, Vit C.
- Sp 21 High Histamine  
SAM, Mg, Vit B12, Fe, Vit B2, Cu, Vit C, Hesperidin, Zn, Vit E
- Ht 1 High Noradrenalin  
Cu, Vit B2, SAM, Mg, Zn, Vit B6, S, Vit C, Vit B5

## **Toxicity**

### **Toxic metals, Chemicals, Radiation**

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#### **Toxic metals**

**Chlorella**  
**Coriander**  
**Glutathione**  
**NAC**  
**Shark liver oil**  
**Yellow dock**

#### **Radiation**

**Chlorella**  
**Coconut**  
**Nutrient 1&2**  
**Ornithine**  
**Probiotics**  
**Selenium Meth**  
**Shark liver oil**  
**Triple zinc**

Eat less Omega 6 oils

#### **Chemicals**

**Acetyl CoA**  
**Allclear**  
**ChemClear**  
**Glutathione**  
**Lemon balm**  
**Milk thistle**  
**NAC**  
**Nutrient 1&2**  
**Yarrow**

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## Tissue repair

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**Tissue repair** starts after the first initial phase of the inflammatory cascade which usually lasts 48-72 hours.

The initial phase is accompanied by **pain** as the same chemicals that drive the acute inflammatory process also sensitise the nociceptors.

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As the chemicals that drive the acute phase have now subsided so does pain.

So a **reduction in pain** indicates a change from the acute phase to the repair phase.

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**Angiogenesis** is the production of new blood vessels from endothelial cell migration, proliferation and maturation.

It is stimulated by hypoxia, the acute inflammatory cytokines and **Vitamin C**.

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## Tissue Remodeling

Collagen

Elastin

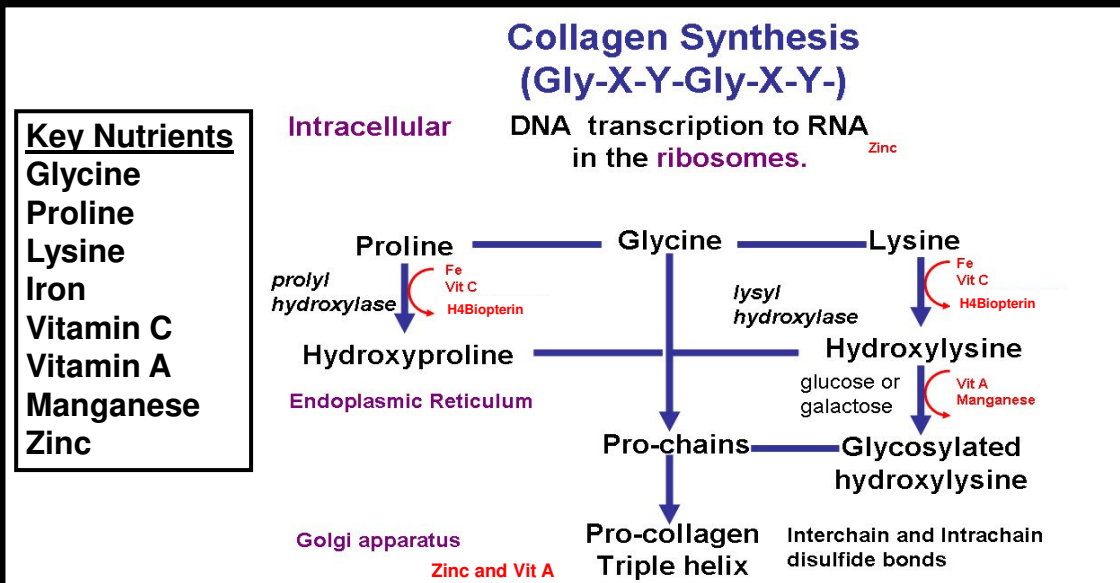
Fibrin



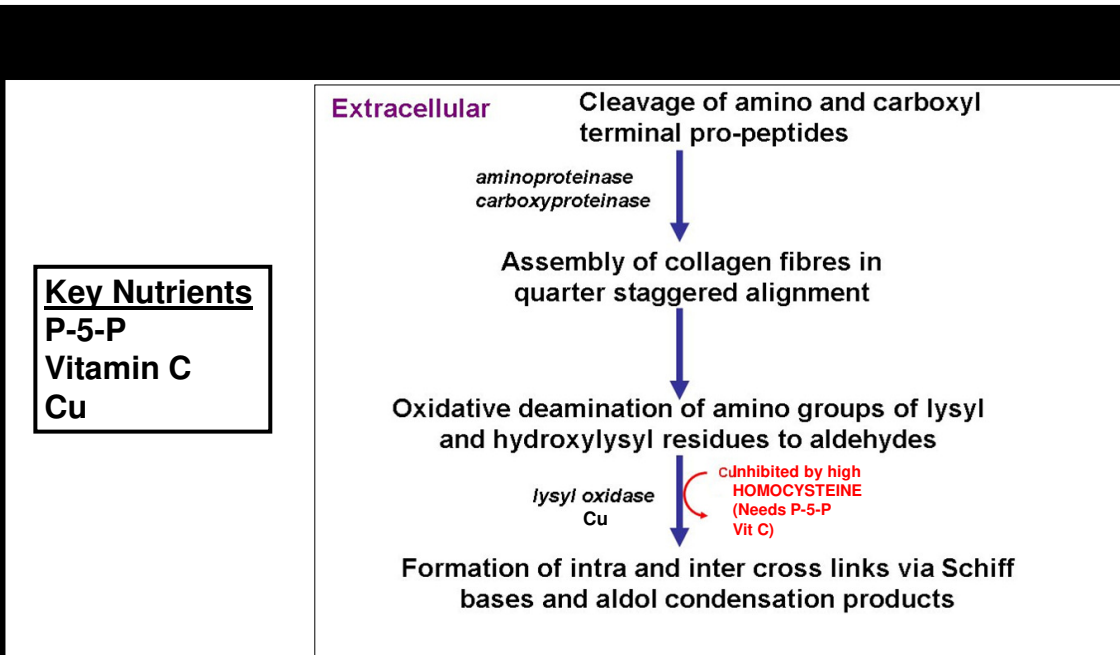
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Collagen

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**Low collagen** leads to a wobbly unstable hypermobile joint.

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## Collagen

Positive sustained challenge –skin tug



### Challenge against

Zinc

Proline

Lysine

Iron

Vit C

Manganese

Vit A

MSM for Sulphur

Cu

P-5-P

Bilberry, Si, (silica for scarring), Vit E

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## Elastin

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**Elastin** is a connective tissue protein that possesses elastic recoil properties.

Present in ligament, lung, arteries, skin, ear cartilage

It is 1/3<sup>rd</sup> Glycine, 1/3<sup>rd</sup> Alanine + some Valine and Proline.

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It contains no hydroxyproline or hydroxylysine. The covalent cross links are formed by a lysine as in collagen and requires *lysyl oxidase*, the Cu<sup>+</sup> dependant enzyme. (Inhibited by high **Homocysteine** levels).

Often elastin ages due to a build up of calcium in the tissue due to Vitamin K2 deficiency.

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## Elastin

Positive Elastin challenge (twang test)



Challenge against

Glycine  
Alanine  
Valine  
Proline  
Copper

P-5-P

Bilberry  
Vitamin K2

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## **Degenerative Joint Disorders**

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### **Hyaluronic Acid**

**Consists of an unbranched chain of repeating disaccharide units containing Glucuronic acid and N. Acetyl Glucosamine.**

**It is rich in synovial fluid, cartilage, loose connective tissue and the *vitreous body of the eye.***

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**Synovial fluid** is a thick, stringy fluid found in the cavities of synovial joints.

Synovial fluid reduces friction between the articular cartilage and other tissues in joints to lubricate and cushion them during movement.

The three constituents of joint fluid, lubricin, hyaluronic acid (HA) and lipids (45% **phosphatidylcholine**),

97

### **Therapy localise joint**

Joint feels dry and creaky .

If positive TL challenge against Synovial fluid  
Challenge against

Glucuronic acid

N. Acetyl glucosamine

Oils (Phosphatidylcholine, Omega3)

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## **Crystals found in synovial fluid**

- 1. Cholesterol**
- 2. Monosodium urates**
- 3. Calcium pyrophosphate dihydrate**
- 4. Hydroxyapatite**
- 5. Corticosteroid crystals**
- 6. Calcium oxalate**

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**Calcium** can be deposited in joint cavities, muscles, skin and arteries.

Due to inactivation of – Osteocalcin  
GLA matrix protein  
by Vitamin K2 leading to deposition of calcium.

Remember use Vitamin D3 for low calcium  
but always use either Vitamin K2 or Vitamin  
D3/K2 for high calcium or Activator X.

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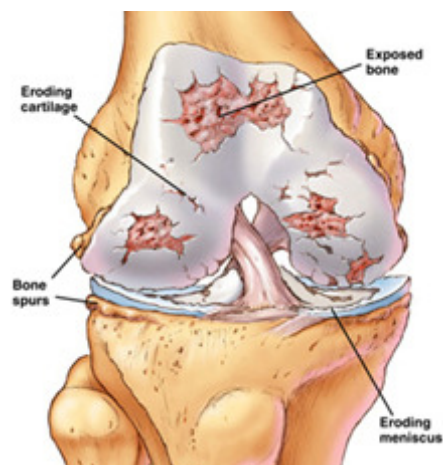
## Oxalates

Very high -

Avocados, Dates, Grapefruit, Kiwi, Oranges, Raspberries, Canned and dried pineapple, Dried figs, Bamboo shoots, Beets, Fava beans, Okra, Olives, Parsnip, Kidney beans, Rhubarb, Spinach, Tomato sauce, Raw carrots, Soy beans, Brussel sprouts, Potatoes, Brown rice, Couscous, Tahini, Pasta, Veggie burgers, All nuts, Carrot juice, Hot chocolate, Lemonade, Rice milk, Soy milk, Tea, Clam chowder, Miso soup, Lentil soup. CABBAGE.  
High – Tangerines, Figs, Dried prunes, Celery, Collards, Whole wheat, White rice.

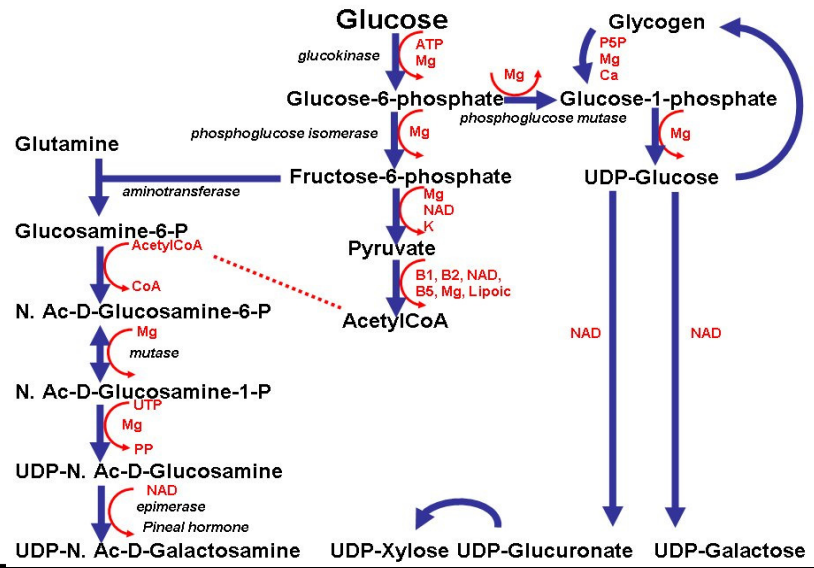
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## Glycosaminoglycans (GAGs)



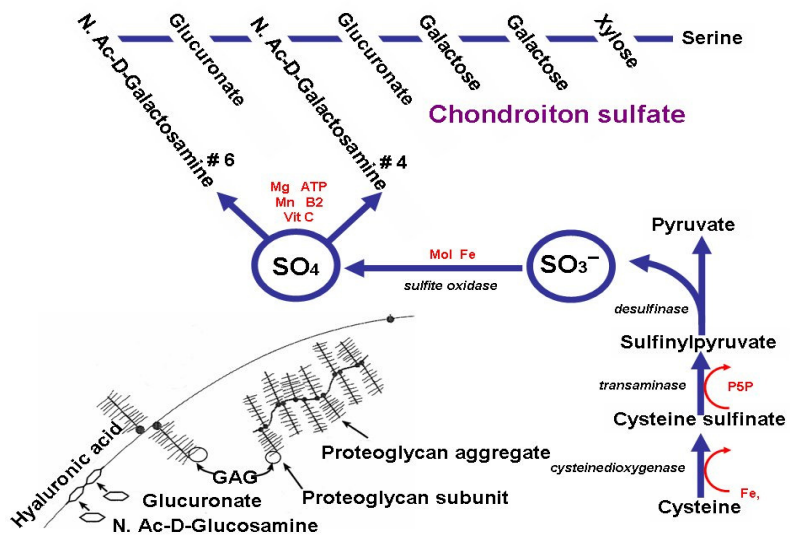
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**Key Nutrients**  
**Magnesium**  
**Vitamin B1**  
**Vitamin B2**  
**Vitamin B3**  
**Vitamin B5**  
**a-Lipoic acid**  
**Glutamine**



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**Key Nutrients**  
**Magnesium**  
**Manganese**  
**Vitamin B2**  
**P-5-P**  
**Vitamin C**  
**Molybdenum**  
**Iron**



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## Arthrosis

Positive Therapy  
Localisation to joint  
or "Grind Test"



### Challenge against

Magnesium  
Glutamine  
Glucosamine  
Acetyl CoA  
N. Acetyl-D-Glucosamine  
NAD  
Glucuronic acid  
MSM (sulphur)  
Vit C  
Silica  
Manganese

105

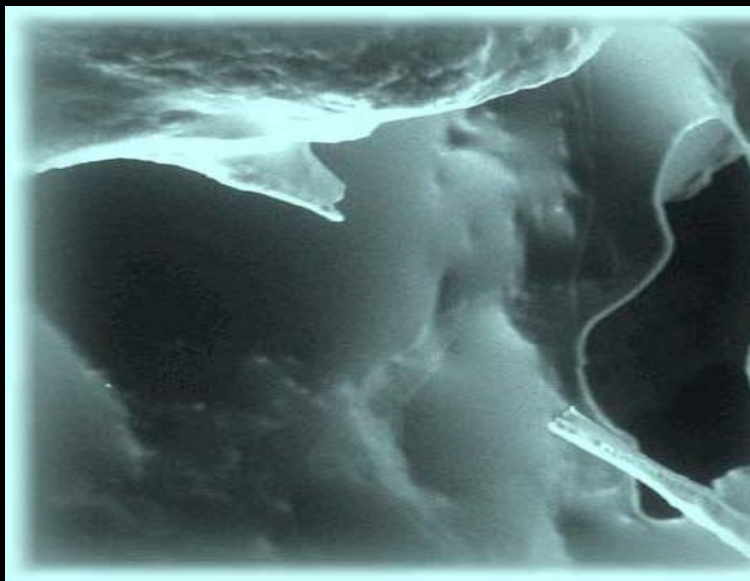
## BONE

106

**Bone** contains both organic and inorganic material.

The principal protein of bone is **collagen** (90%) and some non-collagen proteins which are specific to bone.

107



The inorganic or mineral content of bone is mainly crystalline hydroxyapatite along with Na, Mg, Carbonate, Fluoride and Strontium.

108

90% of the body's calcium is contained in bone. **Hydroxyapatite ( $\text{Ca}_{10}(\text{PO}_4)_6(\text{OH})_2$ )** confers on bone the strength and resilience required by its physiological roles.

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**Bone is a dynamic structure**, that undergoes continuous cycles of remodelling, consisting of resorption followed by deposition of new bone tissue. This remodelling of bone is modulated by both physical and hormonal signals.

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**Osteoblasts** deposit new bone and are stimulated by Testosterone, DHEA and Progesterone.

**Osteoclasts** resorb old bone and are stimulated by Vitamin D and inhibited by Estrogen.

111

Challenge against **BONE MEAL** for strengthening.

If positive challenge against Calcium, Magnesium, L. Lysine Silicon (Bamboo)

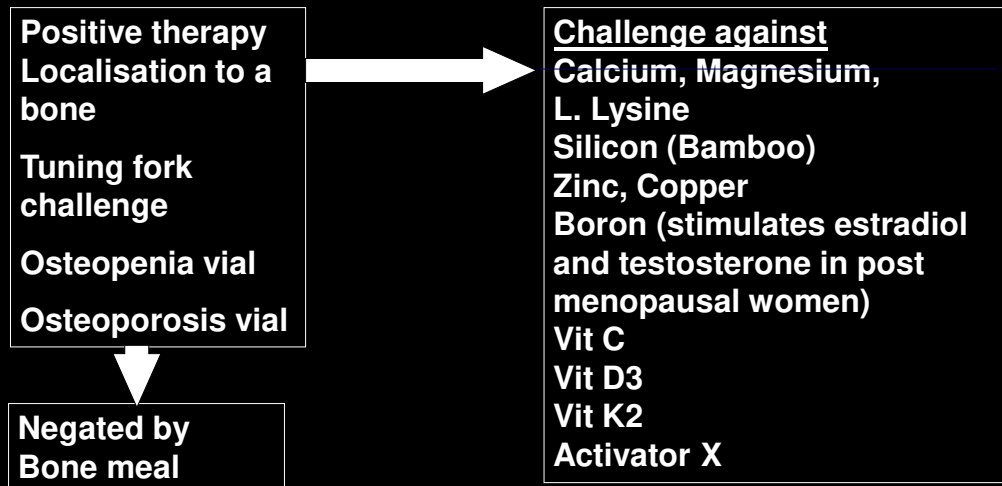
Zinc, Copper

Boron (stimulates testosterone and estradiol in post menopausal women)

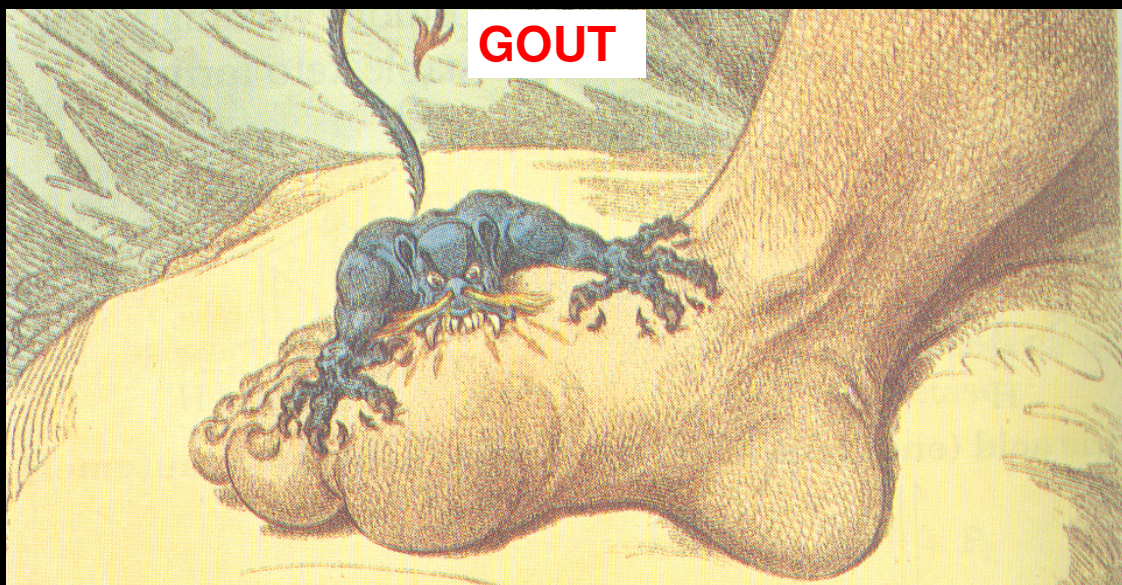
Vit C, Vit D3, Vit K2

112

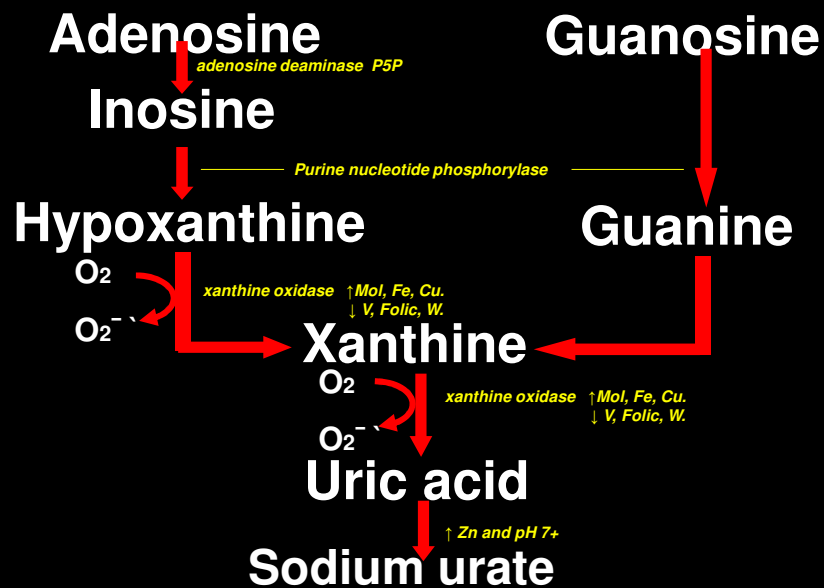
## Bone



113



114



115

**Constant aching, stress, and tenderness in the worst way. Inability to bend, loss of flexibility. Hardness and swelling at the big toe or fingers, wrists ankles and even the knees. Burning sensations and redness around the infected areas.**

**Constant pain.**

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## Purine high foods

Red meats which come from cows or sheep and include steak, chops, corned beef and larger pieces of meat usually roasted in the oven. Game. Meat extracts (e.g Oxo, Bovril). Gravy.

Brains, kidneys, liver & heart (offal), sweetbreads.

Shellfish such as , mussels, oysters and sea eggs.

Anchovies, herrings, mackerel, sardines.

Peas and beans.

Alcohol. especially beer and wine.

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## Gout

*Challenge against Uric acid*

## Nutritional and Natural Medicines

Zinc

Sodium bicarbonate

Glucosamine

MSM

Vitamin E

Detoxify Cadmium

Artichoke (cynara)

Garlic

Silymarin (milk thistle)

Turmeric

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## **Gout diet**

**Grapes – Lowers acidity,  
Antioxidant**

**Bananas – Bromelain, Potassium**

**Cherries – Neutralizes uric acid,  
Anthocyanidins**

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## **Pineapples**

**Rich in potassium uric acid - urates**

**Bromelain – anti-inflammatory**

**Vitamin C – antioxidant to purines**

**Folic acid – tissue repair**

## **Blueberries**

**Potassium**

**Anthocyanidins**

**Vitamin C**

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## **Strawberries**

**Anthrocyanidins**

**Vitamin C**

**Quercetin inhibits xanthine oxidase**

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## **Rheumatoid Arthritis**



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## **Rheumatoid Arthritis**

**Rheumatoid Arthritis (RA) is a chronic, progressive and disabling auto-immune disease affecting 0.8% of the UK adult population. It is an incredibly painful condition, can cause severe disability (this varies between individuals and depends on how severe/aggressive the disease is) and ultimately affects a person's ability to carry out everyday tasks.**

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**Researchers have found that RA can be triggered by an **infection**, possibly a virus or bacterium, in people who have an inherited tendency for the disease.**

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## Natural treatments for RA

Vitamin A  
Vitamin B5  
Folic acid  
Vitamin C  
Vitamin E

Boron  
Calcium  
Iron  
Manganese  
Selenium  
Silver

Omega 3  
Omega 3/6/9  
DHA  
Flaxseed oil

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## Natural treatments for RA

Plant oils



$\alpha$ -Lipoic acid  
Turmeric  
Cinnamon

Colon cleanse  
Digestive enzymes  
Prebiotics  
Probiotics

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## **Herbs**

**Ashwagandha (*Withania somniferum*)**

**Fennel (*Foeniculum vulgare*)**

**Ginger (*Zingiber officinale*)**

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## **Joint Products**

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## Epigenetics Collagen Formula

- Glycine
- Lysine
- Proline
- Copper
- Manganese
- Folic acid
- Magnesium
- H4Biotin factors
- NADH



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## Epigenetics Elastin Formula

- Glycine
- Alanine
- Vitamin B6 as P5P
- Bilberry extract
- Copper



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## Epigenetics GAG Formula

- Glutamine
- Vitamin C
- Chondroitin
- Glucosamine
- Magnesium
- Bamboo (silica)
- Manganese
- Niacin
- Molybdenum



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## Epigenetics Glucosamine, Chondroitin and MSM Capsules

- Provides main components of Glycosaminoglycans (GAGs)
- Glucosamine Sulphate Capsules
- MSM capsules



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## Glucosamine sulfate



## MSM



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## Epigenetics Anti Inflammatory Products



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## Epigenetics Anti Inflammatory Products



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## Epigenetics Omega Oil Products



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## Epigenetics Omega Oil Products



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## Epigenetics Bone Formula

- Calcium, Magnesium, Manganese, Boron, Selenium
- Vitamin C, Vitamin B6 (P5P), Vitamin B12 (methylcobalamin)
- Bamboo as a rich source of silica
- Vitamin D3 2000 IU



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## Best Vitamin Ds for Pain Relief



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## Summary – Assessing Local Pain

1. TL pain
2. Does TL change with position (if so pain is mechanical)
3. Challenge TL against Histamine 6x  
Serotonin 6x  
Kinin 6x  
PgE2 6x  
Leuk B4 6x
4. Challenge against negating nutrients

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## **Summary – Assessing Systemic Pain**

- 1. Challenge against hsCRP 6x**
- 2. If positive Challenge for strengthening against**
  - Histamine 6x**
  - Serotonin 6x**
  - Kinin 6x**
  - PgE2 6x**
  - Leuk B4 6x**

**(These will also weaken in the clear)**

- 4. Challenge these chemicals of inflammation against negating nutrients**

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## **Chemistry of Pain Test Kit**

<b>hsCRP 6x</b>	<b>IgE</b>
<b>Histamine 6x</b>	<b>IgG</b>
<b>Kinin 6x</b>	<b>IgM</b>
<b>Serotonin 6x</b>	<b>Synovial fluid</b>
<b>PgE2 6x</b>	<b>Hyaline cartilage</b>
<b>Lt B4 6x</b>	<b>Uric acid</b>
<b>Lactic acid (L + D +DL)</b>	<b>Oxalate</b>
<b>O2</b>	<b>Calcium pyrophosphate</b>
<b>Collagen</b>	<b>Osteoporosis</b>
<b>Elastin</b>	<b>Osteopenia</b>

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