1

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

2

25th September 2021

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

Public Health England

3

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

4

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

Lack of energy / stamina
Memory issues

5

Functional Testing

6

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

7

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)

8

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_2 / CO_2 etc
5. Photoreceptors – transmit about light

9

Ñ

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.

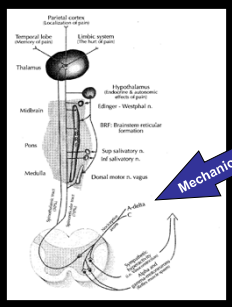
10

Noci comes from the Latin **"Nocere"** which means to injure.

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

11

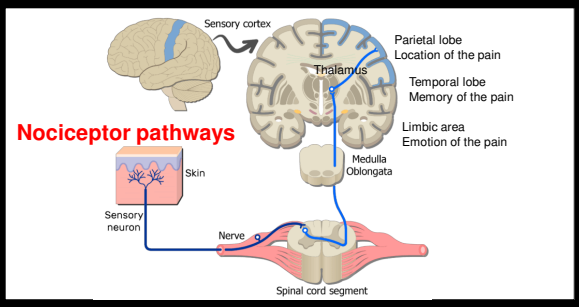
Nociceptor pathways



Mechanical pain varies with posture.
Chemical pain is continuous.

From Chiropractic and Pain control. Drs systems

12



13

Nociceptors are located in every tissue except

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

14

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

15

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

16

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

17

The Chemicals that Sensitize the Nociceptors

Histamine

Bradykinin

Serotonin

Prostaglandins E2 } Prostanoids

Leukotriens B4 } Prostanoids

18

The chemicals that drive the inflammatory process

Histamine

Bradykinin

Serotonin

Prostaglandins E2
Leukotriens B4 } Prostanoids

+ LACTIC ACID ★

Potassium excess or deficiency ★

19

Inflammation

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

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

20

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.

21

Chronic inflammation is unresolved acute inflammation.

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

22

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.

23

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.

24

hsCRP
(High Sensitivity C. Reactive Protein)

25

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-β 1, and Tumour Necrosis Factor-α.

26

So our hsCRP marker is a composite of CRP + IL-6 + TGF-ß 1 + TNF-α.

27

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

28

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.

29

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

30

Challenging with the Chemicals of Pain Biomarkers

31

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

32

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)

33

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

34

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

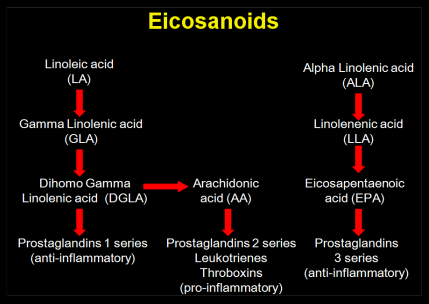
35

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).

36

Let's have a look at the Prostanoids

37



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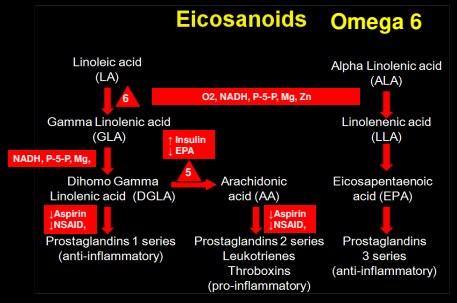
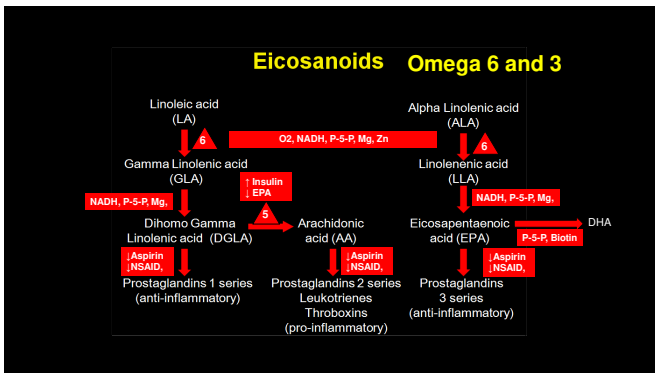
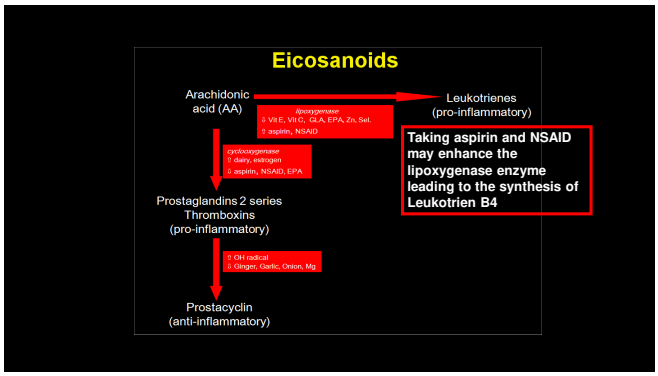


39

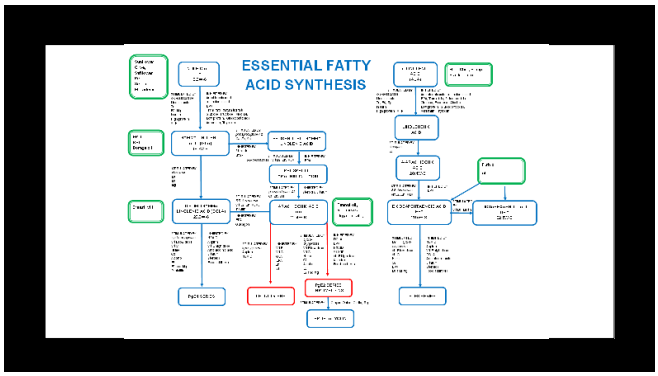
MN


Eicosanoids
Omega 6 and 3
Linoleic acid (LA)
Alpha Linolenic acid (ALA)
6
O2, NADH, P-5-P, Mg, Zn
6
Gamma Linolenic acid (GLA)
Linolenenic acid (LLA)
↑ Insulin
↓ EPA
NADH, P-5-P, Mg,
NADH, P-5-P, Mg,
5
Dihomo Gamma Linolenic acid (DGLA)
Arachidonic acid (AA)
Eicosapentaenoic acid (EPA)
DHA
P-5-P, Biotin
↓Aspirin
↓NSAID,
↓Aspirin
↓NSAID,
↓Aspirin
↓NSAID,
Prostaglandins 1 series (anti-inflammatory)
Prostaglandins 2 series
Leukotrienes
Throboxins
(pro-inflammatory)
Prostaglandins 3 series (anti-inflammatory)

40


Eicosanoids
Arachidonic acid (AA)
Leukotrienes (pro-inflammatory)
lipoxygenase
⇧ Vit E, Vit C, GLA, EPA, Zn, Sel.
⇩ aspirin, NSAID
cyclooxygenase
⇧ dairy, estrogen
⇩ aspirin, NSAID, EPA
Taking aspirin and NSAID may enhance the lipoxygenase enzyme leading to the synthesis of Leukotrien B4
Prostaglandins 2 series
Thromboxins
(pro-inflammatory)
⇧ OH radical
⇩ Ginger, Garlic, Onion, Mg
Prostacyclin
(anti-inflammatory)

41


ESSENTIAL FATTY ACID SYNTHESIS

42

Essential Fatty Acid Products

Omega 6	Omega 3
Borage	Flaxseed oil
Evening primrose	Omega 3
	Omega 3/6/9
	DHA
	Blackcumin seed oil
	Pumpkin oil 15%
	Walnut oil 10%

43

Dosing

44

Composite Nutrition Markers

Amino acids	Saturated Fatty acids
Minerals	Unsaturated fatty acids
Water soluble vitamins	Digestive enzymes
Fat soluble vitamins	Probiotics
Co-enzymes	

45

Amino acids

Minerals

Water soluble vitamins

Fat soluble vitamins

Co-enzymes

Composite Nutrition Markers

Unsaturated Fatty Acids

Saturated Fatty Acids

Saccharides

Digestive enzymes

Probiotics

46

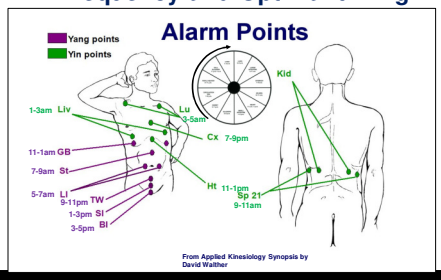
From weakness a simulated copy of a nutrient may strengthen.

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.

47

Frequency and Optimal timing



48

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, SI, Cx

49

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.

50

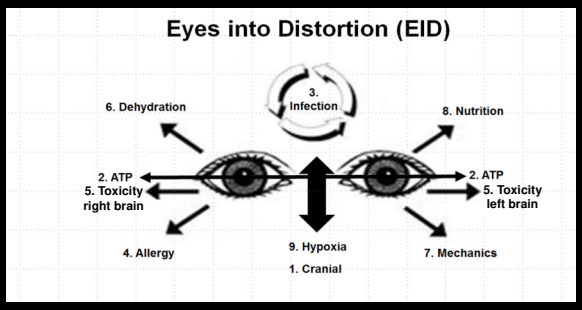
Finally always test any nutrient / remedy for tolerance.

Take a strong muscle and challenge the remedy for weakening.
If weakens then the remedy is intolerant and should not be prescribed.

51

Alternative Diagnostic entry
(best for systemic conditions)

52



53

Cranial faults
Always think Zinc in recurrent cranial faults

54

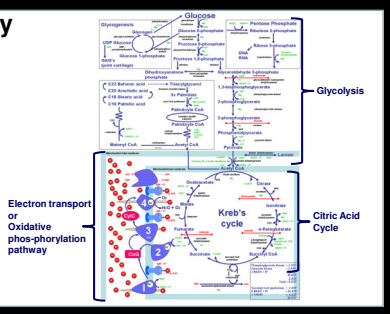
Energy

55

Energy pathway

Key Nutrients

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

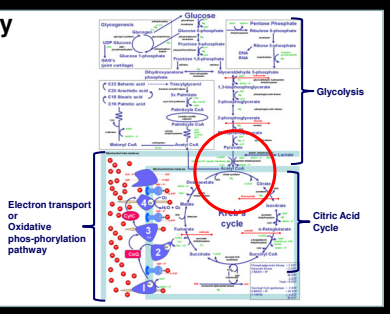


56

Energy pathway

Key Nutrients

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



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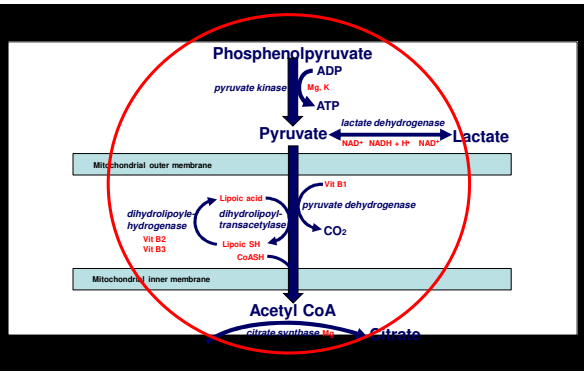


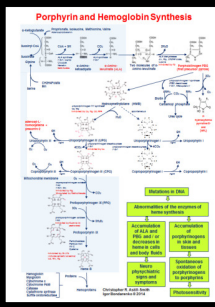
58

Hypoxia

59

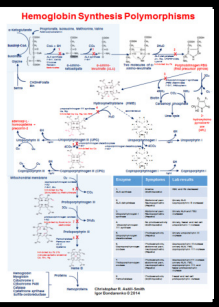
Getting Oxygen to the cells requires mature red blood cells containing adequate amounts of haemoglobin.

60



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



61

Thus a function challenge for hypoxia would be

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

2. EID – Up and Down

62

Infection

63

Infection
Bacteria
Colloidal silver
Ginger
Goldenseal
Mannose
Probiotics

Infection
Virus
Activator X
Astragalus
Colloidal silver
Echinacea
Ginger
Olive leaf
Probiotics
Turmeric

64

65

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

66

Allergy
Intolerance

67

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.

68

ALLERGY
Coombs and Gell immune inflammatory responses

69

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

70

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 ?

73

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.

74

"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."

75

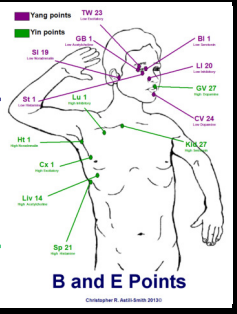
Treatment approach

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.

76

Yang points indicate neurotransmitter deficiencies.

Yin points indicate neurotransmitter excesses



77

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

78

Toxicity
Toxic metals, Chemicals, Radiation

79

Toxic metals	Radiation	Chemicals
Chlorella	Chlorella	Acetyl CoA
Coriander	Coconut	Allclear
Glutathione	Nutrient 1&2	ChemClear
NAC	Ornithine	Glutathione
Shark liver oil	Probiotics	Lemon balm
Yellow dock	Selenium Meth	Milk thistle
	Shark liver oil	NAC
	Triple zinc	Nutrient 1&2
	Eat less Omega 6 oils	Yarrow

80

Tissue repair

81

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.

82

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.

83

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.

84

Tissue Remodeling

Collagen

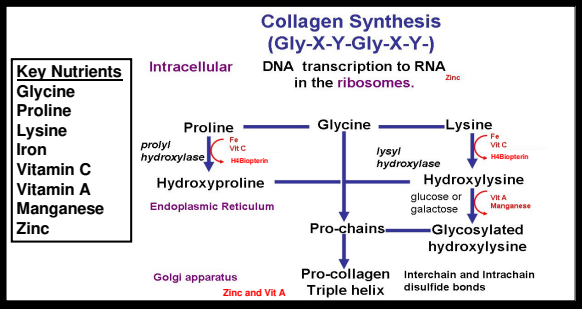
Elastin

Fibrin

85

Collagen

86



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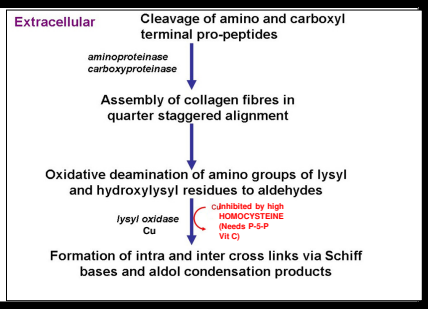
Key Nutrients
P-5-P
Vitamin C
Cu



88

Low collagen leads to a wobbly unstable hypermobile joint.

89

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, (silicia for scarring), Vit E

90

Nf

Elastin

91

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

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

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

92

It contains no hydroxyproline or hydroxylysine. The covalent cross links are formed by a lysine as in collagen and requires *lysyl oxidase,* the Cu+ 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.

93

Elastin

Positive Elastin challenge (twang test) → Challenge against

Glycine
Alanine
Valine
Proline
Copper

P-5-P

Bilberry
Vitamin K2

94

Degenerative Joint Disorders

95

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.*

96

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)

98

Crystals found in synovial fluid

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

99

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.

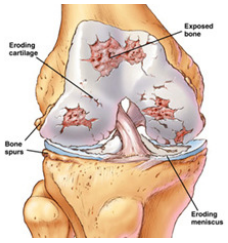
Remember use Vitamin D3 for low calcium but always use either Vitamin K2 or Vitamin D3/K2 for high calcium or Activator X.

100

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.

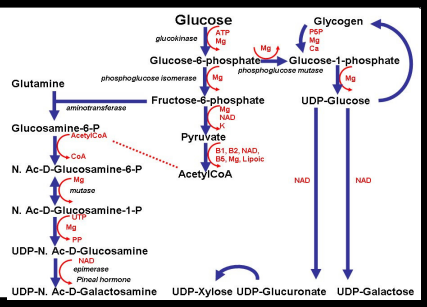
101

Glycosaminoglycans (GAGs)



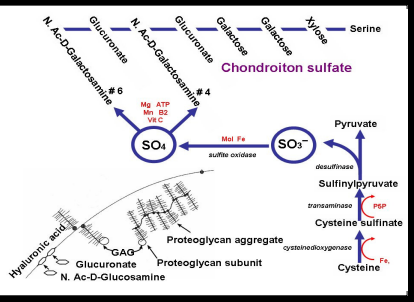
102

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



103

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



104

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

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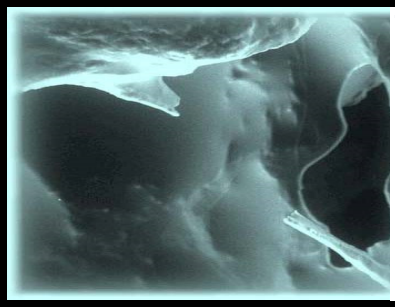
BONE

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 ($Ca_{10}(PO_4)_6(OH)_2$) confers on bone the strength and resilience required by its physiological roles.

109

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.

110

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

Positive therapy
Localisation to a bone

Tuning fork challenge

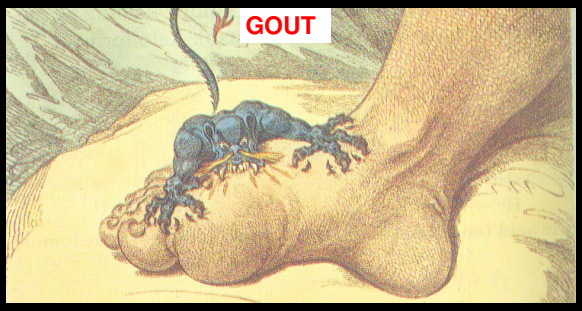
Osteopenia vial

Osteoporosis vial

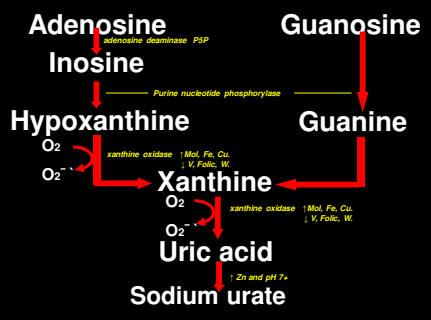
Negated by Bone meal

Challenge against
Calcium, Magnesium,
L. Lysine
Silicon (Bamboo)
Zinc, Copper
Boron (stimulates estradiol and testosterone in post menopausal women)
Vit C
Vit D3
Vit K2
Activator X

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.

116

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.

117

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Gout
Challenge against Uric acid

Nutritional and Natural Medicines

- Zinc
- Sodium bicarbonate
- Glucosamine
- MSM
- Vitamin E

- Artichoke (cynara)
- Garlic
- Silymarin (milk thistle)
- Turmeric

- Detoxify Cadmium

118

Gout diet

Grapes – Lowers acidity, Antioxidant

Bananas – Bromelain, Potassium

Cherries – Neutralizes uric acid, Anthocyanidins

119

Pineapples
Rich in potassium uric acid - urates
Bromelain – anti-inflammatory
Vitamin C – antioxidant to purines
Folic acid – tissue repair

Blueberries
Potassium
Anthocyanidins
Vitamin C

120

Strawberries
Anthrocyanidins
Vitamin C
Quercitin inhibits xanthine oxidase

121

Rheumatoid Arthritis

122

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.

123

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.

124

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

125

Natural treatments for RA

Plant oils

α-Lipoic acid
Turmeric
Cinnamon

Colon cleanse
Digestive enzymes
Prebiotics
Probiotics

126

Herbs

Ashwagandha (Withania somniferum)
Fennel (Foeniculum valgare)
Ginger (Zingiber officinale

127

Joint Products

128

Epigenetics Collagen Formula

- Glycine
  Lysine
  Proline
- Copper
- Manganese
- Folic acid
- Magnesium
- H4Biopterin factors
- NADH

129

Epigenetics Elastin Formula

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

130

Epigenetics GAG Formula

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

131

Epigenetics Glucosamine, Chondroitin and MSM Capsules

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

132

Glucosamine sulfate

MSM

133

Epigenetics Anti Inflammatory Products

134

Epigenetics Anti Inflammatory Products

135

Epigenetics Omega Oil Products

136

Epigenetics Omega Oil Products

137

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

138

Best Vitamin Ds for Pain Relief

139

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

140

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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PQ

Chemistry of Pain Test Kit

hsCRP 6x
Histamine 6x
Kinin 6x
Serotonin 6x
PgE2 6x
Lt B4 6x
Lactic acid (L + D +DL)
O2
Collagen
Elastin

IgE
IgG
IgM
Synovial fluid
Hyaline cartilage
Uric acid
Oxalate
Calcium pyrophosphate
Osteoporosis
Osteopenia