EATING AWAY INFLAMMATION
Delicious Food as Medicine

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The word **inflammation** comes from the Latin: "inflammo", meaning "I set alight, I ignite".
Inflammation is part of the body's immune response. Initially, it is beneficial when, for eg:

• You sustain an injury
• You have a wound
• You get an infection

In these situations, your tissues need care and protection.

Inflammation delivers this care.
THE 5 CARDINAL SIGNS OF INFLAMMATION

• Redness
• Warmth
• Pain
• Swelling
• Loss of function

Chronic inflammation can be asymptomatic
Outcomes

- destruction of tissue,
- thickening and scarring of connective tissue (fibrosis),
- death of cells or tissues,
- altered cell function,
- hormone dysregulation,
- neurotransmitter dysregulation
Inflammation can become self-perpetuating. More inflammation can be created in response to the existing inflammation. Mediated by immune cells. More immune cells in your brain than brain cells.
When this immune response is never "shut off," the constant production of immune cells can do permanent damage, leading to:

- cancer,
- heart disease,
- arthritis,
- mood disorders,
- neurological conditions,
- Alzheimer’s,
- gut disorders,
- allergies,
- autoimmune diseases,
- increased tendency to injury and poor injury recovery among other health concerns.
Inflammation in MIND disorders:

Inflammation ANYWHERE in the body produces immune messengers called cytokines. These cytokines cross the BBB & cause inflammation in the brain, which *alters brain functions and damages brain tissue.*
Conversely, inflammation in the brain can trigger systemic inflammation, resulting in more:

- Joint pain
- Gut problems
- Skin problems
- and more….
VISCERAL INFLAMMATION

Functional and biomechanical relationships exist between internal organs and the locomotor system.

Irritation from internal organs has consequences in the whole motor system.

Viscero-somatic relationships and its influence on spinal stabilization

Petr Bitnar (Rehabilitation and Sport Medicine Clinic, 2nd Medical Faculty and University Hospital Motol, Prague, Czech Republic)

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CAUSES OF CHRONIC INFLAMMATION

- Overweight (and insulin resistance)
- High or prolonged stress
- Pollutant exposure - air / water / food / household
- Lack of or too much exercise
- Lack of or poor quality sleep

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CAUSES OF CHRONIC INFLAMMATION

- chair sitting

- Nutrient / quality poor diet

- Allergies, sensitivities, gut and immune disorders, dysbiosis

- Chronic infections e.g. root canal, gut dysbiosis, candidiasis

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Prolonged systemic, low-grade inflammation and impaired insulin sensitivity act as a risk factor for a failed healing response.

Insulin management is essential in quelling chronic inflammation:
- Obesity, overweight, diabetes, insulin resistance, metabolic syndrome etc.

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INFLAMMATORY FOODS

- Sugar
- gluten (for min. 60% of pop)
- Refined grains
- Cooking oils (w6:w3)
- Trans fats
- Grain fed meat
- Alcohol
- Allergies, sensitivities
- Juices (shop bought)
Gluten can be looked on as a “biological door to inflammation”. It is known to increase an enzyme called **zonulin**, which controls **intestinal permeability** and **BBB permeability**. Can then result in **cross reactivity** with other food proteins resulting in multiple food sensitivities.

“Gluten sensitivity can be at times exclusively a neurological disease”

(Journal Neurology (Vol 56/No. 3 Feb 13, 2005))
gliadin has the capacity to activate cytokine production in monocytes and macrophages.

Gliadin produces potent induction of pro-inflammatory genes, indicating that gliadin and its active peptides are capable of increasing expression of a repertoire of inflammatory genes.
ANTIINFLAMMATORY FOODS AND NUTRIENTS:
TOP ANTI-INFLAMMATORY FOODS

- **Turmeric, cinnamon, ginger**, rosemary, clove, pepper, cumin, + more spices.
- **Organic Blueberries**, cherries, raspberries, acai berry
- Coconut Oil
- Green tea (adults)
TOP ANTI-INFLAMMATORY FOODS

- Vitamin D – grass fed fats & eggs, CLO, caviar
- Enzymes & probiotics: fermented foods, raw fruit + veg, pawpaw, pineapple
- Omega 3’s: Chia seeds, flax seeds, oily fish
- Cruciferous veggies
Galangal, anise, red chili, black cardamom, turmeric, licorice, fenugreek, clove, kokum, ginger, black cumin, rosemary, hop, and pinecone have always been used to improve taste and colour and as a preservative…

They are now also used for prevention and treatment of a wide variety of chronic inflammatory diseases.


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TURMERIC

3000+ studies showing the positive effect of turmeric on a range of inflammatory disorders. 1500 on cancer alone.

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TURMERIC

Anti-inflammatory
Neuro-protective
Liver supportive
Antioxidant

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Six weeks of 3 g dietary ginger and cinnamon, on consecutive days, reduced the plasma levels of IL-6 caused by eccentric exercise in female martial athletes, and 3 g of ginger also effectively reduced muscle soreness.


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GINGER

possess anti-hyperactivity and anti-inflammation on airways.


Related citations www.nourish-ed.com
Ginger, rosemary, and turmeric showed protective capacity by both oxidative protection and inflammation measures.

Paprika, rosemary, ginger, heat-treated turmeric, sage, and cumin protected against DNA strand breaks.

Clove, ginger, rosemary, and turmeric were able to significantly reduce TNF-α.


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VITAMIN D deficiency can have a profound effect on immunity, inflammation and muscle function.

Adequate vitamin D status may reduce stress fractures, total body inflammation, common infectious illnesses, and recovery from injury.


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VITAMIN D

Who needs more and why?

1. Older people, particularly those who are housebound with limited exposure to sunlight.

2. Those with a darker skin colour, e.g. Maori and Pacific Islanders, or people who are veiled.

3. Those living in the further away from equator during the winter.

4. Those working indoors
SOURCES OF VITAMIN D

- Grass fed butter
- cod liver oil
- Organic pastured eggs
- Sunshine on skin without sun cream
- Fish, esp. raw
- Caviar
CHIA SEEDS

- Rich source of anti-inflammatory ω3 fatty acids
- Improves insulin sensitivity and glucose tolerance
- Reduces visceral adipose tissue (in rats)
- Reduces cardiac and hepatic (liver) inflammation and fibrosis


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CHIA SEEDS

- potent anti-inflammatory effects on several inflammation-based models including experimental encephalomyelitis, colitis, peritonitis, oedema, and arthritis through suppression of the inflammatory mediators prostaglandins and leukotriens

Probiotic bacteria, especially the Lactobacillus species, play a significant role in the anti-inflammatory, antiviral and antimicrobial activity of a host's immune system.

Could give a whole presentation on probiotics and inflammation alone due to effects on host gut and immune function.

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ENZYMES

- E.g. Papain (pawpaw) Bromelain (pineapple)- proteolytic enzymes with anti-inflammatory function

- Found in fresh raw fruits and vegetables

- Very high in fermented foods - eg sauerkraut


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VIRGIN COCONUT OIL

Anti-inflammatory
Analgesic
Antipyretic

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CATECHINS
CATECHINS

- Green tea
- Cacao
- Garlic
- red grape skins
- blackberries, raspberries, cherries

Related compounds: quercetin, resveratrol
POLYPHENOLS

Rich in vegetables, fruits, bark, roots, tea, cacao, and wine.

- Most have antioxidant, anti-inflammatory, properties
- Protective effects on mitochondrial functioning, glutamate uptake, and regulating intracellular calcium levels in ischaemic injury


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Consumption of blueberries may be one strategy to slow or reverse age-related neuronal deficits, as well as their subsequent behavioural manifestations.

Polyphenolics lower oxidative stress and inflammation directly by altering the signaling involved in neuronal communication.


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Blueberry and cranberry exhibited the greatest antioxidant activity in studies of neuroprotective and antioxidant effects of polyphenols in foods.


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TART CHERRIES

Tart cherries appear to possess similar effectiveness to NSAIDS in treating the inflammatory reaction seen in both acute and chronic pain syndromes.


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GHEE

- Great source of butyric acid - fuel for colonocytes.
- An important role in maintaining the integrity of the intestinal mucosa, while it also has been shown to exert potent anti-inflammatory effects both in vitro and in vivo.


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Powerful anti-oxidative and anti-inflammatory properties, compared to vitamin C tablets containing equivalent vitamin C content. These effects may be due to the existence of unknown anti-oxidant substances besides vitamin C or unknown substances modulating in vivo vitamin C kinetics in camu-camu.

CACAO

- Contains more phenolic antioxidants than most foods. Flavonoids, including catechin, epicatechin, and procyanidins predominate in antioxidant activity.
- Beneficial modulation of metabolic-syndrome related inflammation by cocoa and cocoa-derived compounds.
- Vasodilatory, antioxidant, and anti-inflammatory effects.
- Can protect nerves from injury and inflammation,

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SLEEP!

Sleep deprivation or poor sleep quality raise inflammation, which in turn increase the risk of many disorders.

Sleep Quality and Duration are Associated with Higher Levels of Inflammatory Biomarkers: the META-Health Study.”

SUMMARY: EAT THESE

- Fresh live foods
- Antioxidant rich foods
- Cacao (not for kids)
- Camu camu
- Herbs and spices - cinnamon, turmeric, ginger
- Blueberries, cherries, raspberries
SUMMARY: EAT THESE

Virgin Coconut oil, ghee, chia seeds, fish, flax seed

Fermented foods, probiotics, gut flora

Vitamin C & D (&A&E)

Green Tea, polyphenols
SUMMARY: DO THESE

Improve Insulin sensitivity, lose weight
Sit less, play / move more
Address organ function
Breath deeply, meditate
Sleep!
THANK YOU!

Doctor Earth, Bondi Junction
Herbies Spices, Rozelle
GPA Wholefoods.com.au
Inside Out Nutritious Goods
Alkamax Water
THANK YOU!

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info@nourish-ed.com