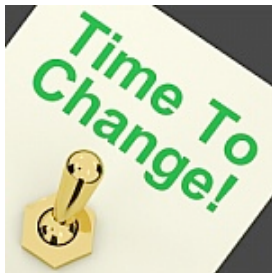


The Challenging Response of Physis to Inflammation Part 6: Healthcare and an Anti-inflammatory Lifestyle

Dr Linda Mayer and Prof Rashid Bhikha

January 2014

Background



Long term exposure to inflammatory conditions results in degenerative conditions from the building up of toxins in the body due to a compromised lymphatic system. The consequences to an individual's overall wellbeing cannot be underestimated, therefore interventions should be adopted to prevent, reverse and eliminate degenerative diseases.

Interventions would include adopting a healthy lifestyle and to assist Physis to maintain a harmonious balance between the physical, emotional, mental, social and spiritual factors. Particular attention needs to be paid to diet, by substituting anti-inflammatory foods for pro-inflammatory ones instead, and taking into consideration the unique temperamental needs of each person.

Interventions for an Anti-inflammatory Lifestyle

A healthy lifestyle includes the six lifestyle factors which Tibb incorporates into its ethos as being fundamental and responsible for creating and maintaining the humours and temperament of the body. These lifestyle factors include: environmental air and breathing, food and drink, exercise, sleep and rest, emotions, and elimination and retention.

1. **Do not interfere with the Physis response**

The management of inflammation must always consider the natural innate healing response of Physis, with the primary aim of assisting Physis in the recuperative stages of healing, and not to undermine or slow down this process. It may be a natural reaction to immediately reduce any swelling or pain with anti-inflammatory drugs, which would interfere with the ability of Physis to restore natural healing.

2. **Identify the cause**

The source of the inflammation needs to be found by identifying the trigger factors which cause the inflammation. Tibb searches for the underlying causes for any humoral changes and imbalances. When the causes has been established the body's natural immune balance needs to be assisted, by providing it with the necessary conditions to aid its recovery, and preventive measures to prevent its reoccurrence.

Ascertain the cause of any allergic reaction by testing the blood for C-reactive protein. It measures the degree of hidden inflammation in the body, such as heart disease, cancer, obesity, dementia, arthritis, autoimmune disease, allergies, and digestive disorders.

Management and treatment of illness condition with lifestyle factors aims at treating the underlying cause and re-establishing the internal balance and harmony.

Therefore treatment with opposites is advised. If something is too hot, it should be cooled; if it is too dry, moisture is added.

3. **Environmental air and breathing**

Tibb recognizes the intimate relationship that exists between the individual and the environment. The existence and wellbeing of an individual depends on the continuous interaction and adjustment between their internal and external environmental factors.

In summer a person with a Bilius temperament needs to increase the intake of water to sustain hydration, and keep cool, while a person with a Melancholic temperament will not be so affected by the heat of the sun, provided that the heat is not too intense, which would increase the qualities of dryness.

One should take care not to drink too many cold drinks nor eat too many cooling foods when the weather starts changing.

In winter the cold, wet weather aggravates phlegm, and increases the vulnerable to develop coughs, colds and lung congestion. Caloric intake needs to be higher in

winter in order to increase energy levels to keep the body warm. Nutrition rich foods are also recommended, like dates and dried fruits. Cold foods and drinks should be avoided and one should drink warm water and ginger tea.

Normal rhythmic breathing is cooling and moistening. This is necessary to balance the heat and dryness related to the continuous movement of the heart.

Keep the humidity level in your house somewhere between 30 to 50 per cent. When you do this it doesn't allow the mucous membranes in the nose to dry out, thus protecting the cilia, the fine hairs that line the nose and act as barriers to keep germs from penetrating the body.¹

4. Food and drink

“The origin of illness is in food; diet is the main medicine.”¹⁶ Diet is one of the oldest and most respected healing agents, as, according to the Hadith, the stomach is regarded as the central basin of the body and the origin of many diseases.¹⁵

The humours are the primary fluids that are manufactured from the digestion of food and drink, which are processed and transformed in the liver. Any dysfunction in the liver will affect the quantitative and qualitative balance of the humours.

Excessive intake of food and drink with the same qualities as the dominant qualities associated with a person's temperament will increase the respective humour the fastest and the most. For example: A person with a dominant Bilious (Hot & Dry) temperament will be much more affected by foods which have qualities of heat and dryness, such as chicken, onion and green and red peppers. Hot and dry foods which are pungent, spicy, seasoned or bitter, would also affect the Bilious temperament the most, because, of the qualities of heat and dryness.

The unique temperament of an individual enables one to predict who is more predisposed to certain illnesses conditions. This enables one to balance the qualities of heat, moistness, coldness and dryness by making the right lifestyle choices, especially concerning nutrition and the intake of tissue salts. **“Let food be thy medicine and medicine be thy food”** (Hippocrates).

Inflammation is only part of the defence mechanism the body employs in an attempt to heal itself. White blood cells are produced in abundance, and require fuel, in the form of saturated fat and cholesterol, both for cell formation and repair.²

Particular attention needs to focus on the glycaemic load. This incorporates the glycaemic index as well as the portion of food:

The glycaemic index: measures the blood glucose levels during two hours after consuming food. The speed at which a particular food increases the blood glucose level varies, for example: carbohydrates, such as white rice, causes a more rapid rise in blood sugar levels, whereas pasta and legumes results in a slower rise in blood sugar levels.

The glycaemic load: considers both the glycaemic index of a food as well as the serving size, in order to give a more practical indicator of the effect of that food on blood glucose.³ Foods with a low glycaemic index are considered to be healthy foods, such as whole grains and cereals, fruit and vegetables and legumes.

- **Whole foods:** high in fibre, which are unprocessed, unrefined, real food and high in powerful anti-inflammatory plant chemicals called phytonutrients.⁴
- **Monounsaturated fats:** such as avocados, walnuts, almonds, pecans and Brazil nuts (also a plant-based protein source), rice bran oil, grape seed oil and walnut oil.
- **Fruit and vegetables:** such as green and bright coloured vegetables and fruits, such as blueberries, strawberries, broccoli, spinach, squash and carrots. These are rich in vitamins, minerals, fibre, antioxidants and phytochemicals.
- **Protein sources:** Nuts, lean poultry and fatty fish (includes omega-3 and protein). Plant-based protein sources are found in legumes, nuts and seeds, as well as soy and soy foods, such as tofu.
- **Take probiotics** (“good bacteria”) daily to help your digestion to improve the healthy bacteria in your gut which reduces inflammation, such as Bulgarian yogurt.⁵

Anti-inflammatory Diet

Ginger (*Zingiberofficinale*) has many medicinal qualities, which have been used as a medicine in Graeco-Arabic, Islamic and Chinese medicine for more than 2000 years. The stem, or rhizome, of the plant was used during this time to aid digestion and to treat stomach upsets, nausea and diarrhoea.¹⁵

Modern usage s of ginger include: regulating blood sugar and increasing circulation. It enhances the absorption of other herbs, and its antioxidant effects strengthen the cardiac muscles and lowers serum cholesterol. It treats constipation and diarrhoea, and it relieves nausea.⁶ Ginger is also used as a digestive aid for mild stomach upset,

In Tibb ginger has qualities of **heat** which is beneficial for colds and flu, and, together with other ingredients, is aimed at restoring a person’s temperament, by **increasing heat in the body**, thus supporting inflammatory conditions, such as arthritis. Oils with Black Seed, Eucalyptus, Camphor and Menthol can be rubbed on the body to bring heat back into the body.

Turmeric (*Curcuma Longa*) is part of the ginger family, and it has many uses, including: clearing infections and inflammations on the inside and outside of the body, because of its qualities of **heat**, and expulsive properties to remove toxins.

- Doctors at UCLA recently found that curcumin, the main component in turmeric, appeared to block an enzyme that promotes the growth of head and neck cancer.
- Dr. Randy J. Horwitz, the medical director of the Arizona Centre for Integrative Medicine states that “Turmeric is one of the most potent natural anti-inflammatories available”.

The University of Maryland’s Medical Centre also states that turmeric’s powerful antioxidant properties fight cancer-causing free radicals, reducing or preventing some of the damage they can cause.⁷

Garlic (*Allium sativum*) is one of the most powerful healing foods, which was used for its medicinal value more than 5000 years ago, according to Sanskrit records.¹⁵ Garlic (and onions) are rich in phytonutrients, and its properties include: boosting immunity to fight disease, due to its **antibiotic** and **anti-inflammatory qualities**, and its ability to detoxify the body by eliminating toxins. There is evidence to suggest a link between garlic consumption and cancer prevention.⁸ Garlic has also been widely used for colic pain, flatulence and dyspepsia.¹⁵

Garlic has qualities of **heat**, which may cause profound sweating, and its properties of diaphoresis plays an important role in the expulsion of waste products/toxins through the skin, especially if the kidneys are poorly functioning.¹⁵

The olive (*Olea europaea*) is a species of the family, Oleaceae. **Olive oil** is full of polyphenols, a type of antioxidant that helps protect the cells of the body from damage, and certain polyphenols also have anti-inflammatory properties. Research conducted by the New England Journal of Medicine concluded that people who are at high risk of cardiovascular disease had reduced incidences of major cardiovascular events when consuming a Mediterranean diet supplemented with extra-virgin olive oil or nuts.⁹

The olive leaf is the first herb cited in the Bible as a natural remedy, and its therapeutic uses date back thousands of years from the time of the ancient Egyptians. The Hadith is quoted to have said: “eat olive oil and massage it over your bodies, since it is a holy (Mubarak) tree.”¹⁵

The greatest therapeutic benefits of the olive leaf include Oleuropein and its hydrolysis products, which has qualities of **heat**, and its **vasodilator** effects

increases blood flow in the coronary arteries. Other medicinal properties include antimicrobial action against viruses, bacteria, fungus and other parasites. It also inhibits the aggregation of plaque formation, as well as having properties of antiaging, antioxidants, antibiotics and immunostimulants.¹⁵

Berries are high in antioxidants and they have anti-inflammatory properties. Blackberries, for instance, contain high quantities of tannins in the root, which produce an astringent effect, especially in the mucous membranes of the digestive tract. These tannins can help to constrict blood vessels, thereby controlling minor bleeding when used with a poultice. A blackberry root tea or tincture can be used for dysentery, diarrhoea, haemorrhoids and other intestinal disorders. It can also be used as a gargle for sore throats, inflamed gums and mouth ulcers. Its antioxidant properties can help to control free radicals.¹⁰

Tart cherries: Oregon Health & Science University researchers suggested that tart cherries have the “highest anti-inflammatory content of any food.” Other research has shown that tart cherries can help athletes improve their performance and reduce their use of anti-inflammatory pain meds.

Beets have good antioxidant properties, which have also shown to reduce inflammation, as well as protect against cancer and heart disease. Beets were used by the ancient Romans as an aphrodisiac, because of its high content of boron, which is related to the production of human sex hormones. Beets are a high source of energy, and contain a high amount of vitamins A, B and C, potassium, magnesium, phosphorus, beta-carotene, and folic acid. It is a good tonic for the liver, and it purifies the blood. Beets contain tryptophan, which relaxes the mind, and it also can assist in lowering blood pressure.¹¹

Tomatoes contain lycopene, which gives it its red colour, and it is a powerful antioxidant, and its properties of lycopene aid in the fight against cardiovascular disease and it lowers cholesterol. Tomatoes have shown to lower the risk of certain cancers. It contains nutrients such as vitamin K, which assists in bone formation, as well as chromium and biotin which may improve diabetes and nerve functioning. Riboflavin assist with energy metabolism and fights against migraine headaches.¹²

Peppers of the sweet bell variety have minimal heat, and are thus recognised as being vegetables instead of spice. Hot peppers, such as chili and cayenne, are rich in capsaicin, a chemical that is used in topical creams that reduce pain and inflammation. Red peppers are rich in vitamins A and C, which contain antioxidants, which neutralise free radicals in the body, thereby reducing the risk of illness and disease. Peppers also contain lycopene, a nutrient known to decrease the risk for

ovarian and other cancers. Peppers contain lutein and zeaxanthin, nutrients which help prevent eye diseases, such as cataracts and macular degeneration.¹³

Low fat dairy products may trigger inflammatory diseases in some people, such as rheumatoid arthritis, because of their intolerance to casein, a protein present in dairy.

Soy comes from the soy bean. It contains isoflavones, which are oestrogen-like compounds which may lower C-reactive proteins and inflammation in women. Isoflavone improves circulation by increasing the flexibility of the arteries, which is beneficial for high cholesterol and preventing diseases of the heart and blood vessels. The potassium content counteracts sodium, which is beneficial for fluid retention, and, together with magnesium, is useful for hypertension. Soy is high in calcium and phosphorus, which has benefits for people with osteoporosis.¹⁴

Nuts contain antioxidants, which assist the body to fight off and repair the damage caused by inflammation. Almonds are a good source of inflammation-fighting healthy fats, which are rich in fibre, calcium, and vitamin E. Walnuts have high amounts of alpha-linolenic acid, a type of omega-3 fat.

Dark leafy green vegetables contain vitamin E, which protects the body from pro-inflammatory molecules, called cytokines. Examples of leafy greens include spinach, kale and broccoli. Dark greens and cruciferous vegetables also tend to have higher concentrations of vitamins and minerals, such as calcium, iron, and disease-fighting phytochemicals than those with lighter-coloured leaves.

Whole grains contain both the fruit and seed of the plant, comprising of the bran, the germ and the endosperm. The outer layer of the whole grain is the bran, which contains fibre and large quantities of vitamin B. The fibre reduces levels of C-reactive protein, an anti-inflammatory agent. The germ is actually the embryo of the seed and contains unsaturated fat, vitamin E, some protein, minerals and B vitamins. The endosperm contains carbohydrate and protein with some B vitamins.¹⁵

Fatty fish, such as salmon, mackerel, tuna and sardines, are high in omega-3 fatty acids, which have been shown to help reduce inflammation.

5. **Exercise**

The type of exercise will depend on the type of temperament of the individual. In order to maintain good health, a balance of movement and rest is essential, as it affects the overall heat and moistness that is associated with each temperament. The extent of exercise and rest depends on the type of temperament of person. For example:

- A person with a dominant Sanguinous (Hot & Moist) and subdominant Phlegmatic temperament (Cold & Moist) will be less affected by strenuous exercise, as there are adequate levels of moisture to balance the increases levels of heat.
- However, a person with a Melancholic (Cold and Dry) and subdominant Bilious (Hot & Dry) temperament will be more affected by strenuous exercise, due to the increase in heat and dryness, which could result in hyperthyroidism from regular strenuous exercise.

6. **Sleep and rest**

Sleep increases coldness and moistness in the body. During sleep the body temperature drops, blood pressure decreases, and breathing and heart rate become slower. Too much sleep results in an excess of coldness and moistness, whereas too little sleep reduces these qualities. The amount of sleep is dependent on each person's ideal temperament.

7. **Emotions**

Anger and its associated emotions of resentment, frustration, irritability and bitterness, have qualities of heat with dryness. These emotions are connected to the Liver, the Gall bladder, the Heart and the Brain. A person with a Bilious temperament (Hot & Dry) will be more influenced by the negative effects of the intensity of anger, due to its similar qualities of heat and dryness. If these emotions are long-lasting, it can be harmful to the liver, by stimulating it excessively, thereby reducing the functioning of the immune system, and predisposing the individual to inflammatory conditions, with a poor inflammatory response and outcome.

As humours are produced from food and drink in the liver, any dysfunction in the liver will alter the quality of the humours produced. The liver, functions optimally with an ideal level of heat and moistness. If disturbed the production of humours are compromised even if an ideal or balanced diet is consumed. The liver is often compared to a cooking pot. If the cooking pot is too hot, it burns the food; if the pot is too cold the food remains raw and uncooked. Similarly if heat is in excess in the liver, the humours produced will be excessively hot and dry and can completely oxidize/burn the humours towards coldness and dryness. If the level of heat is insufficient due to an excess of moistness, the humours will tend towards coldness and moistness. These pathways will affect the quality of the humours manufactured.

Reduce stress by engaging the vagus nerve, the powerful nerve that relaxes the entire body and lowers inflammation, for example: yoga, meditation, deep breathing, or taking a hot bath.

8. **Elimination and retention**

If the body accumulates toxins many diseases will occur, such as allergies, particularly in spring time, due to the increase in the Phlegmatic humour, and weakening of the digestive activity. Spring is the best time for detoxification because nature is already trying to clear out these toxins. A diet rich in light meals like soup with heating herbs and spices is encouraged to assist the body in the elimination of accumulated phlegmatic humour.

Summary

By recognising the relationship between the individual and the environment, as well as the interrelationship between the lifestyle factors and health and wellbeing, the necessary precautions and interventions can be implemented expediently to prevent degenerative diseases and further complications.

By understanding the unique temperament of an individual, one is better equipped to balance the qualities of heat, moistness, coldness and dryness, by making the right lifestyle choices, especially concerning nutrition. The reduction of stress factors (highlighted in part 3), as well as getting the appropriate amount of exercise, sleep, fresh air and keeping the bowels regular, will enable the body to function at its optimal capacity.

References

1. Laringo (no surname), (2012). How To Keep Your Immune System Strong. [Online]. Available <http://laringo.hubpages.com/hub/Keep-Your-Immune-System-Strong>
2. Dean, J. (2011). *Hyperbaric oxygen and inflammation*. [Online]. Available http://www.foodsmatter.com/natural_medicine_comp_therapies/oxygen_therapy/articles/oxygen_inflammation.html
3. Warshaw, R.D. (2010). *What Do Glycaemic Index and Glycaemic Load Mean?* [Online]. Available <http://www.diabeticlivingonline.com/food-to-eat/nutrition/what-do-glycemic-index-and-glycemic-load-mean>
4. Bauer, B. (2013). *Buzzed on Inflammation*. *Mayo Clinic Health Letter*. [Online]. Available <http://healthletter.mayoclinic.com/editorial/editorial.cfm/i/163/t/Buzzed%20on%20inflammation/>
5. Jetvig, S. (2013). *Anti-Inflammatory Foods*. [Online]. Available <http://nutrition.about.com/od/dietsformedicaldisorders/a/antiinflamfood.htm>

6. Whitney, M. (2013). *Ginger: The benefits of the use of ginger in herbal preparations. Medicinal Qualities of Ginger.* [Online]. Available http://www.herballegacy.com/Whitney_Medicinal.html
7. Evans, A. (2012). *The amazing health benefits of turmeric.* [Online]. Available <http://www.mnn.com/food/healthy-eating/stories/the-amazing-health-benefits-of-turmeric>
8. Gucciardi, A. (2012). *5 Powerful Healing Properties of Garlic.* [Online]. Available <http://naturalsociety.com/5-powerful-healing-properties-of-garlic/>
9. Estruch, R., Ros, E., Salas-Salvado, J., Covas, M.A, et al (2013). *N Engl J Med* 2013; 368:1279-1290 [Online]. Available <http://www.nejm.org/doi/full/10.1056/NEJMoa1200303?query=OF>
10. Whittemore, F. (2010). *Medicinal Uses for Blackberries.* [Online]. Available <http://www.livestrong.com/article/96500-medicinal-uses-blackberries/>
11. Dumas, K. (2012). *6 Health Benefits of Eating Beets.* [Online]. Available <http://www.fullcircle.com/goodfoodlife/2012/05/10/6-health-benefits-of-eating-beets/>
12. Teta, K. (2013). *Tomatoes and Tomatoe Products as Medicine.* [Online]. Available <http://www.metaboliceffect.com/tomatoes-and-tomato-products-as-medicine/>
13. Hardiman, M.G. (2013). *Top 5 Health and Wellness Benefits of Peppers.* [Online]. Available <http://voices.yahoo.com/top-5-health-wellness-benefits-peppers-12134102.html>
14. No author. (2013). *Food and Medicinal Properties of Soy.* [Online]. Available <http://www.botanical-online.com/english/soy.htm>
15. Pagano, A.E. (2006). *Whole Grains and the Gluten-Free Diet.* [Online]. Available <http://www.medicine.virginia.edu/clinical/departments/medicine/divisions/digestive-health/nutrition-support-team/nutrition-articles/PaganoArticle.pdf>
16. Chishti, G.M. (1991). *The Traditional Healer's Handbook. A Classical Guide to the Medicine of Avicenna.* USA: Healing Arts Press.