

# Physiological Fire Alarm

## The concept of heat

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### The Fire Element

According to Indian philosophy, the five elements Space, Air, Fire, Water and Earth play an equally important role in the manifestation of the physical universe. Yet Fire, centrally positioned among the five elements, is probably the most fascinating and awe-inspiring of them. Neither can it be touched nor may its fiery power be directly experienced except at a safe distance. When early humans discovered ways to control and make use of fire, civilisation took a revolutionary step forward. Every culture and religion since has appreciated the transformative nature of fire and employed it in ceremonies, rituals and celebrations of change.

### Pitta Dosh

Ayurveda views the five elements and their vital expression in living beings through the concept of *tridosha*. Here, the fire *dosha* (*pitta*) is also centrally placed, similar to the five element theory, thus equally marking the transition point between spaciousness and physicality. However, *pitta* does not simply equate to the fire element, because it represents the combination of both fire and water. The harmonious amalgamation of such diametrically opposed and mutually extinguishing elements into one united force is nothing short of a 'miraculous' tantric *samskar*\*. *Pitta* is thus imbued with the power of transmutation and can be considered, symbolically, the alchemist among the *doshas*. As the interactive mediator between dense and subtle matter, *pitta* transforms the gross external universe into the delicate inner world of living beings, and in so doing maintains the perpetual exchange and interrelatedness of macrocosm and microcosm.

\* *Samskar* = Sanskrit for a process of transmutation. Tantric practitioners employ occult rituals or practices to achieve astonishing transformative results, which may, to the uninitiated eye, appear 'miraculous'.

### Pitta & Agni

In physiological terms, *pitta* represents the metabolising *dosha*. While *kapha* is responsible for all anabolic and *vata* for all catabolic processes, *pitta* ensures that the body's balance between the *doshas* of creation and destruction is maintained. In order to describe *pitta's* function on cellular levels more precisely, Ayurveda employs another fire concept: that of *agni*. It offers an understanding of specific metabolic activities in the GI tract, the liver and all other tissues. *Agni* represents a metabolising fire like *pitta*, but there is an important qualitative difference: while *pitta* is liquid due to its water element content, *agni* is dry. In other words, *agni* can be defined as that part of *pitta*, which is devoid of *drava guna* (fluid quality).

This simple distinction is of major significance in the clinical context, because it explains why a systemic rise of *pitta dosha* in the body causes *agni* dysfunction. It is often mistakenly assumed that increased *pitta* always leads to faster digestion or stronger metabolism, but the opposite is usually true. If *pitta* and its fluid quality are increased excessively, *pitta* acts like a 'hot liquid' that simply 'floods' *agni*. This deprives the latter of its inherent dryness and extinguishes it – just like a

bucket of hot water would if poured over a fire. Hence, excess *pitta* results in a decline of digestive capacity and is often associated with symptoms of gas, bloating, acidity, fullness or tiredness after food. It then leads to *ama* formation and the build up of undigested material in the GI tract, which diminishes *agni* even further.

Examples of foods that can cause a rise in liquid *pitta* are tomatoes, vinegar, oranges, mangoes, fish and fermented foods. Tomatoes, for instance, are hot and wet in nature and therefore *pitta*-increasing yet *agni*-depleting. They may well contain antioxidants, but because of their adverse effect on *agni*, they actually are best avoided. Chillies on the other hand are hot and dry, and should theoretically stimulate *agni*. They are, however, so extreme in action, that their regular intake leads to a drastic increase of *vata*, which in turn 'blows' out *agni* like a hot desert wind. In fact, chillies have such a strong potency, that they should be used medicinally rather than as a spice. In contrast, black pepper is also hot and dry, but its action is not drastic and therefore stimulating to all *agnis* in the body.

The concepts of *pitta* and *agni* are excellent for understanding all physiological functions governed by the fire element in a living organism. However, the fire element also has impacts on the body that cannot be sufficiently explained with these two concepts alone. The Ayurvedic classics do not mention it, but there is another fire concept, discovered by traditional *vaidyas* (doctors) through careful observation, that offers practical insights into further actions of the fire element and their clinical consequences.

### The Concept of Heat

Being composed of mainly fire element, *pitta* naturally has a hot quality, which is transferred to all tissues in order to create the body's homeostatic temperature of 37°C. It follows that any excess of *pitta* should therefore lead to an abnormal rise in body temperature. However, the temperature regulatory system in the brain prevents this by initiating mechanisms that dissipate excess heat, such as increased

excess *pitta* gradually heats up tissues without raising systemic body temperature. Obviously, this heat is not measurable with a thermometer, but can be easily detected through pulse reading as a sensation of abnormal warmth or actual heat radiation from the skin in the pulse area. The presence of tissue heat can also be deduced in people who wear light summer clothing in the winter without feeling cold. Although the Ayurvedic classics do not mention the concept of heat, it is an important practical concept that can help Ayurvedic practitioners understand and effectively deal with many complex health issues of today.

### Causes for Heat

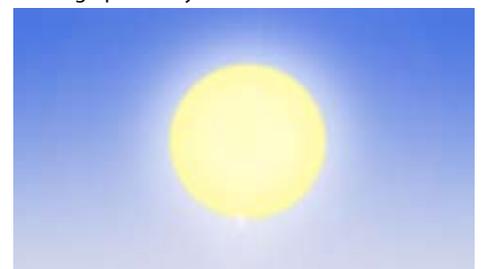
There are various aetiological factors that can lead to a build up of heat in tissues, such as external causes like global warming, chemical pollution, prolonged exposure to strong heat sources (ovens, furnaces etc.) and ingestion of heating substances (medical and recreational drugs, alcohol, cigarette smoke etc.). *Pitta*-increasing foods that deplete *agni* and raise acidity levels in the body are also heat inducers. Most sour foods fall into this category, with the notable exception of lemons: used in moderation, these tend to stimulate *agni* and do not cause heat due to their sweet post-digestive effect. The Indian fruit kokum (*Garcinia indica*) is another example of an excellent souring agent that does not increase heat; it actually is a *pitta* reducer and blood cleanser. Kokum was widely used in traditional Indian cooking, but unfortunately substituted when tomatoes were introduced to the subcontinent.

Suppressing or inappropriately expressing emotions is an internal cause for manifestation of heat. Although they may seem more subtle, feelings are equally powerful in producing physical heat in tissues. If 'hot' emotions like anger, fury or rage are not constructively dealt with, i.e. allowed to be fully felt and experienced, they get stuck deep inside and fester at the core of our being. According to Ayurveda, body, mind and emotions are an interrelated trinity, and so these trapped feelings confer their hot

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sweating, fluid intake, urination or heat radiation from the skin. Homeostatic temperature is thus maintained, but unless the excess of *pitta* is removed from the body, the excessive transfer of heat to the tissues continues, which in turn keeps the above-mentioned 'cooling' mechanisms continuously operative. This process drains considerable energy from other body systems. Also, tissues cannot function at optimum levels when they get too hot. Imagine being in a green house on a hot summer's day: after a short while you feel tired, drained and in need for cooling. Therefore, people with excess *pitta* ultimately experience lowered energy levels, fatigue, weakness and exhaustion. In order to keep up with the demands of their lives, they need to push themselves and often operate from will power rather than physical reserves.

In short, the concept of heat states the following:



## Heat & Allergies

*Kapha dosha* represents stability, earthiness and grounding. It provides physical strength, resistance, *ojas* and immunity. Being cold in nature, *kapha* gets automatically diminished when *pitta* and heat are increased in the body. Hence, heat decreases immunity (which is why food keeps longer in the fridge than in the sun). The growing worldwide incidence of immunocompromised conditions like allergies is directly associated with the global rise in heat caused by environmental pollution and the use of chemical substances.

From an Ayurvedic point of view, two main factors are responsible for producing allergic responses in the body: heat and blood toxicity. When an increase of *pitta* results in *agni* depletion, a particular type of *ama* is created that is associated with *pitta* and *rakta dhatu* (blood). This so-called *samapitta* makes the blood impure, slightly thicker and sluggish. Chemical substances and their metabolites have a similar effect on the blood; they also create haemotoxicity. In conjunction with immunocompromising tissue heat, such 'hot' toxicity causes pathophysiological blood function and then leads to abnormal or allergic immune responses.

Allergies affecting the respiratory system have a third aetiological factor: mucus or *bhej* (for an explanation of the concept of *bhej* see Prana Issue 2 / Winter 2008). Whenever chronic mucus, which is improperly formed *kapha*, is present in the respiratory tract, conditions such as cough, cold, flu or bronchitis can easily develop. If

mucus, however, coincides with tissue heat and blood impurity, an allergic component is added, which results in the development of immunopathologies like hay fever or allergic asthma.

## Treatment of Heat

The elimination of heat is essential in order to restore immunity, resistance, energy and stamina. Simple *shamana* (*dosha*-balancing) treatments are usually insufficient here, because the heat needs to be actually removed from the body, for which *shodhana* (expelling) methods are required. Obviously, *virechana* (purging) as part of *panchakarma* is the ideal solution, as it effectively eliminates heat and *samapitta* (toxic *pitta*) from tissues, swiftly returns *pitta* to normal levels and also restores the healthy function of *agni*. But if *panchakarma* is not possible, heat can also be reduced by means of *nitya virechana*: little by little. For this purpose, mild purgative remedies such as Avipattikara Churna should be given daily. These do not cause drastic eliminations and the elaborate *panchakarma* preparations are therefore not required. If such treatment is continued for long enough, tissue heat can be completely removed.

As a home remedy, 25 raisins soaked overnight in a cup of water, blended in the morning and enjoyed before breakfast are a system-cooling and refreshing start for the day. Fresh coriander leaves are also *pitta* and heat-reducing as well as *agni*-stimulating. Turmeric is the best blood cleanser and essential for the treatment of all allergic conditions. Another excellent remedy for *pitta* correction and heat reduction is fresh

organic Aloe Vera juice.

When physical heat has manifested as a result of suppressed or inappropriately expressed feelings, emotional process work in addition to *virechana* (purgation) is indicated. In order to remove the actual causative factors, any underlying issues or traumas need to be worked through, completed and healed. Otherwise the heat will continuously reoccur even though it is being removed from the tissues by physical means.

The correct diagnosis and effective treatment of tissue heat are important clinical aspects of Ayurvedic practice today. Our world – both internally and externally – is currently in a process of gradual heating up; the cooling of our life systems is therefore crucial in order to create health and sustainability.

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Trivrut (*Operculina turpethum*), the major ingredient of avipattikar powder

## Pukka product review



Our delicious organic Virgin Coconut oil is expressed from freshly harvested coconuts over 24 hours. The water separates from the oil which is then slightly heated to remove moisture, and filtered. The result is a clear coconut oil that retains the distinct scent and taste of the coconuts.

It consists of about 90% saturated fat with 5.8% monounsaturated fatty acids, and 1.8% polyunsaturated fatty acids. However, what is so wonderful about coconut oil is that it contains predominantly easy-to-digest medium chain fatty acids which are known to increase metabolism and promote weight loss. It is also very easy to digest, going directly to the liver where it is transformed to release energy. Interestingly it has been shown to reduce total cholesterol, triglycerides, phospholipids, LDL, and VLDL cholesterol levels and increase HDL cholesterol. This helps to protect the health of the arteries and the heart. Populations that eat large percentages of their diet as coconuts do not display elevated cholesterol levels.

Coconut oil promotes a healthy thyroid function, reduces oxidative damage, improves the quality of cell membranes, assists liver function and helps to heal the intestinal lining. It's anti-fungal, bacterial and viral properties help to clear *Candida albicans* infections as the caprylic, lauric and capryl acids all inhibit the yeast. It greatly improves the absorption of fat soluble Vitamins and also calcium and magnesium.

Coconut oil has a long shelf life lasting up to two years due to its resilience to high temperatures, because of this high smoke point coconut oil is excellent for cooking with.

## Recipe

### Sunny coconut fennel flapjacks

200g rolled oats  
100g virgin coconut oil  
50g maple syrup  
50g sunflower seeds  
50g dessicated coconut flakes  
2 tablepoons fennel seeds

Melt virgin coconut oil over a low heat. Remove from heat and add rolled oats, maple syrup, coconut, sunflower seeds and fennel seeds. Place in oiled baking tray. Heat at 200C for 20-25 mins. Allow to cool, divide, share.

