

# Understanding Nutrition in Chinese Medicine

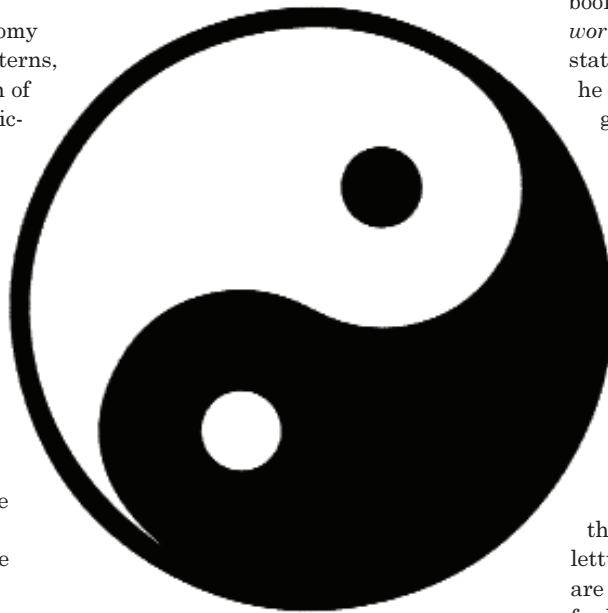
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## Changes in Global Nutrition

Changes in the world food economy are reflected in shifting dietary patterns, for example, increased consumption of energy-dense diets high in fat, particularly saturated fat, and low in unrefined carbohydrates. These patterns are combined with a decline in energy expenditure that is associated with a sedentary lifestyle: motorized transport, labour-saving devices in the home, the phasing out of physically demanding manual tasks in the workplace, and leisure time that is preponderantly devoted to physically undemanding pastimes. Because of these changes in dietary and lifestyle patterns, chronic non-communicable diseases (NCDs), including obesity, diabetes mellitus, cardiovascular disease (CVD), hypertension and stroke, and some types of cancer are becoming increasingly significant causes of disability and premature death in both developing and newly developed countries.<sup>1</sup>

It has been calculated that in 2001, chronic diseases contributed to approximately 60% of the 56.5 million total reported deaths in the world and approximately 46% of the global burden of disease. The proportion of the burden of NCDs is expected to increase to 57% by 2020. Almost half of the total chronic disease deaths are attributable to cardiovascular diseases; obesity and diabetes are also showing growing trends, not only because they already affect a large proportion of the population, but also because they have started to appear earlier in life. It is clear that the earlier labelling of chronic diseases as 'diseases of affluence' is increasingly wrong, as they emerge both in poorer countries and in the poorer population groups in richer countries.<sup>1</sup>

All essential nutrients must be present in our diets in certain quantities if we are to remain healthy. A shortage of any one of these essential nutrients will lead to adverse symptoms, often a characteristic deficiency disease.<sup>2</sup> In 1991 the COMA



report devised a general term known as Dietary Reference Values (DRVs) as the RDAs were misinterpreted as the minimum requirement of value needed in a diet rather than its true meaning of representing a safe zone. However, both references values are pitched against healthy people and make no allowances for ill health.

## History of Nutrition in Chinese Medicine

Nutrition lies at the heart of Chinese medicine. It is where the concept of *Qi* first originated. *Qi* is the master template from which all life derives. From *Qi*, came Yin and Yang and then everything else. *Qi* is defined as air, gas or vapour that is seen whilst cooking a bowl of rice over a fire. Theory of nutrition in Chinese medicine has not changed for over a millennium. The origins of nutrition theory are unknown, as its invention came before methods of recording such as writing, but it is thought to have occurred some time after the discovery of fire. Later during the *Shang* dynasty (c.17th century – c.11th century BC), the first records were scratched onto bones and turtle shells. During the *Tang* dynasty (618-907), Sun Simiao wrote the famous

book *'Food Therapy' in Prescriptions worth a Thousand Gold*, in which he stated: "Before a doctor treats a disease, he must be sure of the cause and pathogenesis of the disease, then treat the patient with diet before using any medications."<sup>3</sup>

## Classification of Foods in Chinese Medicine

Within Chinese medicine, every food is classified as having a particular nature; cold, hot, warm, cool and neutral.

Generally speaking, foods that take longer to grow, such as carrots, parsnips, cabbage and ginseng, are more warming than those that grow quickly, for example lettuce, radish and cucumber. Raw foods are more cooling than cooked food, whilst food eaten cold is also cooling. Foods with blue, green or purple colours are usually more cooling than similar foods that are red, orange or yellow, for example a green apple is more cooling than a red one.<sup>4</sup>

Chinese medicine believes that the seasons have a profound cyclical effect on human growth and wellbeing, in which we are influenced by climatic changes, and should live in harmony with them.<sup>4</sup> Flavour is very important as it aids in sending nutrition via the meridians to a corresponding organ. The five flavours of foods are: pungent (acidic), sweet, sour, bitter, and salty. Pungent and sweet are considered Yang as they tend to be warming and direct energy outward and higher in the body. Sour, bitter and salty are considered to be Yin and cooling as they conduct energy lower and inward.

Each flavour corresponds to a paired set of internal organs:

- Sour flavour enters the Liver and Gallbladder;
- Bitter flavour enters the Heart and Small Intestine;
- Sweet flavour enters the Spleen and Stomach;
- Pungent flavour enters the Lung and Large Intestine;
- Salty flavour enters the Kidney and Bladder.

Flavour	Nature	Action	Symptoms	Foods
Pungent (acrid, spicy, hot, aromatic)	Yang	Stimulates digestion, induces sweating	Good for sluggishness and lethargy	Spearmint, rosemary, scallion, garlic, onions, cloves, ginger, hot peppers, mustard
Salty	Yin	Improves digestion, detoxifies the body, purges the bowels, softens lumps	Good for hardened lymph nodes, cataracts, constipation, abdominal swelling and pain	Salt, seaweed (kelp, kombu, bladderwrack, pulse, etc), barley, millet
Sour	Yin	Astringing, absorbent	Good for the prevention of fluid leakage; excessive sweating, urinary dripping, haemorrhage, diarrhoea, haemorrhoids, prolapse	Hawthorne berry, lemon, lime, pickles, rosehip, sauerkraut, sour apple, sour plum
Bitter	Yin	Causes contraction and directs energy to descend	Good for inflammation, infections, constipation	Dandelion, burdock, yarrow, chamomile, hops, valerian, chaparral
Sweet	Yang	Tonify, grow, expand upwards and outwards	Good for dry, cold, nervous, thin, weak or scattered people	All grains, all legumes, most meats and dairy products, some fruit, vegetables, nuts and sweeteners

Table 1. The Five Flavours and their Properties

In the diet of a healthy person the flavours should be balanced, with sweet flavour predominating, because its associated flavour corresponds to the Spleen and Stomach; our source of *Qi* and Blood. Therefore, each day the sweet flavour, the primary flavour of most carbohydrates such as grains, vegetables, legumes, nuts, seeds and fruit, should be accompanied with small amounts of bitter, salty, pungent and sour foods.<sup>4</sup> The quantity of flavours is also important. If a flavour is generally helpful for an organ's function, too much of that flavour can have an opposite effect.

#### Eating According to Your Climate

This knowledge of nature and flavour of foods, allows the physician to formulate a nutritional strategy based upon the patient's pattern or disharmony. The key to healthy eating in Chinese medicine is to eat certain foods that correspond to your disharmony as well as your surrounding environment. For example, the UK has a very damp climate; therefore, people who live within this environment are more likely to have more damp related disorders, such as joint pain, arthritis, asthma, ME, IBS and other digestive disorders. It is therefore wise not to eat excessive amounts of damp causing foods within a damp environment, for example; dairy or raw foods.

Generally speaking, everything in small quantities is fine, but eating excessive amounts of foods that are not traditional to a country is not always good for the body. An example of this is the millions of people who eat curry every Friday or Saturday night. Hot, spicy foods are pungent and aromatic in nature; they open and disperse, and are eaten in their native countries to vent excessive heat in the body. If you eat hot, spicy food every weekend in a country that isn't hot, then you'll increase the quantity of heat or Yang in your body as you sweat and lose Yin (water). If you then mix that with a naturally damp climate, as you have in the UK, it will lead to damp-heat, one of the most difficult conditions to treat in Chinese medicine.

The UK cuisine has evolved out of its surrounding climate. Foods are usually served hot, with sauces and hot deserts, because the surrounding climate is often cold. However, as the UK undergoes climate change, our traditional diet will need to adapt to reflect the new environment we live in. That doesn't mean to say we should start eating spicy curries every night, but rather look at other European countries where the climate is traditionally hotter and may reflect our climate in the future. In many respects this is already being done with many people eating a continental diet. Our diet should not only reflect our surrounding environ-

ment, but should also include locally grown, seasonal, organic foods that pertain to that region. Eating a diet that corresponds to your local environment also acts to reduce foods' carbon footprint. Foods should also not be heated using a microwave. A microwave will badly damage a food's *qi* leaving it with little or no energetic substance.

The case study below illustrates the points raised so far.

#### Case Study

The patient is a 63 years-old single Asian male who works as a library assistant. The chief complaint was excessive bowel movements with bleeding and mucous for two years. His western medicine diagnosis was carcinoma of the colon. During this time the patient had also suffered with distension, gas and tenesmus. He sometimes felt tired, with pain, and had a temperature. His sleep was disturbed as he had to pass urine every two hours. During these frequent visits to the toilet he had to wait until he passed urine. He had no night sweating, and generally felt cold whilst his appetite was normal. Physical observations noted that he was thin and his lips were slightly dry and red. After being told of his cancerous condition he stopped smoking. Dietary information noted that he was a vegan and of Indian origin. The tongue was pale with a thin white coating whilst the pulse was thin and deep.

Phytochemical	Food Source
Allium	Garlic, leeks, chives and onions
Apigenin	Chinese cabbage, bell pepper, garlic, French peas, guava and celery
Catechins	Green tea, black tea, wine, coffee and apples
Coumestans	Clover, alfalfa and sprouts
Isoflavones	Tofu, soybeans, tempeh, soymilk and textured vegetable protein
Isothiocyanates	Broccoli, cauliflower, kale, turnips, collards, Brussels sprouts, cabbage, kohlrabi, rutabaga, Chinese cabbage, bok choy, horseradish, radish and watercress
Lignins	Flax seed
Phytic Acid	Wheat bran
Quercetin	Apples, onions, tea, berries, brassica vegetables (broccoli, cauliflower, Brussels sprouts, bok choy), various seeds and nuts, some medicinal botanicals i.e. Ginkgo biloba and St. John's Wort
Resveratrol	Grapes, berries, peanuts and red wine

Table 2. The list of all phytochemicals and their corresponding foods

The patient's pattern was categorized into *Li Ji* (dysentery) and further categorized as a deficiency of Kidney Yang. The pathogenesis is a functional disorder of the Spleen in transportation and transformation, which is caused by a deficiency of Kidney Yang failing to warm it.<sup>5</sup> These Spleen *Qi* symptoms are commonly seen in cancer patients.<sup>6</sup> The basic pathogenesis of carcinoma of the colon however, is rooted by a deficiency syndrome characterized by an insufficient amount of vital essence (*Jing*) held in the Kidney.<sup>7</sup> The fact that the patient is 63 years-old also indicates a deficiency of Kidney *Qi*, where *Jing* is held, and is commonly seen in elderly patients such as this. The nutritional treatment strategy employed is to treat the same disease with different methods.<sup>5</sup> Firstly, warm

the Kidney Yang *Qi*, then invigorate the Spleen *Qi*, stop diarrhoea and fight the evil cancerous *Qi*. Sources of Yang *Qi* are usually derived from red meat, but can also be obtained from other vegan sources. It is therefore not unusual for vegans to suffer from a deficiency of Kidney Yang.

The theory and understanding of cancer from a Chinese and western viewpoints are very similar. In Chinese medicine, an irrational diet is not only harmful to health, and the recovery from a disease, but can also aggravate the illness. A rational diet and sufficient nutrition are the most important measures in cancer treatment.<sup>3</sup> This is also the point of view held by the British Nutrition Foundation<sup>8</sup> who state that dietary factors may protect against or reduce the risk of cancer. Furthermore, a vegetarian diet can sometimes result in cancer, particularly an ovo-lacto-vegetarian diet in which the dairy and eggs are of poor quality and the vegetal food is denatured.<sup>4</sup>

The orthodox medical analysis shows us that as the malignant tumour increases in size it secretes an insulin-like substance which consumes excessive amounts of carbohydrates, energy and nutritive materials causing hypoglycaemia and marasmus (a form of severe protein-energy malnutrition). The patient then becomes progressively thinner. As bleeding occurs it leads to a loss of protein. Cancer patients are, therefore, susceptible to malnutrition which will increase the development of cancer.<sup>3</sup> Most researchers in their clinical observations verified the fact that sufficient nutrition

not only improves the immune function, protein and enzyme metabolism, but also increases body-weight, serum albumin levels and sensitivity to radiotherapy. Therefore cancer patients can become strong enough to endure further anti cancer treatment.<sup>3</sup> Bo states that patients with dysentery should eat some warm, natured food such as parched flour and millet gruel and avoid raw cold foods.<sup>5</sup>

Both western and Chinese approaches can be applied to the choice of foods as part of the nutritional treatment strategy, as many foods used in both cultures have the same action to heal the patient. From a Chinese medicine point of view it is to warm the Kidney Yang and the middle *jiao* whilst strengthening genuine *qi* in its ability to fight the evil *qi*. The western point of view is to use anti-cancerous foods with important phytochemicals, which interact with other phytochemicals and cells within the body.

Some of the most extensively researched phytochemicals are isoflavones that are found in soy foods. Others include isothiocyanates which are present in broccoli, cauliflower and Brussels sprouts. Another important phytochemical is the compound allicin, which is seen in fresh garlic, onions, chives and leeks. Allicin fights cancer by reacting with carcinogens and changing their structure so they can no longer initiate tumours, or by speeding the death of cancer cells that have already formed.<sup>9,10,11</sup> Another group of phytochemicals are catechins which are found in black and green teas, wine and fruits such as apples and have a similar function to allicin. They act by preventing cancer or killing cancerous cells that have already formed.<sup>12,13</sup> Resveratrol is a phytochemical in red wine, grapes, berries and peanuts and has the effect of slowing tumour growth in both the lung and colon by destroying potential carcinogens.<sup>14,15</sup> This represents the organ relationship found in Chinese medicine with the close relationship between the lung and large intestine. Another good phytochemical used to fight against colon cancer is phytic acid which is found in wheat bran.<sup>16</sup> In addition, all these fruits and vegetables mentioned are good sources of fibre, which may reduce the risk of colon cancer.<sup>8</sup> A list of all phytochemicals and their corresponding foods is shown in Table 2 above.



Sun Samio

## Conclusion

Chinese nutrition lies at the root of Chinese medicine and is fully integrated into social eating habits in China. This ancient cultural knowledge is now being spread into western society and with that, greater understanding of how food can be used as nutritional medicine. By applying the ancient theories of Chinese medicine to our modern society, we can learn how to live in better harmony with the surrounding environment, reduce our impact on the climate, improve our health and prevent disease.

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## Further Reading

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