

How to Regulate Yin and Yang through Diet

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Keywords:
Yin yang,
dietary
therapy, fan
cai, Atkins
diet, raw food,
Okinawa,
paleolithic
diet, LCHF,
metabolic
syndrome,
Western
diseases.

Abstract

Western lifestyle-related diseases are reaching epidemic proportions throughout the world, including China. According to both modern research and traditional Chinese knowledge, diet is an essential factor in the development of these diseases. This paper puts forward the view that TCM theory, in combination with scientific knowledge, can give basic, individually-tailored advice regarding food choices that can be crucial for health. In the West during recent years there has been an increasing amount written about what to eat to cure disease, lose weight and enjoy optimal health. There are many different dietary methods, such as the Atkins, Montignac, Scarsdale, South Beach, Mediterranean, G.I. and living food diets. Even though some of these diets seem diametrically opposed in theory and practice, their proponents are often convinced that their method represents the healthiest choice. In the experience of the author, all of the well-known dietary methods have advantages and disadvantages, and Chinese medical theory and diagnosis can be used to ascertain which particular dietary system 'fits' a specific patient. Based on awareness of three different models of food proportion, it is possible to use diet to regulate yin and yang and thus improve health. For practitioners using acupuncture, tuina or herbal medicine who wish to improve their clinical success, the author strongly recommends application of the models outlined in this paper.

Chinese medicine and culture has always emphasised the importance of food for health: when to pick, how to prepare and what to eat when and in which combinations. These concerns seem more important than ever in Western countries, where people have abandoned traditional ways of eating and chronic disease is rising due to affluent lifestyles. Modern research has confirmed beyond doubt that food choices contribute to the development of poor health, and provides evidence on how diet influences inflammation, blood sugar levels, hormone balance and free radical activity, amongst others (Johansson, 2004; Lindeberg, 2003; Lombard & Renna, 2004). In the experience of the author, dietary therapy can produce huge changes in patients' health conditions, sometimes as rapidly as within a day. For many patients, acupuncture and herbal medicine are not sufficient to effect a cure until appropriate changes are made in their eating habits. The three models presented in this article can be used to ascertain which dietary changes are appropriate for a particular patient.

Variation and tradition

In order to ensure that we take in the necessary nutrients in our diet it is important to have variation. The goal for most people should be to eat lots of different food items, which makes one more adaptable physically, mentally and socially. Such variation is

obvious in the diets of societies where people live as hunters, fishermen and gatherers (of wild vegetables), especially when compared to the typical modern Western diet.

The transition from a culture sustained by hunting, fishing and gathering to a culture of farming - as was the case in early China (6500 to 3500BCE: Anderson, 1988; Chang, 1981) - brought about substantial dietary changes, although the Chinese have never lost their knowledge and tradition of gathering wild plants. The Chinese culinary tradition has a vast knowledge of which plants are edible, which parts to use, when to pick them, how to prepare and combine them and, of course, how to make them taste good. The Chinese have always stated that dietary variation is important for health. The classical text *Huang Di Nei Jing* (*Yellow Emperor's Inner Classic* - henceforth referred to simply as *Nei Jing*) states that there should be at least a five-fold variation in diet: 'By keeping the five tastes in careful balance the bones are upright, the sinews flexible, qi and blood can freely flow...'. Thus the *Nei Jing* implies that restricting dietary variation can increase the risk of developing disease. In the important Yuan dynasty text on diet, the *Yinshan Zhengyao* (*Important Principles of Food and Drink*), Hu Sihui echoes this discussion of the five tastes: 'However even if the five flavors are flavored [evenly] and the mouth wishes to eat and drink, one cannot eat large amounts of any food. If too much is eaten it gives rise to illness. Small amounts

augment. Rare delicacies of the hundred flavours and careful moderation daily, that is the best thing.’ (in Buell & Anderson, 2000).

Traditional diets use fresh, whole foods that have been grown naturally and not manipulated. This is not the case with modern Western ‘fast’ foods, which contain artificial extracts, preservatives, taste additives, colouring agents and trans-fats, amongst others. In the experience of the author, diets that promote health long-term are those that use traditional ingredients, such as butter instead of margarine, olive oil instead of corn oil and sugar instead of aspartame. Such ingredients and their correct preparation and combination have been empirically tested in traditional societies for hundreds of years. Following these tried and tested methods seems to be the best way of knowing what is healthy, rather than basing dietary theory on food research, which can be heavily influenced by methodological problems and industrial interests. Changing one’s diet to follow these simple traditional dietary principles can have a profound impact on the health of people who have not previously eaten in this way.

‘Fan cai’ and research

Farming cultures like China generally recommend the proportion of foods on the plate seen in Figure 1 below. Chinese knowledge of how to combine foods in daily life might be encapsulated in the term ‘fan cai’, which literally translates as ‘rice and vegetables’. A more free translation which captures the wisdom of the Chinese culinary tradition might be rendered as ‘how to combine staple foods such as rice, millet and noodles with nutritionally complementary foods such as cooked vegetables, pork, chicken and fish that make the dish taste good so that the body digests it well’ (‘accepting and digesting’ here means assisting the natural downward-movement of the Stomach qi).

Several studies have shown that the traditional Chinese method of choosing and preparing foods is beneficial for health. Proof of this was found in one of the biggest studies ever conducted into food and health, the China Study (Campbell, 2005; Chen, 1990), which involved cooperation between Cornell University, Oxford University and Beijing University under the supervision of Professor Colin Campbell. This study concluded that the Chinese way of eating prevents some of the main health problems of the West, such as cardiovascular disease, hypercholesterolaemia, diabetes, chronic disease in general, certain forms of cancer and osteoporosis.

Another large study of diet was the Okinawa study (Willcox et al., 2001). Okinawa boasts the largest population of centenarians in the world, and its men and women show an impressive vigour. This 20-year study concluded that Okinawans may be the healthiest population in the world, and that their diet contributes to this. Okinawan

Yin-yang theory can be applied to dietary methods to distinguish which dietary system is most suitable for a particular person.

ideas of how to eat agree with the Chinese approach to diet. Although Okinawa is part of Japan, it is probably the part most influenced by China. The word for meat in Okinawa, for example, refers to pork – as is the case in China, whereas in the rest of Japan it generally refers to beef.

The eating habits of the Chinese and their Asian neighbours are not only informed by health concerns, but also by climatic, geological and ecological factors, as well as by population growth and prevalence of meat etc. The fact that this way of eating is good for health does not exclude possibilities of other eating habits also being healthy. There are many different ways of eating that can have a strong positive impact on health, even though they may not agree with the traditional Chinese approach – such as eating raw foods or eating lots of meat. Some diets are beneficial for a specific period but then need to be adjusted as the condition of the individual changes. Extreme diseases and conditions sometimes call for extreme measures, but as the condition changes then the diet should be changed in response – preferably to a more varied diet. For example, if the Atkins diet (Atkins, 2003) helps an obese person to lose weight and gain control over high blood sugar levels, it does not necessarily imply that this diet is the best diet for that person for their whole life; or if a strict vegetarian raw-food diet helps a person recover from chronic arthritis, it does not necessarily mean that such a diet will be optimal for that person a few months later. In the experience of the author, it is best to follow the Daoist ideal of adaptability – accepting all food as potentially healthy depending on the amount eaten, the time eaten and the state of the person who is eating it. To achieve this, and to maintain a balanced state, it is therefore necessary to remain aware and sensitive as to when to make the appropriate dietary changes.

Yin-yang theory can be applied to dietary methods to distinguish which dietary system is most suitable for a particular person. This can be done through observational diagnosis, based on a body-typology which has evolved from ideas described in *Ling Shu* chapters 64, 65 and 72, where four body types are distinguished: small yin and yang and large yin and yang (see below).

The three models of food proportion

It is essential to ask patients about their daily habits of eating and drinking in order to find clues as to what is creating or consolidating their disharmony. From a Chinese dietary perspective one method to help the patient regain health is to look at food proportions. The author uses three different

basic models of food proportions to balance yin and yang. Many of the well-known dietary methods fit into one of these three models and, if not, they are often a mixture of two of the models. If a patient is following an unfamiliar dietary regime, it is usually possible to use the models presented here to work out how a particular diet will affect yin and yang. If you wish to encourage a patient to eat a more healthy diet there are many good recipe books available today that the patient can be advised to buy. It is always easier to follow a new dietary regime if it tastes good. Delicious food assists the Stomach and Spleen in transforming and transporting more efficiently. Ideally patients should learn to cook a variety of recipes, as well as what is suitable for their health, and thereby gain greater control over their own lives.

Model one

Model one contains the typical proportions of food seen in farming cultures. Industrial and post-industrial societies are still influenced by this model. This model has been recommended in China throughout its history. Half or more of the plate consists of grains or root vegetables. More than half of the rest of the plate consists of a variety of vegetables, and the remaining part is considered to be 'wei' food (wei means 'taste'). Wei food is said to have a dense taste and to be rich and nourishing, for example meat, organs, egg, oil, fat, fish and dairy products. In a dietary context, wei foods sit in juxtaposition to 'qi' foods: thus foods with more qi (e.g. vegetables, spices and tea) are thought to be less nourishing, but are lighter and help with transport and circulation in the body. Foods with more wei, on the other hand, are more nourishing and tend to build up essence.

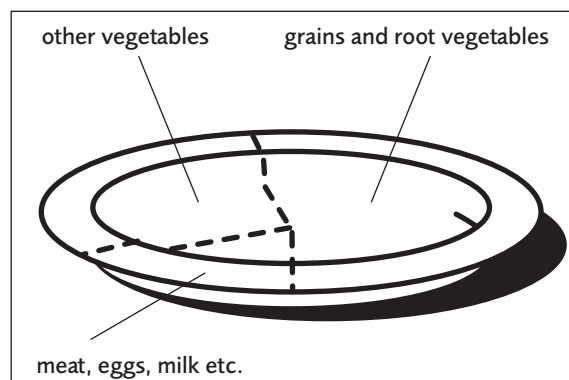


Figure 1: Model one

Model one is considered relatively balanced in terms of yin and yang. An example of this diet which has been found to be very healthy is the so-called Mediterranean diet (Simopoulos & Robinson, 1999; Johansson, 2004). Eating the model one diet requires that a person moves around a lot - either from physical work or

regular exercise. The sugars from the grains and root vegetables are important for growth and regeneration, which is particularly required in children or athletes. Athletes who adopt diets that include no grains or root vegetables often become exhausted from lots of aerobic training; in such cases it is effective to simply add more root vegetables or brown rice into their diet to increase their carbohydrate intake.

In Chinese medicine the Spleen is associated with the sweet taste, the flesh (rou) and damp-phlegm. The Spleen is said to fill out the flesh of the body and the limbs (the muscles, fat and connective tissues). If the Spleen is adversely affected by the diet, for instance due to an excess of sweet foods, the flesh can become filled with phlegm (usually in the form of fat). If too much sugar is consumed - usually in the form of sweets, refined grains (such as white bread) and sodas - there is a risk of obstructing yang and increasing yin, which manifests as damp-phlegm and may produce symptoms of tiredness. Such a situation can be countered with physical exercise such as jogging or walking.

The typical body type suited to a model one diet is the thin, muscular, energetic type. Such a person has clearly defined muscles and facial structure - for instance a long-distance runner - and can be slightly nervous in temperament. In terms of *Ling Shu* typology, this is the small yang type. The small yin type, a thin, weaker, paler and somewhat nervous person, is also suited for model one. Most Chinese people prior to around 1990 (when Western dietary influences in China became significant) would have been classified as these types and would thus suit this way of eating. According to other Chinese body typologies, these body types would include people with yin deficiency, blood deficiency and sometimes qi deficiency.¹

Model two

Model two is the vegetarian meal. Eliminating the animal (wei) part of the meal makes this model the most yin, cooling and dispersing (cleansing) of the three models (as opposed to warming, nourishing and enriching). With knowledge of Chinese dietetics it is possible to counter the cooling, dispersing effect of this diet by choosing the correct combination of foods and methods of preparation.

To be healthy on the model two diet requires knowledge and planning, as there is a risk of imbalanced eating - especially in terms of eating too much sugar, bread and pasta. A subgroup of this vegetarian diet is where as much sugar and carbohydrates as possible are eliminated, making it even more cooling and dispersing. In order to counteract the cooling and damp-forming effects of the model two diet, more spices can be added

such as chilli, curry, ginger and garlic, and food can be cooked rather than eaten raw. This advice is even more important for vegetarians if they have a pale or bluish area between the mouth and the nose or around the lips, indicating that the digestive organs are too cold.

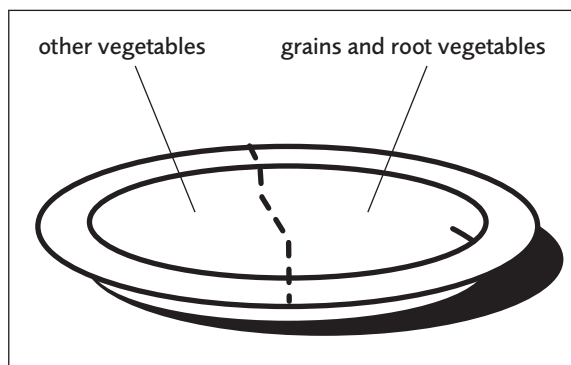


Figure 2: Model two

There are different types of vegetarian diets, and adjustments can be made depending on the results desired. For example, if a person feels cold and bloated in the abdomen on a raw 'living food' diet (e.g. Wigmore, 1978), they can be advised to follow a macrobiotic diet (Kushi, 1993), Dr. Bieler's diet of vegetable broths (Bieler, 1965) or any similar diet that involves cooked food. If a vegan starts to feel weak and shows other signs of deficiency, more vegetarian wei foods can be added to their diet, such as nuts, tofu, black beans, black-eyed peas, seeds and goji berries. Sometimes it is necessary for vegans to supplement with vitamin B12, since this vitamin is difficult to get other than from animal sources. It has been reported that sea buckthorn berry (Sha Ji [Hippophae Fructus], which according to Chinese medicine nourishes yin amongst other actions) contains as much vitamin B12 as animal liver (Mingyu, 2001), although it is not clear whether it exists as an analogue (inactive) form (as is the case with some of the microalgae such as spirulina or seaweeds). If there is still a deficiency of vitamin B12 the person may have to add animal foods to their diet such as eggs, cheese or fish. Animal wei foods are generally more nourishing than vegetarian wei foods. If there is iron deficiency it is better to add chicken soups or - even better - stews using wild game meat (in which case this model becomes more like model one). Usually vegans solve this problem by taking supplements of vitamin B12, however, and are not willing to make a shift to animal foods.

Based on *Ling Shu* typology this diet is most suitable for the big yang type. This person has a heavy, strongly built body, convex, thick nails with large lunulae, tends to exhibit signs of heat and excess such as a red face, thirst and restlessness, and may

suffer from psoriasis or hypertension. This body-type may present with excessive heat and damp-phlegm, in which case the person would likely do well on this diet.

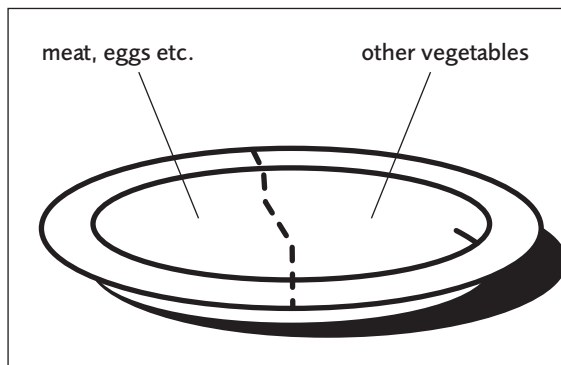


Figure 3: Model three

Model three

The model three diet is sometimes called the paleolithic diet. It is modelled on how humankind has eaten for most of its existence. Although there are variations of this diet, grains are usually eliminated (and often beans too) and other carbohydrate foods such as root vegetables - especially potatoes - are reduced. In the typical paleolithic diet milk products are also eliminated, since they were not introduced into the human diet in significant amounts until approximately 10,000 years ago (Lindeberg, 2003; Cordain, 2002). The model three meal constitutes one part varied vegetables to one part animal wei foods such as meat and fish. The Atkins diet (Atkins, 2003) is a type of model three diet, although it allows milk products such as cottage cheese and yoghurt.

Depending on an individual diagnosis, adjustments can be made to this diet. Although this diet efficiently reduces damp-phlegm, in the case of accumulation of damp-heat, hot spices, fried foods and alcohol should be avoided, and the vegetarian part of the plate should be increased at the expense of the wei part. In order to reduce the production of heat, wei foods that are cooling or neutral in temperature can be chosen, such as white fish, pork, rabbit, eggs, tofu, aduki beans and mung beans.

Studies have shown that the model three diet has positive effects on health (Shai, 2008; Cochrane library, 2007; Dashti, 2006; Volek, 2002; Pérez-Guisado, 2008; Mente, 2009; Haimoto, 2009; Barclay, 2008; Mavropoulos, 2005; Lindeberg, 2003). From the perspective of Chinese medicine this diet is balanced in terms of wei and qi foods. If the choice of warming and cooling foods is also balanced, this diet can be beneficial for many health problems. This is perhaps

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unsurprising, as anything that reduces damp-phlegm can potentially be beneficial in treating many diseases – as the saying goes, ‘the 100 afflictions all coexist with phlegm’.

In the experience of the author, eating the model three diet is an effective way to strengthen yang. In Chinese medicine it is said that in order to successfully strengthen yang it is also necessary to nourish yin. In South Asia, where the weather is hot and humid and afflictions involving damp-heat are common, lots of vegetables are eaten to counter the heat, with spices such as chilli included to circulate qi and counter the dampness. Dampness is yin and retards the circulation of qi, creating turbid stagnation, disrupting the function of the Spleen and making it difficult to produce clear yin. By adding spices, which are very much qi (and light) in comparison to wei foods, the circulation of qi is stimulated, which counteracts dampness and creates a better atmosphere for yin to be nourished by the cooling and moistening vegetables.

Although the model three way of eating tends to increase yang, it can also be adapted to nourish yin. This might be called the LCHF or ‘low carbohydrate, high fat’² diet, because it eliminates all carbohydrate foods (as in model three) and focuses on increasing fat as much as possible. This may sound dangerous, but actually produces some interesting effects. The fats ingested should be natural and beneficial (rather than synthetic or rancid) - as eaten in traditional diets - with an emphasis on saturated, monounsaturated or omega three fats. A typical example of this is the diet of the eskimoes, who enjoy excellent health (Price, 1945). In the LCHF diet the fatty products consumed include fatty fish and meats, nuts, ghee, butter, cream, full fat yoghurt, lard, good quality coconut fat, olive oil, rape seed oil and avocado. People who eat this diet become full easily and consequently eat less and have less cravings. Their blood sugar also becomes lower, as do their insulin and leptin levels,³ and rather than storing fat the body uses it as a source of energy. Many people at risk of type two diabetes get better on this diet, as do those with metabolic syndrome-related conditions, such as hypertension and high cholesterol. In Sweden in 2008 a doctor who had helped many patients with type two diabetes by treating them with an LCHF diet was sued for giving out ‘dangerous advice’. The doctor in question was subsequently investigated and found to be advising patients based on sound evidence, and was allowed to continue her work.⁴ Many patients on this diet report experiencing higher energy levels, and recover from such conditions such as PCOS and migraines (Mavropoulos, 2005).⁵

When fats are metabolised as an energy source, ketones are produced and the LCHF diet is therefore a type of ketogenic diet (not to be confused with ketoacidosis).⁶ This diet has also been used effectively to prevent childhood epileptic seizures in cases unresponsive to anticonvulsive drugs; a team at Emory University School of Medicine found that this diet affected the expression of genes and the function of neurons in the brain, with the number of mitochondria in the neurons of the hippocampus increasing significantly, which correlated with an anticonvulsive effect (Emory University Health Sciences Center, 2005).

The model three diet is more ‘wei’ than the model two diet, and therefore produces more thick yin fluids, and is less cooling and dispersing. The typical patient who responds well to a model three diet presents with accumulation of damp-phlegm, yin deficiency and excess yang (such as internal wind and heat). Based on the *Ling Shu* typology the model three diet is suitable mainly for big yin types, but if modified can also be used for big yang types to rid the body of phlegm. It is especially suitable if the patient has yin signs such as deficiency and damp-phlegm, and for those experiencing high or fluctuating blood-sugar levels. For example, this might be a pale, tired and overweight patient with a large swollen abdomen and a ‘puffy’ appearance. This model is certainly worth trying for patients with metabolic syndrome afflictions (see below). According to other classifications in Chinese medicine this body type would be typical for people with yang deficiency and/or damp-phlegm.¹

Choosing amongst the different dietary methods

The three models presented in this article have one thing in common - the important role played by vegetables. From a Chinese medical perspective, the vegetable aspect of the diet induces yin movement in the body, directing qi downwards to assist with intestinal transit and elimination. Vegetables are more qi in relation to wei foods, which means they are light and assist in the free movement of qi. Grains are generally more wei than vegetables, and contain a good balance between wei and qi. A well-regulated passage of food through the fu organs is crucial in terms of keeping turbidity away from the zang and supplying them only with clear essences. A diet such as Gerson therapy, which is used to combat tumours, is an example of how the light and circulating mode of vegetables can be used to counter stagnation and accumulations (Hildebrand, 1995). Bi syndrome is another type of stagnation where good results can be obtained with vegetarian diets. Dr Bieler (1965) wrote in 1965 that he found different vegetarian diets had a 95 per cent positive effect on arthritis. 30 years later a Norwegian study published in the *Lancet* made headlines around the world by successfully treating patients with rheumatoid arthritis using a vegan diet (Kjeldsen-Kragh, 1991).

The Montignac, G.I., omega and zone diets are examples

of diets that are a mixture between models one and three. These diets reduce sugar intake from grains and other carbohydrate foods. For many patients this mixture seems to be suitable to maintain optimal weight and health. The DASH diet (Dietary Approaches to Stop Hypertension: Sacks, 2001) has been thoroughly researched and seems not only to reduce hypertension, but also to lower the risk of stroke and cardiovascular disease, especially in women; this diet could be classified as either model one or a mixture of models one and two.

The Okinawan diet, although ostensibly a model one diet (similar to the typical Japanese diet), is actually closer to model three, as described by Ochi (1989): 'In Okinawa the average calory intake is very low, about 2100 calories daily for each resident. However, while the caloric intake is low, the amount of animal protein is 203 per cent and the amount of green-yellow vegetables eaten is 309 percent more than the national average of all Japan. In contrast, sugars comprise only 26.5 per cent of the Japanese average.'

Sugars and carbohydrates according to TCM

The difference between grains (and root vegetables) and other vegetables is in the proportion between sugars (carbohydrates) and other nutrients. Grains contain more sugars and less nutrients in comparison with vegetables (which contain less sugars and more nutrients). In affluent societies where there is an enormous supply of food, there is a tendency to overconsume calories in the form of sugars and fat. This tends to produce damp-phlegm and heat in the body, which cause many modern chronic diseases.

Sugars are needed, like oxygen, by every cell of the body to fuel biological processes. This is reflected in the Chinese ideogram for qi, in which the upper part means air and the lower part grain. Eating lots of sugar provides plenty of calories which, if not used, will be stored as fat or phlegm. When sugar and fat are excessive and combined together, the risk of the engenderment of damp-phlegm is increased significantly. In modern society where sugar consumption is very high, foods which would normally be healthy - such as millet, rice, oats, potatoes and carrots - can become less healthy choices because of their high carbohydrate content.

The effects of the sweet taste according to TCM are multifaceted. Li Shizhen's description in the 16th century of sha tang (brown sugar) provides a typical TCM view of the effects of sweetness: 'It harmonizes the internal and strengthens the Spleen. It calms fullness of Liver qi.' (Li, 2003). In his *Bencao Gangmu*, Li refers to what Mengxian wrote about shi mi (white sugar): 'It moistens Lung qi, strengthens the five zang and produces jin ye [body fluids].' In Chinese herbal medicine and dietetics it is often found that a large dose of a substance produces the opposite effect of a moderate dose. Sweetness is a good example of this: in moderate doses the sweet taste strengthens, tonifying the Spleen and the internal organs;

When sugar and fat are excessive and combined together, the risk of the engenderment of damp-phlegm is increased significantly.

too much, however, will weaken the Spleen, engender heat and imbalance the Kidney qi.⁷

As well as strengthening qi, the actions of the sweet taste are frequently described as lifting qi.^{8, 9} This may explain why too much sweetness can produce yang pathogenic factors such as heat, wind and ascending yang. Thus although Li (2003) describes white sugar as 'sweet, cold and slippery', he adds that it can also 'excessively increase[s] heat'. (interestingly, the word 'calory' derives from the latin word 'calor', meaning heat). Zhang Xichun (1860-1933) utilised this lifting action, employing Yi Tang (Maltosum) in a formula to lift Liver qi (something that happens naturally when a person becomes very decisive or angry). Both anger and maltose raise blood sugar levels dramatically (as experienced by diabetics who constantly monitor their blood sugar) and can induce symptoms that in TCM terms would be described as manifestations of wind, such as shakiness. Again, although in appropriate amounts the sweet taste is able to harmonise and calm the Liver, in the experience of the author too much sweetness will disturb the Liver and make the qi stagnant and disorderly.

To summarise, too much sugar can lead to dampness, phlegm, weakness of the Spleen and Stomach (and other organs), heat, wind, yang rising, stagnation and disordered Liver qi. The exact manifestations will depend on the individual. Thus eating too much sugar and carbohydrates can produce the opposite of Li Shizhen's description above, i.e. it causing internal disharmony, weakness of the Spleen and fullness of the Liver (manifesting as stomach ulcers, gas, diarrhoea etc).

Research indicates that the Chinese seem to be more prone to so-called 'affluent' diseases than Westerners when they start eating a modern Western diet involving increased sugar, processed food and overeating (Tsung, 2004). A survey of Chinese villages between 1929 and 1933 showed that 0.5 per cent of daily calories came from sugar (Simoons, 1991); this proportion has increased dramatically (Simoons, 1991). While practising in China in 1989 and 1992 I remember how difficult it was finding sweets, even in Beijing; 15 years later shops selling any kind of food stock sweets, even in smaller towns. Together with a decrease in the consumption of unprocessed grains (Wang, 2006) in favour of refined grains such as white rice and wheat, this may be the dominant reason why the Chinese have developed typical Western problems such as obesity, diabetes and cardiovascular disease. In order to remedy this problem, they might try to resume their traditional eating habits, or decrease the carbohydrate part

of their plate (to eat more like model three). This is also the case in the modern West (Taubes, 2007): In Sweden during 2007, for example, the annual consumption per head of confectionery and soft drinks was 55 and 196 per cent higher respectively than in 1980.¹⁰ The Chinese seem to be heading in the same direction, but at an even faster pace (Tsung, 2004).

Western diseases and metabolic syndrome

Colonial or missionary physicians from the early twentieth century such as Schweitzer and Hutton observed that 'diseases of civilisation' or 'Western diseases' would first appear in places where sugars, molasses, white flour and white rice were introduced, and that this would lead to obesity, diabetes mellitus, cardiovascular disease, hypertension, stroke, various forms of cancer, cavities, periodontal disease, appendicitis, peptic ulcers, diverticulitis, gallstones, haemorrhoids, varicose veins and constipation. Many of these diseases are today categorised under the label 'metabolic syndrome', as they all have insulin resistance in common (Johansson, 2004; Lindeberg, 2003; Taubes, 2007). If blood sugar levels are raised in the body, insulin levels increase in order to regulate this. If blood sugar levels are raised too much and too often over many years, the body's cells begin to protect themselves against such a hormonal barrage, and start to ignore the signals; the pancreas then starts to produce more insulin as a response. This is called insulin resistance. Insulin is the main hormone that signals to the body to store fat (rather than use sugar as energy). Obesity is usually the first warning sign of the development of insulin resistance, especially abdominal obesity (Haglund, 2003; Lindeberg, 2003; Taubes, 2008). For many patients with the early stages of abdominal obesity, all other health markers may be normal, such as blood sugar, cholesterol and blood pressure. From a Chinese medicine perspective, at this point there are often signs of Spleen qi deficiency, such as fatigue, and cravings for sugar and carbohydrates. If such a situation is allowed to continue without the necessary lifestyle changes, triglyceride levels may rise, cholesterol levels may change (lower HDL-cholesterol and higher LDL-cholesterol), blood pressure may rise, glucose tolerance may be lowered - with higher blood sugar levels - and diseases such as type two diabetes or PCOS may develop (Mavropoulos, 2005; Lindeberg, 2003). The risk of cardiovascular problems such as stroke also rises (Lindeberg, 1994; Hu, 2002). Other problems associated with metabolic syndrome are enlargement of the prostate (Haglund, 2003), infertility (Kousta, 1999; Druckman, 2002), hormone-dependent cancers (such as breast, colon and prostate cancer) and other forms of cancer (Stocks, 2007), myopia (Cordain, 2002), acne (Cordain, 2002), endothelial dysfunction (Arcaro, 2002; Stuhlinger, 2002), atherosclerosis (Mozaffarian, 2004; Shimamoto, 1989; Lindeberg, 2003), fatty liver (Garg, 2002), gout (Wortman,

2002), sleep apnoea (Ip, 2002), early puberty (Travers, 1998) and osteoporosis (Bartl & Frisch, 2009). There are also likely to be other symptoms and inflammatory processes around the body, and the patient will likely need to take various prescription medicines which make their symptomatology and treatment more complex.

In *Suwen* Chapter 8 it states, 'The Spleen stores the ying ... When the breaths of the Spleen are empty, the four limbs can no longer be of any use, and the five zang know no peace. When they are full the belly is swollen, the transits and micturition function badly'. Larre and Rochat de la Vallee (1995) comment on this quote, describing (in the opinion of the author) the basic pathogenesis of metabolic syndrome: 'In the case of fullness, despite an abundance that can hardly be assimilated, there is blockage and congestion instead of enrichment. The belly is the chosen site of the congestions of the spleen's excess breaths. The bottleneck blocks circulations, including circulations moving towards the outside of the body'.

Lindeberg (1999) studied the people of Kitava, who eat a paleolithic-style diet and show no signs of metabolic syndrome. The most important remedies for metabolic syndrome are dietary changes and exercise to lower blood sugar and insulin. Blood sugar levels are increased most by consuming sugars and carbohydrates, and least by consuming fat. The model three diet above may make a huge difference to those adversely affected by a carbohydrate-rich diet. The key in such a diet is to avoid food that contains high amounts of sugar (even fruit) and to eat fatty foods instead. A good example is the Rosedale diet (Rosedale, 2004). When all clinical signs have stabilised, the diet can again become more varied, although the patient will likely have to maintain a moderate approach to sugar, as well as being vigilant for the signs and symptoms that may signal a return to poor health.

Case study

A 33-year-old woman attended the author's clinic for the treatment of allergy. During most of the Spring and Summer she would react to various pollens and grasses with symptoms of itchiness of the nose, throat and eyes, a stuffy nose and constant snivel. She had been diagnosed with asthma and prescribed antihistamines and bronchodilators. Her breathing was clearly slightly heavy. She was constantly tired and 10 kilograms overweight, and looked pale and swollen, with soft, puffy hands and underarms. She reported often experiencing headaches and aching in her muscles and joints. Her abdomen was often distended and she complained of gas and cramping pains. She ate a varied diet, which included a lot of potato chips, sweets, fast food, milk and bread.

My diagnosis was of wind in the exterior, wei qi deficiency, Spleen and Lung qi deficiency, damp-phlegm accumulation and stagnation of Liver qi. I asked her to eat more fresh and home-cooked foods and less milk, bread,

sweets and potato chips (which she found difficult). I treated her six times with acupuncture using the following acupuncture points: Chize LU-5, Lieque LU-7, Fengchi GB-20, Fengmen BL-12, Feishu BL-13, Gaohuangshu BL-43, Zusanli ST-36, Hegu L.I.-4, Yingxiang L.I.-20 and Yintang (M-HN-3). The allergic symptoms and asthma decreased gradually until she was no longer aware of them. She was still tired, however, and her weight was unchanged, although her headaches did not occur as often. Her digestive symptoms were also a little better. We therefore concluded treatment prior to the summer vacation.

The following Spring she returned to the clinic with similar symptoms, although this time she felt that tiredness was the worst of all of her problems. She reported that for the rest of the previous summer she had been free of all allergic and asthmatic symptoms and did not need to use any medication. This Spring the symptoms of allergy were not as marked, but she was experiencing a paralysing tiredness. She looked pale, puffy and overweight and I therefore recommended that she follow dietary model three. Even though eating more meat and fish increases the risk of 'fawu'¹¹ - which is generally not regarded as good for allergy - in my experience the model three diet works well for patients like this. I did, however, ask her to avoid shellfish and asked that she eat fish cooked with fresh ginger (in order to avoid provoking fa too much). The dietary recommendations were strict this time, and she was not allowed to use milk products.

The change in diet this time made a huge difference to her energy levels within a single day. She reported that her energy was back for the first time in years and she began to lose around one kilogram per week. She found that as soon as she reverted to her old diet she became tired and stopped losing weight. Her digestion was also much better while she followed the diet, and her muscle and joint aches gradually faded away. By the time of the Summer vacation she said she would try to manage on her own. The combination of acupuncture and correct dietary change in this case helped the patient to regain balance. In such cases it is recommended that after feeling well for a period of time the patient should again broaden their diet, while carefully monitoring their signs and symptoms. In the case of this patient the optimal ongoing daily diet would probably be a mixture between model one and model three. ■

Acknowledgements

The author would like to thank the following for their helpful comments regarding this article: Petra Lundström, Dr. Elisa Liao (Yunnan), Dr. Li You (Jiangxi) and Dr. Xiaohong Kong (Harbin).

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- 54). Dr. Dahlqvist made LCHF famous in Sweden in recent years. Also see www.lowcarbism.com or www.lchf.de (in German).
- 3 Leptin is a hormone produced by fat cells and are involved in regulation of appetite and fat metabolism. Low levels of Leptin have been correlated with long-life according to Dr Rosedale (2004), who states that there are two main ways of lowering leptin by diet: either eat very few calories or eat according to LCHF.
- 4 The doctor was Annika Dahlqvist. The investigation is available at <http://blogg.passagen.se/dahlqvistannika/search?q=berne> [accessed 15 September 2010].
- 5 Anecdotal evidence based on personal experience as well as that of colleagues and Dr. Dahlqvist (see endnote 4).
- 6 Ketone bodies are used by the brain and central nervous system if glucose is not available.
- 7 *Suwen* 10: '...if one eats excess sweet then the bones ache and hair falls out.' (bones and the hair here are manifestations of the Kidneys).
- 8 *Suwen* 5: 'Sweet engenders the Spleen, the Spleen engenders flesh ... dampness damages the flesh ... the sweet damages flesh'.
- 9 Zhang Jingyue (1562-1639) in *Jingyuequanshu* 11: 'Sweet governs moderation and its movement ascends, therefore it tonifies the middle burner'.
- 10 See www.jordbruksverket.se (Swedish).
- 11 'Fa' means to throw outward and 'wu' means thing. Thus in China foods regarded as fawu are seen to 'throw things outwards to the surface', i.e. they aggravate allergic diseases, skin diseases and chronic diseases. Although in China there are different ideas of what constitutes fawu, generally it includes shellfish, fish (especially if they smell of the sea), alcohol, chocolate, garlic, coriander, fried foods, beef and lamb. A skilled dermatologist in Nanchang, Dr. Yu Wenqiu, regards factory-farmed meats such as battery chickens as more fawu than free-range or organic meats. Research has shown that naturally-fed animals such as cows and chicken produce meat that contain more omega-3 fatty acids, which may be relevant in this regard.

Endnotes

- 1 Personal communication from Elisa Liao.
- 2 For historical background see Taubes (2007), p.327-