

Ancient history?

Lessons from Hippocrates' use of plants

By Sue Evans PhD, School of Health and Human Sciences, Southern Cross University



Sue Evans is truly an expert in her field! She began her training in the Western herbal medicine tradition in the 1970s, and since then has worked in the herbal medicine profession in clinical practice, teaching, research and academia.

A Melbournian by birth and by preference, in 1996 she moved to the Northern Rivers to take up a position as foundation herbal medicine lecturer to the Bachelor of Naturopathy program at SCU. There she developed her teaching which focussed on the historical and philosophical foundations that underpin traditional herbal practice in Australia and the clinical use of medicinal herbs. She also completed her PhD there, which was a sociocultural account of contemporary Western herbal medicine in Australia.

She now divides her time between working as a consultant on educational and governance issues with CAM organisations, educational providers and review bodies, and research. Current research includes issues around medicinal plant supplies as well as continuing her longstanding passion for all matters associated with the history, philosophy and tradition of herbal medicine.

She is now living back home in Melbourne.



Hippocrates is known as 'the father of medicine' and is popularly credited with the phrase 'let food be thy medicine and medicine be thy food'. He has an important place in the history of many health professions, including herbalism, naturopathy and medicine. The focus of this article is recent research into the plant recipes of the Hippocratic Corpus, and the parallels between the philosophy of Hippocratic medicine and some common sense treatment assumptions of Western herbal medicine and naturopathy.

While Hippocrates himself is understood to have been a Greek healer who lived on the island of Kos in the 5th century BCE, the Hippocratic Corpus is the product of many practitioners rather than of one man. Written over a period of 700 years, it is unclear whether Hippocrates wrote any of the collection of works that bears his name.

For medical practitioners, Hippocrates is important as he is credited with introducing approaches to diagnosis and treatment which emphasised clinical observation, and rational rather than supernatural causes of disease. He is also associated with establishing expectations for high moral standards for practitioners.

However, for herbalists these writings hold additional interest. Hippocratic practitioners documented the use of local plants and simple plant preparations to treat their patients, and their diagnostic and treatment focus was not only on clinical observation and rationality, but also on the idea that *balance* is the cornerstone of health. Health maintenance and treatment of ill-health required active patient involvement and, ultimately, responsibility. Recent research locates herbalists and their patients for whom these issues and perspectives – local plants, simple interventions, a holistic and balanced approach to health – are highly relevant (Bitcon, Evans, & Avila, 2015; Nissen, 2015).

The Hippocratic Corpus and the Hippocratic practitioners

The Hippocratic writings consist of more than 60 treatises (books) which were written by a number of authors between the 5th century BCE and the 2nd century CE (Jouanna, 1999; Totelin, 2009). This was more than fifteen hundred years before state regulation of medicine defined who was licensed to practice medicine and who was not, and the medical marketplace of ancient Greece was served by competing groups of healers, including bonesetters, midwives, folk practitioners and religious healers. Those who followed the Hippocratic School were known as *iatroi* (doctors). Practitioners were primarily itinerant, travelling from town to town, competing for patients and working fee-for-service, and the Hippocratic Corpus documents the changing knowledge and understanding of this group over a 700 period (York, 2012).

The Hippocratic Corpus contains more than 1500 recipes, and its emphasis is on discussion of gynaecological conditions. Treatment was largely through the use of diet and lifestyle, referred to as *regimen*. These writings do not contain anything we would recognise as a *materia medica* – there is no listing of actions and indications for particular plants, so understanding of their actions must be deduced from the recipes. The writings themselves are not consistent, contain contradictions and they are written in different dialects (York, 2012). Further, they do not provide comprehensive information about medical practice, but are more like practitioner notes and reflections. Totelin says that 'the medical novice would get nothing from reading the preserved Hippocratic recipes' (p. 243) and suggests the work can be seen as an 'aide memoire'.

Medicinal recipes

The frequent references to plants in the Hippocratic formulae provides insight regarding practice at that time. Fortunately for today's herbalists, a small group of scholars continue to undertake painstaking research which makes some detail of this plant use available.

Totelin (2009) has made a specific study of the recipes in the Hippocratic writings. He does not look at individual plants, rather his focus is on the way medicines are combined

and prepared. He sees many parallels between the recipes used for medicine in the Hippocratic Corpus and basic recipes used in cooking.

A basic recipe will enable a cook to substitute one ingredient for another, and vary quantities depending on the dish the cook wants to make. For example a pasta sauce may have as basic ingredients meat, tomatoes, mushrooms – or just one of those ingredients, or other ones entirely. Smaller amounts of other vegetables (like onions) and herbs and spices (like oregano and garlic) may be used according to availability and taste. The overall amounts will be guided by preference, availability and the number of people to be fed, and our common sense and previous knowledge of pasta sauces tells us that we will have less of onions, oregano and garlic than we will of tomatoes and meat.

Similarly Totelin suggests that recipes in the Hippocratic Corpus give basic principles and examples of ingredients with the understanding that the physician will substitute and adapt according to the needs of an individual patient and the remedies available – and that the physician or person preparing the remedy (many remedies were prepared at home) would have the common sense and previous experience to understand what ingredients should be used freely and what ingredients should be used sparingly.

Totelin tells us that most recipes in the Hippocratic writings are short, with four or five ingredients, and the instructions for preparation are outlined chronologically – first do this, then do that, as a recipe for a specific dish would be written. Sometimes, but not always plant parts are specified; sometimes but not always quantities of ingredients are included. Specific techniques and the equipment required are not included which suggests the formulae were written for those who already knew the principles of preparing medicines. In the example of the pasta sauce, such a recipe may be written without specific instructions of how to cut the vegetables, or the type of pan to use, or the optimum temperature for cooking, or length of time cooking will take. Similarly, many details of the medicinal recipes are omitted.

As an example, Totelin gives a formula for the treatment of haemorrhoids

Crush well myrrh, oak gall, burnt Egyptian alum, one and a half times the amount of the others, and the same amount of black pigment: use these dry. With such remedies, the haemorrhoid will detach itself like burnt hide. Do this until they have all disappeared (2009, p. 267).



Paying attention to what is missing here, we can ask – what part of myrrh should be used? How much of each ingredient? How specifically should each plant be prepared? How should they be combined? What equipment should be used? In addition, specific instructions for application of the recipe are not given – how much should be applied externally or taken orally? How often? How long should it take for a change to be seen? As herbalists, we may be able to fill in some gaps, make some judgements and expectations based on our own experience of

preparing and using plant medicines, but this is difficult or impossible for those who do not have experience working with plants in this way.

The Hippocratic Corpus is not unique in providing incomplete information. All herbals are written with a particular audience in mind, and in a specific historical context. Inevitably, they include assumptions that may not be as useful in another period. A personal favourite from a different time period is Culpeper's comment regarding barberry 'The shrub is so well known by every boy or girl that has but attained to the age of seven years, that it needs no description' (Culpeper, 1653/1995 p. 22). That may have been the case in 17th century London, where Culpeper wrote, but few seven year-olds or even seventy year-olds would be able to identify barberry today. Similarly, the Hippocratic Corpus was written from the perspective of the citizens of ancient Greece – and for us, leaves many questions unanswered.

The plants

As mentioned earlier, there is no specific treatise in the Hippocratic Corpus that systematically outlines plants and their uses. However, in a recent article, Touwaide and Appetiti document their analysis of the plants in its recipes. They found that 380 species of medicinal plants were used throughout the works, for a total of 3480 uses. As some plants were mentioned often, up to 87 times, and others were mentioned just once, they carried out further analysis to determine the most frequently-used plants. They found that 40% of the documented plant uses come from just 44 plants. Furthermore, 77% of these plants (34 of the 44) were also eaten as foods (Touwaide & Appetiti, 2014).

The majority of these plants are well known today. Among food plants on the list of most-used remedies are celery, leek, beet, cabbage, barley, lentils and millet, along with familiar culinary herbs including sage, oregano, rue and bay, and fruit plants such as pomegranate and blackberry. Touwaide and Appetiti suggest that these plants were cultivated close to patients' homes and eaten fresh, and they conclude that most plants used as medicine at this time were cheap and easily available. Many were prepared domestically. Pitman's (2014) research indicates that plant preparations in ancient Greece are similar to those used today – infusions and decoctions (the herbs being strained or pressed); plants prepared in honey, wine or vinegar, or made into lozenges, pills, salves and pessaries, or extracted in oil. Less common today but popular then were vapour baths and fumigations.

Touwaide and Appetiti (2014) describe the Hippocratic physician as an itinerant healer, travelling from town to town, carrying few medicines, perhaps just some favoured preparations or plants they know they were going to be unable to source locally. In most cases, they argue, practitioners gathered the medicines they needed from cultivated or uncultivated land near the homes of the patients they visited. This is consistent with the story that many of us have heard, that in some (unspecified) 'old times', when people lived in one place for extended periods, herbalists would choose the plants they prescribed from those that grew around a person's house. Touwaide and Appetiti also suggest that medicinal plants were used fresh. While there is no mention of a preference for fresh plants in the Hippocratic Corpus, they note that Dioscorides, writing in his five-volume

'De materia medica' in 70 AD, insisted on the importance of using fresh plants. They suggest that the freshness of local plants was assumed in the Hippocratic corpus.

Medicinal plants that are traded over long distances will necessarily be dried before transportation in order to prevent spoiling. Popular imported plants documented in the Hippocratic Corpus include myrrh (*Commiphora molmol*), cumin (*Cuminum cyminum*) and frankincense (*Boswellia spp*), traded from northern Africa and the Middle East.

The origins of disease

As mentioned previously, followers of the Hippocratic School rejected the idea that diseases were caused by supernatural causes and that human health depended on the whims of the gods. They developed the idea that balance was the key to good health, and imbalance was the cause of disease. This was described as the lack or excess of a particular humor - blood, bile, black bile and phlegm. To the ancient Greeks these humors were actual bodily fluids that must be kept in balance, and the role of the healer was to re-establish this balance through changes to diet and lifestyle and through the administration of remedies (Nutton, 1995).

Thus the food and drink consumed, sleep (including dreams), exercise, and individual reactions to the environment, were all understood to be important contributors to overall health, and suggestions for modifications were made by the practitioner. These ideas clearly have strong parallels with herbal and naturopathic practice which emphasise a holistic perspective and individual treatment. Everyone's humoral balance, and the measures required to address them, was understood to be different. These treatments were not one-size-fits-all (Pitman, 2014).

It is true that a central idea of humoral medicine – that these four bodily fluids should be kept in balance - has been relegated to the history books. However a reinterpretation of humoral medicine can be found in the writings of contemporary herbalists, including Hedley (2002) and Trickey (2011). When these practitioners describe the humors, it is as symbols and metaphors, used to guide aspects of clinical intervention and as a guide for healthy living. They are not referring to literal fluids to be increased or decreased, and their reinterpretation fits modern understandings, and encourages patients to think of themselves as being part of their natural environment.

Connections between the humors and seasons, and the times of life, are set out in Table 1. This should be read as a table of 'correspondences' - that is, an abbreviated and simplified way of acknowledging energetic similarities. A person with, for example, a sanguine personality can be seen as having a similar

energy as spring, childhood and the element of air. Such a person conveys a certain youthfulness, a carefree-ness, a lightness of being, and perhaps naivety, whatever their chronological age. This can be contrasted with, say, the phlegmatic person who may give a sense of being old before their time, who is hard working and serious, and whose health may deteriorate in winter.

For example an 80 year old woman with a phlegmatic constitution and who lives in a cold climate, and who presents with the flu in the middle of winter may require some of the opposite energy – choleric – as part of her treatment. She may be prescribed warming foods, and a trip to a warmer (more summery) climate to convalesce and encouraged to engage in regular exercise as far as possible. However, a 20 year old choleric man who experiences similar symptoms may simply be encouraged to take time out, to stop, to rest. The fact that such advice seems common sense to many of us demonstrates how embedded these ideas are in our understanding.

Such concepts, when combined with more conventional understandings of flu treatment, can assist in individualising treatment strategies, as clearly an 80 year old phlegmatic flu patient will need different interventions to that of a 20 year old choleric one. And the differences between these interventions extend beyond age-related differences in the dose of a specific herb, and include recommendations about diet and lifestyle.

A note on the gods

The rejection of a supernatural causation of disease by the Hippocratic doctors changed treatment. When disease has its origin in supernatural events, treatment involves rituals and ceremonies with prayer and purification. When disease has its origin in a humoral imbalance, treatment approaches that emphasised changes as discussed above. However, the rejection of supernatural causation did not mean that the gods were rejected, but religion and medicine became more separate. It was still seen to be prudent for doctors to ask for their assistance. This is reflected in the beginning of the Hippocratic Oath, the legendary oath of medical practitioners, which begins by invoking the gods of the Greek pantheon.

I swear by Apollo Physician and Asclepius and Hygeia and Panacea and all the gods and goddesses, making them my witnesses, to fulfil this oath and this covenant, according to my power and judgement (Temkin, 2002, p. 21).



The Hippocratic Corpus links herbalists to a line of practitioner who have been using plants to heal for millennia. It reminds

Humor	Sanguine	Choleric	Melancholic	Phlegmatic
	blood	yellow bile	black bile	phlegm
Season	spring	summer	autumn	winter
Time of Life	childhood	adulthood	middle age	old age
Element	air	fire	earth	water

Table 1



us of the timeless aspects of our craft – focussing on a holistic approach encompassing the whole of life – attending to physical, emotional, spiritual, social and environmental concerns – and which is not a ‘one size fits all’ but which is individualised to the patient. In addition, now, as then, the practices which encourage good health need not require exotic ingredients or complex interventions. A thoughtful diet with home remedies, cultivated or collected locally, perhaps enhanced by a small number of imported plants, was the reality of practice for many practitioners in ancient Greece. As some herbalists continue to re-examine how they might live simple healthy lives themselves, and how they can assist others do the same, a study of the Hippocratic writings may provide some guidance and inspiration. ✿

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