



## RESEARCH ARTICLE

### ETHICS AND PROFESSIONALISM IN THE MEDICINE OF HIPPOCRATES

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#### Abstract

In recognition of his contribution to the medical field, Hippocrates is universally known as the “Father of Medicine”. The Medicine of Hippocrates has been practised for more than 2500 years under various names across the world. Hippocrates conceptualised philosophical principles of medicine including Vis Medicatrix Naturae (healing power of nature), Humours, Temperament and Lifestyle Factors. More significantly, he is known for transforming the practice of medicine that included superstition and magic, to a scientific system based on the principle of cause and effect, with holism, professionalism, and medical ethics with respect to bedside manner, benevolence, and conduct. This led to the Medicine of Hippocrates being known as A Science of Medicine and the Art of Care. Whilst the technological advancements of Western medicine have made excellent progress in diagnostics, with pathological and imaging technology and also in surgical procedures, the side-effects associated with Western medication, is a major concern within the context of the Medicine of Hippocrates.

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#### Introduction

The Medicine of Hippocrates has been practiced for more than 2500-years under different names including Greek medicine, Greco-Arab medicine, Unani medicine, Western herbal medicine and Tibb. Hippocrates known as the Father of Medicine, conceptualised the pioneering philosophical principles in medicine, including Vis Medicatrix Naturae (Physis), Humours, Temperament and Lifestyle Factors. More significantly, he is known for transforming the practice of medicine which included superstition and magic, to a scientific system based on the principle of cause and effect, with professionalism and medical ethics. These ethical responsibilities are recognized to this day, with qualifying doctors committing to the Hippocratic oath<sup>1,2</sup>.

#### Philosophical principles of the Medicine of Hippocrates

Below is a brief overview of the philosophical principles of the Medicine of Hippocrates:

##### Vis Medicatrix Naturae (Physis)

The Medicine of Hippocrates recognizes the body’s inherent ability to heal itself, known as Vis Medicatrix Naturae<sup>3,4,5</sup>. The term Vis Medicatrix Naturae, literally means "the healing power of nature", and is the Latin rendering of the Greek Νόσων φύσεις ἰητρού<sup>6</sup>. The Greek philosopher, Aristotle (384 – 322 BC), described Vis Medicatrix Naturae as “Physis” in Latin<sup>7</sup>.

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Physis is the sum total of the body's natural, instinctive reactions and responses to maintain, and where necessary restore homeostasis. Physis is responsible for maintaining homeostasis between the physical, mental, emotional, and spiritual aspects of every individual. It works at a cellular/sub-cellular level, between all the organs and systems of the body, by constantly monitoring and adjusting the millions of biochemical and physiological pathways that are genetically designed<sup>7</sup>.

The practice of the Medicine of Hippocrates highlights the importance of a physician to be constantly aware of physis, in both health promotion and treatment.

Unfortunately, in keeping with the circle of life, and as death is inevitable, and, just as our metabolism slows down with age, the efficiency of physis to restore homeostasis becomes weaker with age.

### Humours

The humoral theory is one of the most important pillars in the Medicine of Hippocrates. The humoral theory hypothesizes that the body consists of four bodily fluids known as humours with respective qualities –Blood (Hot & Moist), Phlegm (Cold & Moist), Yellow Bile (Hot & Dry), and Black Bile (Cold & Dry)<sup>8</sup>. The humours are a microcosmic form of the macrocosmic theory of the four elements of creation Earth, Water, Air and Fire also with associated qualities<sup>1</sup>. Each individual has a unique combination of the four humours with a dominance of one humour and an overall qualitative state. Based on this, the humoral theory hypothesizes that when the humours maintain a balanced qualitative state, according to an individual's constitution and overall qualitative state, health will be maintained.

Hakim Sayed Ahmed described the role of humours as postulated by Hippocrates<sup>9</sup>:

*“The basis of health is the right proportion and specific equilibrium of humours according to their quality (and quantity) i.e., homeostasis in the internal environment. As long as this homeostasis in the internal environment is maintained, the body remains healthy. This is the basis of **health preservation and preventative medicine**. Second, when the normal proportion and specific equilibrium of humours is altered, the internal environment reaches a state of imbalance, and thus disease develops. This is the basis of **aetiology and pathology of disease**. Third, when this wrong proportion and altered equilibrium of humours is corrected, health can be recovered. This is the basis of **treatment**.”*

### Temperament

The uniqueness of an individual is highlighted in the famous saying of Hippocrates:

*“It is more important to know what sort of person has a disease than to know what sort of disease a person has”*

Hippocrates' postulated that the humours directly affect an individual's personality, behaviour and health<sup>8,10</sup>. He based his treatment on an individualistic approach, identifying the importance of each individual and their constitution<sup>11</sup>.

The renowned philosopher Galen (129 – 216 CE) who expanded on the Hippocratic concept of the uniqueness of an individual, further hypothesized the temperamental theory. According to Galen, based on the admixture of the four humours, there are four main types of temperaments, with associated qualities and linked to a dominant humour<sup>12,13</sup>. These include Sanguinous (Blood – Hot & Moist), Choleric (Yellow Bile – Hot & Dry), Phlegmatic (Phlegm – Cold & Moist) and Melancholic (Black Bile – Cold & Dry)<sup>8</sup>, with each individual having a unique temperament with an overall qualitative state.

Temperament describes a person's physical characteristics (the constitution) plus his or her psychological, emotional, and spiritual attributes, with each individual having a unique temperament with an ideal overall qualitative state, which for health to be maintained, physis needs to ensure that the overall qualities of the humours are the same as the ideal qualitative state of an individual's temperament. More significantly, temperament provides insights into an individual's predisposition (risk factors) of illness conditions, which assists in diagnosis and facilitates targeted treatment.

### **Lifestyle Factors**

Hippocrates postulated that life entails a reciprocal relationship between an organism and the environment<sup>14</sup>. He hypothesized that all organisms, including humans, grow at the expense of the environment, taking from it what is necessary to sustain life and rejecting what is unnecessary.

During the 9<sup>th</sup> and 11<sup>th</sup> centuries, philosophers and physicians described the environment within the context of the Six Essential/Lifestyle Factors as mentioned in Avicenna's Canon of Medicine<sup>15</sup>.

These include Food and Drink, Air/Climate, Physical Activity, Sleep and Wakefulness, Psychic Movement and Response, Evacuation and Retention. The impact of Lifestyle Factors is based on the qualitative effect of each of the Lifestyle Factors. For example, weather is either hot or cold, foods such as ginger are heating, sleep is cooling, and exercise produces heat<sup>16</sup>.

Lifestyle factors especially diet results in qualitative changes to an individual's humoral balance in relation to an individual's ideal temperamental qualitative state, which if beyond the ability of Physis to restore homeostasis, will result in illness conditions, associated with excess or abnormal humours.

The philosophical principles described above have provided an overview of aetiology (causes), pathology, diagnosis and treatment for more than 2000-years – before the development and dominance of Western medicine.

### **A Science of Medicine based on Clinical Evidence**

Hippocrates implemented the documentation of a detailed medical history for each patient, followed by physical observation and clinical examinations – based on this a diagnosis was made and prognosis established. He is thus responsible for developing evidence-based medicine as we know it today, through documentation and the comparison of findings for each illness condition among different patients<sup>3</sup>. Hippocrates emphasized that information of illness conditions should be achieved using vision, auscultation, olfactory senses, taste, and palpation. These sensory mechanisms were used as a tool to collect information, record it by documentation and were used for future reference<sup>17</sup>. This was the initiation of research and the basis of clinical medicine as it is practiced today.

Based on all his clinical findings, Hippocrates and his followers wrote extensive medical literature, included in the 'Hippocratic Corpus', consisting of 72 books divided into 53 chapters. These medical texts and practice were used as a reference for medical practitioners<sup>1</sup>. He advised that each physician should consult medical texts and engage with research to enhance their knowledge on specific illness conditions and progress of medicine.

### **Holism, Professionalism and Medical Ethics**

The holistic approach of the Medicine of Hippocrates recognises that human beings are "body and soul" and health is impacted physically, mentally, emotionally, and spiritually, resulting in the professionalism in the Medicine of Hippocrates as the Art of Care. Also, Hippocrates removed superstition and magic from the practice of medicine by introducing medical ethics within the context of the principle of cause-and-effect as a Science of Medicine - thus the Medicine of Hippocrates is known as A Science of Medicine and the Art of Care.

The Art of Care is described by Hippocrates as the physician always remaining honest, calm, and understanding when dealing with a patient. He emphasized that physicians treat each patient with respect, communicating their knowledge of the disease in a manner that is understandable and beneficial to the patient<sup>17</sup> – as mentioned in his famous sayings: "*Cure sometimes, treat often, comfort always*" and "*Wherever the art of medicine is loved, there is also a love of humanity*". More particularly the Art of Care is also encompassed in his famous saying: "*Primum non nocere– first do no harm*".

With respect to the Medicine of Hippocrates as a Science of Medicine, it is interesting to note another famous saying of Hippocrates: "*Science is the father of knowledge, but opinion breeds ignorance*".

Could this saying be a prediction of current Western medicine which began a few centuries ago, based on the "Cartesian Model" named after the French philosopher Rene Descartes (1596-1650 CE) who promoted the ideology that man was separated from nature and could be viewed objectively through experiment. This model was supported by Pasteur (1822- 1895) who developed the Germ theory and Virchow (1821-1902), who demonstrated that disease begins with changes in living cells. These developments resulted in the causes of Western medicine

being linked to the “Doctrine of Specific Aetiology” where most diseases are reduced to a single cause - a micro-organism, an inborn error of metabolism, or one or other physiological or biochemical malfunctions. This resulted in the holistic approach of a comprehensive understanding of the cause/s of illness conditions of more than 2500-years, being marginalised in favour of this doctrine, and reductionism, and is contrary to a Science of Medicine and the Art of Care from the 20<sup>th</sup> century onwards.

### **Western pharmacotherapy compared to herbal pharmacotherapy**

The negative influence of Western medicine began about 150-years ago with the development of Western pharmacotherapy. Prior to this, the main source of pharmacotherapy for thousands of years was from plants.

*“God in his infinite goodness and bounty hath by the medium of Plants, bestowed almost all food, clothing and medicine upon man” [Gerarde’s Herbal (1636)]<sup>18</sup>*

Pharmacotherapy with natural ingredients, especially herbs, has invariably been the first line of treatment and the restoration of optimum health. It is important to note that each herb contains many different categories of active ingredients. For example, Garlic contains flavonoids, alkaloids, saponins, tannins and cardiac glycosides<sup>19</sup>. Ginger contains phenolic compounds, flavonoids, alkaloids, glycosides, saponins and tannins<sup>20</sup>. Basil contains terpenoids, alkaloids, flavonoids, tannins, saponins and ascorbic acid<sup>21</sup>.

The many categories (together with the different active ingredients within each category), contained in a single herb allows for a wide range of pharmacological activity, across multiple physiological systems of the body – cardiovascular, digestive, respiratory, etc<sup>22</sup>. They not only address the signs and symptoms of the illnesses associated with the different systems, but also restore homeostasis at a cellular/sub-cellular level. Garlic, for example, has proven benefits in patients suffering from multiple clinical disorders<sup>19,23</sup> including raised blood pressure, prevent stroke, lower cholesterol, control inflammation, counteract skin and intestinal infections and reduce tumour progress.

Western pharmacology emerged from two distinct lines of scientific endeavour: (a) identification, extraction and modification of active ingredients found in plants; and (b) the application of techniques in synthetic organic chemistry, based on the receptor theory. The drugs developed from the identification, extraction, and modification of active ingredients from plant origin include morphine, quinine, aspirin, atropine and reserpine. Being active ingredients from plants, the pharmacological action of these ingredients were effective, with limited side-effects.

The development of synthetic organic chemistry drugs was introduced by John Newport Langley (1852-1926)<sup>24</sup> on the basis of visualizing that a cell receptor could be turned off and on by specific drugs. This led to “new to nature chemicals”, based on the receptor theory, which stimulate, inhibit, or block receptors as a prelude to pharmacological action either to stimulate or depress normal body biochemical and physiological functions.

The receptor theory was the impetus to the development of numerous drugs that stimulate, inhibit, or block these receptors as a prelude to pharmacological action. Western drugs have also been developed to inhibit the passage of electrolytes and neuro-hormones across cell membranes.

An example of a **receptor inhibitor drug** is the proton pump Inhibitor Omeprazole – which opposes the cellular mechanism responsible for the production of gastric hydrochloric acid resulting in food being incompletely digested, leading to side effects and complications, such as leaky gut syndrome, constipation, osteoporosis.

A **receptor blocking drug** is the beta blocker which not only blocks the beta receptor site in the heart muscle, but also blocks beta receptor sites in other tissues and organs, resulting in side effects like bronchospasm, confusion, and depression centrally. Not only are the underlying causes of hypertension not addressed, but additional side effects are also created.

**Stimulating drugs** are dopamine agonists such as bromocriptine. In Parkinson’s disease there is a progressive loss of the neurotransmitter dopamine, so conventional treatment often involves administering a dopamine agonist. Side effects such as hypotension, confusion and heart rhythm disturbances often ensue.

While the above highlights that Western pharmacotherapy will lead to side-effects, it is important to note that Physis is constantly attempting to address the side-effects and restore homeostasis, which may be possible if the medication is only used in the treatment of acute conditions. However, the harmfulness of Western medication in the treatment of chronic conditions will most certainly lead to severe side-effects, especially with medication based on the receptor theory which interferes with the biochemical, physiological pathways. This will most definitely result in Physis not being able to restore homeostasis from all the side effects of the receptor-based medication.

Within the context of the saying of Hippocrates "*Science is the father of knowledge, but opinion breeds ignorance*" could this not be the result of the diagnosis of "autoimmune diseases", which undermines the ability of Physis to restore homeostasis.

It is important to note that the principle of physis was an accepted principle until the beginning of the 20<sup>th</sup> century as is evident from the saying of Dr Albert Schweitzer (1875-1965).

*"Each person carries his own doctor inside him. We are at our best when we give the doctor who resides within each patient, a chance to go to work"*<sup>25</sup>

### **Describing the Medicine of Hippocrates within the context of current Western medicine**

The technological advancements, especially over the past century in Western medicine has made impressive progress in diagnostics with respect to imaging technology (CT scans, sonars, etc.), changes in biochemical, physiological, and anatomical functions of the human body and also in surgical procedures. However, Western pharmacotherapy is of major concern because of the side-effects especially medication based on the receptor theory.

The dominance of Western medicine over the past century has negated the principles of the Medicine of Hippocrates, and particularly completely disregarded the concept of Physis which highlights this perfection of creation by God Almighty. Furthermore, the prescribing of Western medication especially the "new to nature drugs", based on the receptor theory, within the context of the Hippocratic saying of 'first do no harm' needs to be seriously considered.

Also, Western medicine based largely on the Germ/viral theories and the doctrine of specific aetiology is mostly definitely contrary to the holistic approach of the Medicine of Hippocrates which recognises that human beings are "body and soul", and health is impacted physically, mentally, emotionally, and spiritually, with professionalism and ethics as A Science of Medicine the Art of Care.

### **Summary and Conclusion**

The above information provides insights into the Medicine of Hippocrates and Western medicine within the context of A Science of Medicine the Art of Care and has also provided a brief overview of the philosophical principles of Physis, Temperament, Humours and Lifestyle Factors. More significantly the paper highlights the differences between the Medicine of Hippocrates and Western medicine with respect to Holism, Professionalism and Medical Ethics.

### **References**

1. Yapijakis, C. (2014). Hippocrates of Kos, the Father of Clinical Medicine, and Asclepiades of Bithynia, the Father of Molecular Medicine. *in vivo*, 507-514.
2. Garrison, F. H. (1966). *History of Medicine*. Philadelphia: W.B Saunders Company.
3. Christos F. Kleisariis, C. S. (2014). Health care practices in ancient Greece: The Hippocratic ideal. *Journal of Medical Ethics and History of Medicine*, 1-5.
4. Jouanna, J. (2012). The legacy of the Hippocratic treatise the nature of Man: The theory of the four humours. In J. Jouanna, *Greek Medicine from Hippocrates to Galen* (pp. 335-359). Brill.
5. Alan C Logan, E. M. (2012). *Vis Medicatrix naturae: does nature "minister to the mind"?* *BioPsychoSocial Medicine*, 1-10.
6. Last, J. M. (2007). *A dictionary of Public Health*. Oxford University Press.
7. Dr Fateh Ali Tipo, D. B. (2019). Understanding concept of Tabiat (Physis) in the view of Unani physicians: A literature review. *International Journal of Research and Analytical Reviews*, 265-268.

8. Konstantinos Kalachanis, I. E. (2015). The Hippocratic View on Humors and Human Temperament. *European Journal of Social Behaviour* 2, 1-5.
9. Ahmad S. I. (1980). *Introduction to Al-Umoor-Al-Tabi'yah Principles of Human Physiology in Tibb*. Delhi-6, India. Printers: Pahari Dhiraj.
10. Sebers, R. (2016). What's Your Temperament: the Humoral Theory's Influence on Medicine in Ancient Greece. *Young historianS conference*, (pp. 1-13). Portland state.
11. Eleni Tsiompanou, S. G. (2013). Hippocrates: timeless still. *Journal of the Royal Society of Medicine*, 288-292.
12. Jesper Dammeyer, I. Z. (2018). A Bried Historical overview on links between personality and health. *Personality and Disease*.
13. Sheehan, H. E. (2002). *Unani Tibb: History, Theory, and Contemporary Practice in South Asia*. *The Annals of the American Academy of Political and Social Science*, 122-135.
14. Renger F. Witkamp, K. v. (2018). Let thy food be thy medicine....when possible. *European Journal of Pharmacology*, 102-114.
15. Bakhtiar, L., Gruner, O. C., Shah, M. H., Crook, J. R., Nasr, S. H., & Avicenna, . (1999). *The canon of medicine (al-Qanoon fi'l-tibb)*.
16. Rasool Choopani, Majid Emtiyaz. (2016). The Concept if Lifestyle Factors, Based on the teachings of Avicenna (Ibn Sina). Published in the *International Journal of Preventative Medicine*, September 2016.
17. Margotta, R. (1968). *The story of Medicine*. New York : Golden Press.
18. Hoffman David. (2013). *Medical Herbalism: The Science Principles and Practices of Herbal Medicine*. Healing Arts Press, Vermont, USA
19. Duke JA (2002) *Handbook of Medicinal Spices (eBook)*. CRC Press, USA
20. Schulick P. (2001) *Ginger: Common Spice and Wonder drug*. Hohm Press, USA.
21. Wagner W. (2015). *The Holy Basil Supplement*. Createspace USA
22. Bhikha R and Glynn J (2018) *Pharmacological Action of Common Herbal Remedies*. *Amer J of Internal Medicine* Vol. 6, No. 5, pp.99-107. doi: 10.11648/j.ajim.20180605.13.
23. Surendran S. (2018) *Commiphoramukul: An Overview*. *Research Journal of Pharmacy and Technology* 11(7).
24. Langley J. N. (2004) *Receptive Substances and his Path to a Receptor Theory of Drug Action*. *Medical History* 48, pp. 153-174.
25. Cousins, N. (2005). *Anatomy of an Illness as Perceived by the Patient*, WW Norton, New York, USA. (Albert Schweitzer).