

Short Article

Greek (Unani) Aspect of Preventive & Social Medicine

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I N T R O D U C T I O N

There are number of systems of medicine prevailing in this world. The Greek (Unani) system of Medicine is one of them. The classic period of Greek Medicine was from 460-136 BC. The medieval period to which Greek medicine belong is 500-1500 AD. The golden period of Greek medicine is considered from 800 to 1300 AD (Park K, 2011) Greek medicine was reintroduced in 1351 AD by Arabs. Athens which was learning centre shifted to Alexandria as Arab - Persian medicine. It flourished in India under the patronage of Mughal Emperors, suffered a setback during the British rule but soon regained its momentum by endless efforts of Nizam of Hyderabad, Azizi family of Lucknow and Sharifi family of Delhi. At present Greek system of medicine has now been regarded and recognized as one of the Indian systems of medicine and forms an integral part of national healthcare delivery system (P. Siddiqui, 2009).

Every established system of medicine is related to a certain major civilization of that period. Greek system of medicine is related to great Greek civilization. Greek Medicine is one of the ancient systems of medicine of which many believe that the modern system of medicine has evolved from it. Hippocrates (460-370 BC) who is considered as father of medicine by the followers of all system of medicine in this universe was a native of Kos/ Cos, Greece (now in Turkey). (pleiades.stoa.org/ places/ 599581).

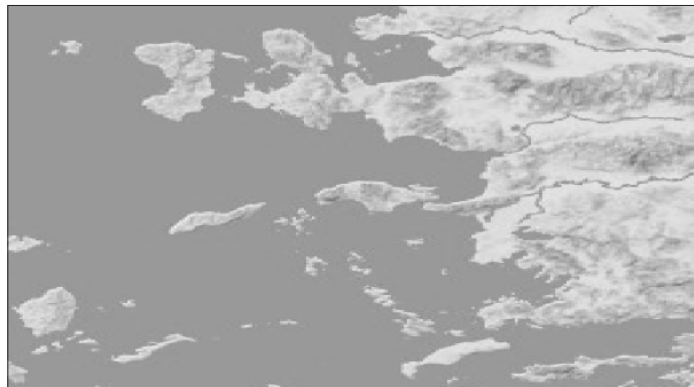


Figure 1. Cos/ Kos, Greece

Preventive and Social Medicine

The medical historian Douglas Guthrie reminds that the Hygeia was worshiped as goddess of health and Panacea as goddess of medicine. Panacea and Hygeia give rise two dynasties of healers -curative medicine and hygienist –preventive medicine with different philosophies. Thus the dichotomy between curative and preventive medicine begins early and remain today. Aesculapius the father of Hygeia and Panacea is still cherished in medical circles - his stick entwined by serpent continued to be the symbol of medicine. In Greek mythology the serpents testifies the art of healing. Hygiene has been variously defined as “the science of health and embraces all actors which contributes to healthful living”. According to another definition hygiene is “the science of preventing disease and promoting health”. Thus the aim of hygiene is not only to preserve health but also to improve it. During ancient days due to lack of knowledge about disease causation and spread, Hygiene and cleanliness was the only option for the promotion of the health and prevention of the disease. (ParkK, 2011), (P Siddiquee, 2000).

Health is a common theme in most of the cultures. The oldest and shortest definition of health is “absence of diseases”. According to WHO, health is a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity. (Park K., 2011) An individual may be called a healthy person if he/ she is physically fit, mentally sound and socially well adjusted. (P. Siddiquee, 2000).

Community medicine is a new terminology. It is the successor of the term hygiene, preventive medicine, social medicine and public health. The goal of this Medicine is to protect, promote and maintain health and well-being and to prevent disease, disability, and death. (Suryakantha AH., (2010).

Origin of Prevention & Social Medicine with the Definition of Medicine

The comprehensive definition of medicine in Greek literature is as follows.

“It is that knowledge which discusses the human body in reference to health and absence of health / deterioration of health so that if health has been availed than preserve it and if health is absent means a disease has been developed than try to revive the health”

On the basis of above mentioned definition the medicine classified into two:

- (a) Preservation of health
- (b) Therapies (Hamdaani SKH., 2006)

Genesis of Greek Preventive & Social Medicine

Human body created through semen (sperm) and

menstruation (ova). Semen (sperm) contains fire and air component while menses (ova) blood and water and the end product of combination have dominance of earthen and fire contents. Earthen part has the power of hardness while fire of metabolism.

So, human body faces two types of damage from internal and external causes as follows.

- Continuous dissolution/ dilution of fluids
- Wear and tear of body fluid - if no corrective measures are taken - body cannot be protected

External factor are air. Internal factors are innate heat. Death is a result of vanishing of innate heat (hararate garizeeya). Knowledge of PSM cannot limit/ stop death and process of ageing.

Preventive & Social medicine is accountable for two things:

- Prevent wear and tear in innate fluids (ratoobate gareezia)
- Prevent dissolution and extinction of innate fluid (ratoobate gareezia)

There are three methods for preventing purposes for above mentioned point no: 2

- Appropriate attainment of alternate of dissolution in the body
- Prevent the body from the factors responsible for dryness of the body fluid
- Prevent such condition in the body which causes infection of innate fluid and dominance of innate heat should be prevented internally and externally.(Khan AM, 2003)

Greek Concept of Classification of Preventive & Social Medicine

Preventive & social medicine may be divided into 3 parts:

- Care of weak body - like children, aged and weak adults
- Prevention - of such persons who are susceptible to disease and due to low immunity may suffer from any disease
- Care of absolute health - which are absolutely healthy and have no tendency/ susceptibility of disease. Measures to maintain their health and achievement of natural age are called prevention of health

Other classification of preventive & social medicine (2 parts):

- Personnel hygiene - for individual to maintain his health and natural age
- Public/ community health - related with state to maintain health of all persons related with environmental sanitation, elimination of epidemics, preventive measures etc. (Khan AM, 2003).

Islamic Concept co-related with Greek Preventive & Social Medicine of Medieval Period (500-1500)

The medieval period was the period of transformation of Greek medicine into Arabic medicine. So, number of sacred words are there related with Greek preventive & social medicine.

Holy Quran

- Alcohol, narcotics, blood, dead animals, swine/ pig flesh are prohibited
- Advice of good foods, optimal use of food and drinks

Prophetic words - hygiene is a branch of Islam which practiced through following norms:

- Keep the clothes clean
- Loves cleanliness
- Allah loves those who remain clean
- Allah like cleanliness, good odour, hygiene and sanitation, so, keep your dwellings clean and don't copy those who collect waste in their homes
- Allah don't like dirty body and uncombed hairs (Rehman S.Z., 2001)

Caliphate words - Haris bin kildah saqfi was an Arab physician - Hazrat Umar farooq asked Haris what is medicine? Haris replied 'preservation of health'. (Rehman S.Z., 2001).

Most Influential Personalities and their Concepts of Greek Preventive & Social Medicine

Hippocrates (*Buqraat*)

- Father of all medicine (460-370/377 BC).



Figure 2. Hippocrates (460-370)

Hippocrates established a line of demarcation between therapeutic and preventive medicine

- He presented environment as one of the cause of a disease and an idea about seasonal disorders. His book "Air, water and places" considered as a sacred book and

milestone in the field of Preventive & social medicine in which he described relationship of health with water, house, cloth, dietary habits etc. (Khan AM, 2003).

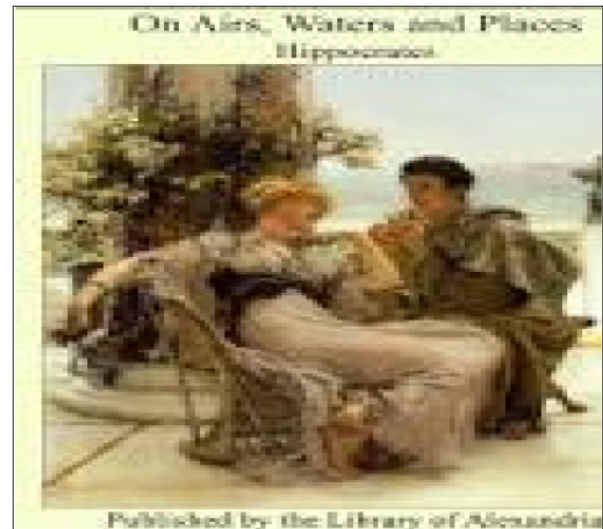


Figure 3. Book - Air, water & places

Hippocrates - as an epidemiologist

2nd important work of Hippocrates is related with epidemic and epidemical diseases.

- He distinguished disease which was epidemic and those which are endemic. He studied such things as climate, water, clothing, diet, habit of eating, and the effects they had in producing disease. Hippocratic concept of health and disease stressed the relationship between man and environment.
- Introduced the terms 'Epidemic', 'Endemic' and clearly distinguished between them.
- Studied the effects of seasons & of hot and cold winds.
- Sources and effects of different types of water.
- He studied diseases in relation to time, season, place, environmental conditions and disease control. (Khan AM, 2003).

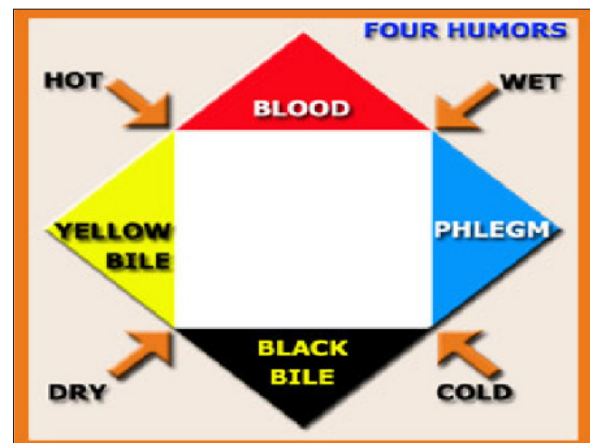


Figure 4. Humours - representing 4 qualities corresponding

Hippocrates was the 1st person who describes

- Humours – Every person supposed to have unique humeral constitution which represent healthy state.
- Medicatrix naturae (Quwate mudabbrah)/ power of self-preservation/ adjustment maintain correct humeral balance in the body.
- Correct diet is one of the important things which help power of self-preservation.(Siddiquee M.K., 2009).

Concept of physic (Tabiat) / Immunity (Quwat e Mudafiat)

- The function of physic is preservation of health in state of health and defences against disease in the state of disease. Physic is responsible for maintenance of health.
- Human body is designed by nature to be self-sustaining and self- healing.
- Illness and disease are the result of body's fight against the disease process.
- The role of the physician is that of a servant and facilitator of nature.

The purpose of medical intervention should be to strengthen the vitality through preventive measures. (Qadeer A., 2005).

Galen (Jalinoos) 129-200 AD.**Figure 5.Galen**

Galen contribute in the field of Greek preventive & social medicine as follows:

1. Tripod Factors

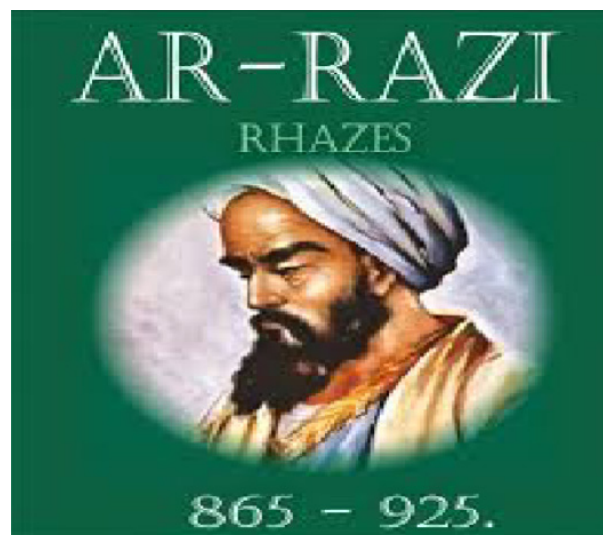
3 types of factors are responsible for occurrence of diseases:

- Predisposing Factors
- Exciting Factors
- Environmental Factors

The preventive theory of WHO can be seen as a modification of this i.e. intervention at any of these levels will prevent the disease process.

2. Sanitation and Public Health

- He also served as a Public Health Administrator in Rome in his later years.
- An important aspect of Preventive Medicine on which he emphasized was Sanitation.
- He made special rules and regulation of sanitation for the general public. (Nigraami SMH., 2004).

Rhazes (Zakariya Razi) - (865-925 AD).**Figure 6.Rhazes**

Rhazes contribute in the field of Greek preventive & social medicine as follows:

3. The Putrefaction Theory

- He hung pieces of meat at different quarters of the city and selected that site for hospital where the meat had decayed the least.
- He showed the bacteriologic putrefaction of meat by the microbes present in the air.
- He proved the environmental role that contaminated air plays in the spread of infection.

4. As an Epidemiologist

- *Small pox & Measles (Kitabal Judri wal Hasba)* also covers descriptive epidemiology and infectious disease epidemiology.
- Also describes all the basic tools of a modern epidemiologist.
- 1st Chapter - agent, host, environment relationship.
- 2nd Chapter - seasonal and personal distribution of the disease according to temperament & body shape.

5. As a 'Pioneer of Preventive Medicine'

- Described the preventive measures for small pox and measles.
- Advised venesection for adults and cupping for all young patients.
- Discovered the method of variolation to provide

- acquired immunity to healthy persons.
- *AlHawi* has one whole volume dedicated to the various preventive measures.
- In *Kitab Al Mansoori* also, has devoted quite a large part to preservation of health. (Qadeer. A , 2005)

Avicenna (Ibn Sina) - Cannon of Medicine.



Figure 7. Avicenna (980-1037 AD)

The concept of Greek preventive & social medicine as described in the book is as follows:

1. Health is depend on six essential factors of life / health which are as follows
 - Air
 - Water & drinks
 - Bodily movement & rest
 - Psychic movement & rest
 - Retention & evacuation
 - Sleep & wakefulness

Air which remain optimum and clean, moreover external bodies which have adverse effects on temperament of spirit (pneuma) if not combined with it then such air preserve health (Avicenna) (Jamil. A. 2011).

All the above factors are essential for life or one can say life is impossible without them. All these factors are basis of preventive and social medicine. (Ashraf SMS, 2012).

1. Other factors are non-essential for life but play an important role in preservation of health.

These factors are as follows:

- Bath
 - Physical exercise
 - Massage
 - Venesection
 - Fatigue
 - Yawning & Pedunculation
 - Clothing / Garments etc. (Ashraf SMS, 2012)
2. Art of maintaining of health is concerned with 2 things (i) prevention of putrefactive breakdowns and (ii) safeguarding of innate moisture from very rapid termination. (Part III of canon of medicine).
 3. Essential consideration in the art of preserving of health consists in maintaining equilibrium between all these various contaminant factors. There are seven matters concerning with special care.
 - Equilibrium of temperament
 - Selection of article of food and drinks
 - Evacuation of effete matters
 - Safeguarding of composite
 - Maintaining of purity of air respired
 - Guarding against extraneous contingencies
 - Moderation in regard with movement of body, motion of mind including sleep and wakefulness (Shah M.H., 2007)

Various theses

Thesis 1: Related with Infants to Adolescent

The detail has been described in the book on the following topics:

- Regimen in infancy - the period from the moment of birth to the commencement of weaning
- Regimen during lactation and weaning
- Disease of infancy
- Regimen from infancy to adolescence

Thesis 2: Related with Adult

It is a proper Regimen for the physically matured.

- General regimen for the athletic age – collective discourse upon bodily exercise

The regimen for maintaining health consist in the regulation of (1) exercise (2) food and (3) sleep.

- Various forms of exercise
- Best time, duration and other rules
- Friction, massage and shampooing
- Various uses of hot bath
- Ablution with cold water
- Regimen in regard with food and drink
- Rules concerning use of water and wine
- Sleep and walking state
- Strengthening of the members (Limbs), weak persons, gaining of flesh and size of body

- Stretching & yawning
- Dealing lassitude, other state following exercise & lassitude of spontaneous origin
- Regimen of cases having defective temperament

Thesis 3: Related with Old Age

These are as follows:

- General Regimen of the old age
- Use of wine
- Removal of obstruction in the old age
- Massage
- Exercise
- Food for old age

Thesis 4: Related with Abnormal Temperament

Regimen for cases of abnormal temperament

- Rectification of hot in temperament
- Rectification of Cold in temperament
- Regimen to person prone to illness
- Lean person to put on flesh
- Reduce obesity

Thesis 5: Related with Atmospheres

Change in atmosphere:

- Regimen according to season, and variation of atmosphere

Theses 6: Related with Travellers

- Symptoms premonitory of the diseases
- General regimen for travellers
- Regimen when exposed to heat/travelling to hot climate
- Regimen when travelling to cold climate
- Protection of limbs from cold
- Counteracts of injurious effects of various water during journey

(Avicenna, 980-1037) translated by Gruner O.C. (1930).

Few important concepts of Avicenna in regard with Greek preventive & social medicine

- He has assured of the importance of environmental factors in causation of disease and also in their prevention.
- He suggested the 'multiple factor' cause of the disease.
- He said infections can be prevented by avoiding direct contact with the person - thus gave the idea of quarantine.
- He had directed special attention to specific groups who were at high risk of acquiring disease.
- He suggested many procedures of evacuation (*istafraqh*) to keep the body in healthy state e.g. diarrhea, vomiting, venesection and cupping.
- He describes various types, quality and illnesses of water.

- He mentioned air spoilage and its effects.
- He note down the design and location of houses.

Precise concept of Avicenna about preservation of Health

"In the practice of health preservation it is necessary that a proper balanced between the various essential, already described anywhere in this book should be ensured. Of these need special mention (a) maintenance of balanced temperament under the varying condition of life; (b) Consumption of suitable food and drink; (c) proper elimination of waste product; (d) adequate care of organ; (e) purity of inhaled air; (f) healthy environment and; (g) moderation in physical and mental activity including sleep and wakefulness." Avicenna (980-1037 AD) translated by Shah M.H. (2007).

Eminent Quotations about health & Preventive & Social medicine by Hippocrates

- Don't eat so much that eateries might eat you.
- Bodily and psychic movement and rest effect body in case of scarcity and abundance. So optimization is must for health.
- Duration of Sleep and wakefulness should also be optimum. Imbalance causes digestive disturbances. Metabolism is better in sleep. Wakefulness causes fatigue which is removed through sleep.
- Evacuation and retention is another important Greek concept of Preventive & social medicine. In materialistic temperamental defects abnormal retention and evacuation takes place. In the state of health benign material retain in the body while defective matter evacuated from body. (Qadeer A. 2005)
- Health is protected by not filling of stomach with food & drinks and avoidance of lethargy
- I assured health of those who manages emesis in the beginning and end of month
- Cause of disease is feeding like an animal while cause of health is feeding like birds
- Eat to live and don't live to eat
- Respect health before it lost

Literature Related with Greek Preventive and Social Medicine

The following are important books of Greek system of medicine which contain different Greek concepts of preventive and social medicine. Some books are related with preventive and social medicine only.

Specific Books on preventive and social medicine

- kitabul ahwia wal maa wal buldaan - air, water and places - Hippocrates,
- kitabul waba - epidemics - Hippocrates

Note: Ibne abi usaiba coded 12 important books of Hippocrates used in teaching related with preventive &

social medicine

- iii) Kitabulfusool (seasons) - Hippocrates
- iv) Kitabul giza (Nutrition) - Hippocrates
- v) Arjoozah fil fasul alarbaa (season) - Avicenna Poetry (Berlin library, Germany)
- vi) Arjoozah fi tabirul fahool fil fasul arbaa poetry(seasons)- Avicenna, (Ayasofia, Topkapi Palace, Istanbul, Berlin Library, Germany, Vatican city)
- vii) Alagzia wal adwia (food & drugs) - Avicenna, (Ayasofia museum, Istanbul)
- viii) Hifzatussehat (health preservation) - Avicenna, (Ayasofia, Istanbul, Bankipur, British museum, London),
- ix) Alfasad ya filurooq almafsoodah (venesection) - Avicenna - (Ayasofia, Topkapi palace, Istanbul)
- x) Wasiat hifze sehat (Preservation of Health in poetry) – Avicenna (Berlin Library, Germany) (Rehman S.Z., 2001)
- xi) Maqalah fil qaza ya hifze sehat - Roofas of city afas of Greece wrote 58/ 60 books. One is on preventive & social medicine
- xii) Kitabe hifze sehat (preservation of Health) - Rabban Tabri (Nigraami H., 2004)

General books containing chapters on Preventive & Social Medicine

- xiii) Corpus hippocraticum - Most familiar and important book of Hippocrates containing 72 volumes. The book was compiled in a school of Alexandria of Egypt.
- xiv) Usul fittib (Principles of Medicine) - Avicenna (Ayasofia, Istanbul, Bankipur & Raza Library, Rampur)
- xv) Alqanoon fittib (Canon of Medicine) - (Mashhad, milli, Iran, Istanbul, Paris Library, Berlin Library, Germany, Braille, Bankipur, British Museum, London, Raza library (Rampur), Vatican city, Cairo (Egypt), Cambridge University, England, Manchester University, England & Iran

5 parts

1st part - on Preventive and social medicine.

xvi) Firdosul hikmat - Rabban tabri

Based on 7 chapters

2nd chapter - hifzane sehat.

3rd chapter - tagzia wa giza .

xvii) Kitabul mansoori fittib - Rhazes

10 Treatises

3rd treatise on food & nutrition, 4th treatise on preventive & social medicine, - seven essential factors (asbabe sitta zarooriah), Non-essential factors (asbabe ger zarooriah), Child & senile care, Neonatal & mother care, 5th treatise on cosmetology, hair care, 6th treatise on traveler's guide, season preventive measure, preventive measures of eye, nose and ear in adverse geographical condition.

xviii) Kitab alhavi - Rhazes

Volume III: Nose, ear, mouth & throat hygiene.

Volume XVII: Small pox & measles (judri wa hasba) – 1st introduce inoculation and isolation.

xix) Kamilusanaa - ali abbas majoosi - 2 volume

Volume I contain 10 treatises

5th on the causes of health, seven essentials of life, sex, and bath

xx) Kitabul maet - Aabu sahal masihi

100 books

10-22 books on six essentials of life, 56-58 books on preventive & social medicine

xxi) Zakhira khwarzam shahi - Ismaeel jurjani

Contain 9 volumes

Volume III on preventive & social medicine with topics on country, season, air, water, food, drinks, six essentials of life, cloth and preventive & social medicine of children, aged and travelers

xxii) Kitabul kullyaat - Ibne rushd

Contain 7 chapters

6th chapter on preventive & social medicine

xxiii) Kitabul mukhtaaraat - Habal Bagdadi

Contain 4 volumes

1st volume on six essentials, preventive medicine for travelers (Qadeer A. 2004)

xxiv) Kitabussehat wassaqam - Aristotle - 23 books - one on preventive & social medicine (Nigraami H., 2004)

Conclusion

The best possible ways of health promotion in this holistic system of medicine are improvement of Tabiyat (Medicatrix naturae or Immunity) by immunomodulators, restoration of balanced temperament, maintenance of balance in the quality and quantity of humors, moderation of Asbaabe Sitta Zarooriya (six essential factors for life), Munzij wa Mushil (concoctive and purgative) therapy and Ilaj bil ghiza (Dieto-therapy).

Conflict of Interest: None

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