



## Air Pollution: Avicenna's Concept

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### DEAR EDITOR,

Exposome, a term used by scientists, refers to the study of various environmental factors and body factors affecting our health from birth to death.<sup>[1,2]</sup> A main environmental factor is the air polluted by gases and particles of different sizes. This claims the lives of about 7 million people in the world every year.<sup>[3]</sup> Furthermore, studies in 2010 show particles in the air ranked ninth on the list of the most pathogenic risk factors.<sup>[4]</sup> Polluted air may cause a variety of cardiovascular, respiratory, digestive, psychological, and chronic health problems such as hypertension, diabetes, and cancer.<sup>[5-7]</sup>

Abu- Ali- Husain- Ibn- Abdollah- Ibn- Sina (Avicenna) (980-1073 AD), the famous Iranian scientist whose noted work in medicine entitled, "Canon of Medicine," has speculations on air and its effects on human health very much similar to those found in modern medicine.<sup>[8,9]</sup>

He believes that healthy air is the base of life energy of human life. He reckons that air changes occur in two forms: Quality and components. Air quality relates to hotness, coldness, dryness, and wetness, while changes in air components are called changes in the nature of air. Avicenna believes that there are four air disorders, namely thick, smoky, opaque, and pathogenic air disorders. Each type differs from others in terms of its pathogenic effect and type, size, and density of its particles. According to his view, polluted air could cause short- and long-term effects, affecting cardiovascular system first and later the brain for short periods. Polluted air can cause itching, burning eyes, watering eyes, irritability, anxiety, and headache. In the long run, polluted air can affect development and growth systems and consequently cause heart and mental problems, depression, fatigue, energy loss, digestive disorders. Liver problems, ovarian disorders, skin problems, and cancer could be related

due to digestion disorders.<sup>[9]</sup> Avicenna believes that cardiovascular problems are the most common ones caused by air pollution, a fact observed in modern epidemiologic studies.<sup>[10]</sup>

Avicenna suggests a number of preventive and curative measures to keep safe from the harms of polluted air. He recommends moving to mild weather areas and green plains, remaining indoors and shutting windows when the air is highly polluted, having fragrant stuff around, consuming antidotal foods, and foods which enhance cardiovascular and mental functions, avoiding hot, salty foods, and avoiding strong emotions such as anger.<sup>[9]</sup>

It appears that studying Iranian Traditional Medicine reference books related to lifestyle, especially investigations on properties of food stuff, can help reduce the harmful effects of air pollution on our health.

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