

P 31. PARTICULATE MATTERS AND ITS EFFECTS ON HUMAN HEALTH

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ABSTRACT: The impact of air pollutants on health is one of the major problems of the world in the past and today. Air pollutants are present in gas and particulate form sourced by natural or anthropogenic. Particulate matter (PM) is called particles which are separated from each other in solid or liquid phase which can be suspended in air for a while. The PM can be formed released directly by the sources of pollutants (primary) or by particulate condensation of gases or by chemical reactions in the atmosphere (secondary). PM is directly released into atmosphere from various natural sources (soil, dust storms, sea sprays and ocean surfaces, volcanoes, forest, pasture fires, etc.) or anthropogenic sources (heating processes, garbage incinerator, steam generators, fires, domestic heating, traffic, agriculture and construction activities. PM sources differ in size ranges, formation mechanisms and chemical compositions. Therefore, they have various chemical and physical properties. Cancer containing organic chemicals (such as PAH, furan) are very dangerous for health. Zinc ammonium sulfate in the smoke components can be converted into sulfuric acid in the lung. Since soot, fly ash, gasoline and diesel exhaust particles contain cancers components such as benzo (a) pyrene, cancer evidents can be increased if they are inhaled for a long time. Health effects vary depending on the particle size and concentration. Health effects vary depending on the particle size and concentration. Especially in the range of 0.002µm-10µm is important for health. Coarse particles (PM10-2.5) can worsen respiratory disorders such as asthma and may cause negative affect both lung functions and heart rhytm depending on the duration of exposure. Fine particles (PM2.5) may cause various health problems, including before time death. The aim of this study is to review the effects of particulate matter pollution and its effects on human health.

Keywords: air pollution, particulate matter, human health