



Causes of respiratory diseases

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DESCRIPTION

Allergic respiratory illnesses (rhinitis, sinusitis, bronchial asthma and their equivalents) appear to be increasing in most countries, with people living in urban and industrial areas more than people living in rural areas. This increase is, among other things, associated with air pollution, which poses a major public health threat today. Laboratory studies support epidemiological evidence that inhalation of several pollutants individually or in combination impairs lung function in asthmatics. The most common air pollutants in urban areas with heavy vehicle traffic are particulate matter, nitrogen dioxide and ozone. Nitrogen dioxide does not consistently affect lung function, but ozone, breathable particles, and allergens impair lung function and increase airway sensitivity and bronchial obstruction in predisposed individuals. However, air pollutants not only act as irritants, but can also regulate the allergenicity of antigens carried by suspended particles. By adhering to the surface of pollen and paucimicronic particles from plants, contaminants can change the morphology of these antigen carriers and their allergen potential. In addition, contaminants cross the mucosal barrier by inducing inflammation of the airways, increasing the permeability of the airway epithelium and promoting allergen-induced inflammatory responses. In addition, air pollutants such as diesel exhaust gas are thought to regulate the immune response by increasing immunoglobulin E synthesis, thereby promoting allergic sensitization in atopic individuals and the subsequent development of clinical respiratory symptoms. Air pollution affects mostly the organs and systems in the human body. Air pollutants can cause and exacerbate diseases such as cardiovascular disease and ischemic heart disease. Air pollution also has a negative effect on the nervous

system (Castaño-Vinyals, 2008), digestive system (Carrey, 2013) and urinary system (Genc, 2012). Long-term exposure to air pollution has been reported to increase mortality from all causes (Kaplan, 2013). Air pollution is the cause and exacerbation of many respiratory illnesses such as chronic obstructive pulmonary disease (COPD), asthma and lung cancer. The fight against air pollution seems to be a long-standing challenge for both developed and developing countries, especially China. As air pollution continues to be a serious problem around the world, it seems useful for people, especially those with chronic respiratory illness, to understand the components of air pollutants and the actions to be taken.

Contaminants in the environmental air were mainly made of industrial production, forest and brush combustion and waste incineration and transportation emissions. The micro particles are less than 2.5 microns in diameter. Automotive, power plant, forest fire, forest fire, agricultural combustion, several industrial processes, and other combustion processes are displayed. It is a large scale that burns the cause of air pollution in a certain amount of time to bring the climate of the turbidity directly. The largest source of automotive cars is considered to be derived from diesel exhaust gas. Diesel exhaust particles take into account up to 90% of aviation export PM in the world's largest city. Other PM sources include wild forest fires, burning trash, dismantling, and large reconstruction. PMS is usually carbon particles with other chemical components, microorganisms and heavy metals on their surfaces. PM10 and PM2.5 are two commonly used indexes for PM monitoring. PM2.5 is currently used as the main indicator of health of particle contamination in many countries (AQI). Particles deposited in sufficient amounts in the respiratory tract can cause inflamma-

tion, as shown in both animal and controlled human exposure studies. The degree of pneumonia depends on the dose and composition of the particles. Controlled human exposure studies have shown that markers of pneumonia increase after exposure to a variety of different particle types. For example, organic carbon particles and transition metals from combustion sources can cause a strong inflammatory response.

Air pollution is a major public health threat, especially in busy urban areas (Venn, 2001). Recent scientific evidence shows that there is a potential link between urban air pollutants and adverse health effects, especially those affecting the respiratory and cardiovascular systems. Children, the elderly and people with chronic illnesses are a particularly vulnerable group. However, the vulnerabilities of children, especially very young children, are unique. First, the lungs of children are still growing, and early exposure to environmental pollutants can easily alter lung development and function. Second, children, especially preschoolers, are more physically active than teenagers and adults in all categories, have long-term increased respiratory rates, and deposit large amounts of environmental pollutants in the airways. There is a possibility. Third, infants are primarily mouth breathers. This means that the nasal filter is bypassed, allowing the entry of many different pollutants into the lower respiratory tract.

Our results show that there is a significant association between traffic-related air pollution and exacerbation of asthma and respiratory infections in children with

atopic parents and children with recurrent wheezing or asthma. This association can also occur in healthy children and correlates with duration and intensity of exposure, but children with existing respiratory vulnerabilities appear to be more susceptible to air pollutants. Further research is needed to confirm this finding and assess whether other factors may contribute to this association.

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