

EDITORIAL:

Smog has acquired a striking position due to its widespread health hazards in Pakistan especially in city of Lahore. Smog is a combination of the words smoke and fog. It refers to smoky fog, its opacity and odour. Fog is condensed water vapor on pollutants, thus fog is basically suspended tiny water droplets floating in air. Its appearance is whitish in comparison to smog which is darker. Its major components are VOC (Volatile Organic Compounds) and Nitrous Oxides. VOC consists of Carbon, Oxygen, Hydrogen, Chlorine, and Sulphur. They are derived from Coal emission, vehicular emission (trucks, buses, and automobiles), industrial emissions, forest and agriculture fire, photochemical reactions. These molecules react with sunlight, heat, ammonia, moisture and other compounds to form noxious vapours, ground level ozone and particles that comprise visible air pollution which we see as smog.

Pulmonary problems are the main focus of smog, be it inflammation of breathing passages, down to decreasing lung's working capacity, causing shortness of breath (SOB), pain while inhaling deeply, wheezing, coughing leading to the diseases like Emphysema, Bronchitis and Asthma. It can effect eyes and nose by drying out protective membranes of nose and throat and ultimately interfering with the body's ability to fight infections and thus increasing susceptibility to illness. Increased hospital admissions have been seen and increasing respiratory deaths during periods where levels are high. It can also originate the disease like asthma in otherwise normal patients besides worsening the condition of pulmonary patients. It can cause cancer as well and researches have been done for its effects on tiny magnetic particles from air pollution causing Alzheimer's disease. Birth defects like neural tube defects (spina bifida), anencephaly has also been seen and few areas having smog have researches over low birth weight as well.

There are particular constituents of smog which cause these diseases. Ozone is responsible for breathing problems, triggering asthma, reducing lung function and causing lung diseases. Sulfur dioxide is an eye irritant and it can cause cough, mucous secretion, exacerbate asthma, chronic bronchitis, infections for respiratory tract. High risk patients include extreme age (children/old aged), pregnant females. Comorbid conditions especially related to lung and heart disorder. Management of smog constitutes eye disease management for which wrap-around zero powered eyewear are used. Wash eyes with cold water after travelling. Place cucumbers/cold compress on your eyes and rest, to help reduce inflammation. Avoid rubbing eye in case of pollutants getting in the eye don't rub your eyes, instead, wash your eyes thoroughly with cold water or apply lubricating eye drops for relief. Don't wear contact lenses. Respiratory disease management is required. Optimize the treatment of primary disease. Asthma / COPD patient should have rescue-inhaler with them. Avoid going out unnecessarily. Get vaccination done.

There are certain precautionary measures. Drink plenty of water. Avoid cold beverages. Always wear face mask. Cover head with cap. Keep your hands sanitized. Avoid unnecessary travelling. Clean home and work places with wet cloth daily. Keep your doors and windows shut. Keep your inhaler with you if you are asthmatic. Keep away from high traffic areas. Do not smoke indoors. Fix water infiltration problems to prevent mold growth. Opt for healthy and environmental friendly household products and materials. Limit use of wood burning.

Government responsibility is to keep check and balance on emissions standards for industry and road vehicles as well as monitoring air quality should be made as first priority. Its depressive effect on human health should be highlighted and interventions like 'odd even' system for vehicles where cars with odd and even registration numbers are allowed on streets on alternate days.

Public awareness programs like instructions regarding maintaining vehicles are fuel management and assuring public effort to help society fight against this evil must be implemented at all levels. There are few suggestions for government authorities. Increase awareness about smog. Take adequate steps to reduce air pollution. Keep check and balance for industries and vehicles which are causing pollution. Reduce use of pesticides. Deforestation should be greatly discouraged. Steps should be taken for further enhancement of the greenery around us.

Make glitzy, high visibility infrastructure projects, but do not put aside measures to reduce factors producing smog.

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