



Evidence Growing of Air Pollution's Link to Heart Disease, Death

The scientific evidence linking air pollution to heart attacks, strokes and cardiovascular death has “substantially strengthened,” and people, particularly those at high cardiovascular risk, should limit their exposure, according to an updated American Heart Association scientific statement.

The evidence is strongest for fine particulate matter (PM2.5) having a causal relationship to cardiovascular disease, said the expert panel of authors who updated the association's 2004 initial statement on air pollution. The major source of PM2.5 is fossil fuel combustion from industry, traffic, and power generation. Biomass burning, heating, cooking, indoor activities and forest fires may also be relevant sources, particularly in certain regions.

“Particulate matter appears to directly increase risk by triggering events in susceptible individuals within hours to days of an increased level of exposure, even among those who otherwise may have been healthy for years,” said Robert D. Brook, M.D., lead author of the statement, which was written after review of epidemiological, molecular and toxicological studies published during the past six years.

“Growing evidence also shows that longer-term PM2.5 exposures, such as over a few years, can lead to an even larger increase in these health risks. In this context, the American Heart Association said that PM2.5 should be recognized as a ‘modifiable factor’ that contributes to cardiovascular morbidity and mortality.”

The elderly and those with existing heart diseases, such as heart failure or coronary artery disease, and perhaps those with diabetes appear to be at higher risk from short-term PM2.5 exposure.

The foremost message for these high-risk groups remains that they should work to control their modifiable traditional risk factors -- blood pressure, cholesterol, diabetes, smoking. There are several ways by which PM2.5 could affect the cardiovascular system; however, one leading explanation suggests that several components of PM2.5, once inhaled, can cause inflammation and irritate nerves in the lungs. These responses can start a cascade of changes that adversely affect the rest of the body.

Reducing exposure to air pollution takes effort at the population level by implementing national policies as well as at the individual level, Brook said. “People can limit their exposure as much as possible by decreasing their time outside when particle levels are high and reducing time spent in traffic -- a common source of exposure in today's world.”

Adapted from *Science Daily*

1 Answer the following questions:

1. What are the main sources of PM2.5?
2. Who is at higher risk from PM2.5 exposure?
3. What should they do to prevent complications?
4. What should normal people do to limit their exposure to PM2.5?

2 Write a summary of the passage (about 100 words).

Freshwater Pollution Prevention: Clean Drinking Water For Everyone

Freshwater pollution may not get as much attention as the pollution of the oceans. Nevertheless, what most individuals do not realize is that it is freshwater that is the most fundamental for their survival.

Freshwater includes drinking water, which we need to live. Every living being requires water to last. Animals and plants depend on us to make sure that they have the freshwater supply they require, free from pollution, to survive. That is why freshwater pollution prevention is a leading priority.



Importance of Prevention

The importance of freshwater pollution prevention cannot be denied.

Without a clean supply of freshwater we would all be in risk. It is often guessed that avoiding dumping waste and different polluting agents into water is sufficient to prevent water pollution. This is just a share of the problem.

Water is polluted in many various ways. It can be polluted through overgrowth of algae or bacteria. It can happen through pollution on the surface that seeps into the groundwater. It can also be a side effect of air pollution.

Freshwater pollution prevention is not as easy as it may seem at all. To prevent water pollution there is a great deal of regularisations that must be put into place.

Prevention Measures

Water pollution happens due to varying sources. Waste thrown directly into the water is a kind of pollution that can be easily prevented. Through regulations and constant supervising of waterways, dumping can be stopped. People are not likely to dump trash in to water if they know they will pay a price for doing so.

Waste material that is not thrown into water is different worry and far trickier to supervise. Waste sitting above ground will seep into the ground beneath and eventually into the groundwater. Groundwater is the main origin for all freshwater. One time it seeps to the ground water then the ground water is polluted.

Controlling this problem is also done through regulation. It demands educating businesses and people about the dangers of dumping trash anywhere, as well.

Another issue is the growth of bacteria. This is highly heavy to prevent. Still, over detailed supervising of watercourses conditions can be found and changed as required to prevent excessive growth.

Air pollution transferring to water pollution is getting more of a concern as air pollution runs to get harder. The single way to prevent this pollution is to struggle air pollution. Thus, prevention of air pollution and water pollution go hand in hand.

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1 While reading, find the English equivalent for the following words

Parte	Scaricare
Crescita eccessiva	Rifiuti
Si infiltra	Più complicate
Effetto collaterale	Richiede

2 Write a summary of the text (about 110 words)