Relation of Air Pollution with Diabetes

Why in news?

\n\n

According to recent research proportion of pollution-linked diabetes is high in India.

\n\n

What is the research findings about air pollution?

\n\n

\n
- Particulate matter that exists as fine dust in the air can lead to an increased risk of diabetes, particularly in low-income countries such as India.
\n
- Analysis of the burden of pollution-linked diabetes (in the journal, Lancet Planetary Health) estimates that in 2016, air pollution resulted in as many as 3.2 million new cases of diabetes.
\n
- This is 14% of all new diabetes cases for that year, and India’s share was 20% of new cases.
\n
- Annually, the researchers estimated that pollution-linked diabetes caused more than 2 lakh deaths in 2016.
\n

\n\n

What are the concerns for India?

\n\n

\n
- India tops the list in terms of ‘Disability-Adjusted Life Years’, which measures years of healthy life lost due to pollution-linked diabetes.
\n
- Researchers estimate that nearly 8.2 million years of healthy life were lost globally in 2016, and India lost 1.625 million healthy years.

\n
- The global PM2.5 average was 42.3 micrograms per c3, in India, it was 72.6 per m3.
\n
- The study finds that a modest reduction in PM2.5 levels may lead to a reduction in diabetes cases in India.
\n
- This level is considered “safe” by Indian standards which sets a limit of 40 micrograms per m3) and is far below what is experienced in cities.
\n
- In Delhi, for instance, PM2.5 can touch nearly 100 micrograms per m3.
\n

\n\n

How air pollution contributes diabetes?

\n\n

\n
- Researchers undertook a global estimate extrapolating national annual PM2.5 exposure estimates and using data points from the Global Burden of Disease study.
\n
- The risk of incident diabetes increased with rising concentrations of PM2.5 (fine dust less than 2.5 microns in diameter).
\n
- Studies have shown that this fine dust enters the bloodstream through the lungs, reducing insulin production and triggering inflammation.
\n
- This factor adds to the diabetes burden which affects more than 420 million people globally.
\n
- Even though previous studies had shown a significant impact of air pollution on diabetes, the burden of the disease had yet to be quantified.
\n

\n\n

\n\n

Source: The Hindu

\n



SHANKAR
IAS PARLIAMENT
Information is Empowering