

Air pollution damages babies in womb: study

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WASHINGTON: Babies' DNA can be damaged even before they are born if their mothers breathe polluted air, according to a study published last week.

"This is the first study to show that environmental exposures to specific combustion pollutants during pregnancy can result in chromosomal abnormalities in fetal tissues," said Kenneth Olden, director of the National Institute of Environmental Health Sciences, which funded the study.

"These findings may lead to new approaches for the prevention of certain cancers."

The team at the Columbia University Center for Children's Environmental Health in New York studied 60 newborns for the report, published in the February issue of the journal

Cancer Epidemiology Biomarkers and Prevention.

As part of a larger study, they monitored the babies' exposure to polycyclic aromatic hydrocarbons, which are compounds produced by burning.

"Although the study was conducted in Manhattan neighbourhoods, exhaust pollutants are prevalent in all urban areas, and therefore the study results are relevant to populations in other urban areas," said Dr Frederica Perera, who led the study.

To determine exposure to pollution, the mothers filled out questionnaires and wore portable air monitors during the last three months of their pregnancies.

Women were rated as having high, moderate or low exposure based on average pollution lev-

els for the group.

Then they tested the umbilical cord blood of the newborns, looking specifically at the chromosomes, which carry the DNA. Damage to chromosomes can cause cancer.

"We observed 4.7 chromosome abnormalities per thousand white blood cells in newborns from mothers in the low exposure group, and 7.2 abnormalities per thousand white blood cells in newborns from the high exposure mothers," Perera said in a statement.

The kind of damage to the chromosomes that they say was the type that tends to linger, making people more susceptible to cancer.

Other studies have linked exposure to pollution with leukemia and other cancers.—Reuters