

CHILDREN OF BHOPAL

The Indian government has estimated that half a million people were exposed to the toxic gas when it leaked in 1984. Those and countless others have endured chronic, continuing exposure to toxic chemicals through contaminated water. There have been no large scale, official studies on the effects of this chemical exposure on children born to exposed parents. We do know enough, however, to be certain that these children are facing very high rates of serious congenital health problems. Serious research is needed and appropriate treatment and care must be provided now and guaranteed for the future.



Lack of Research

The Indian Council of Medical Research (ICMR) initiated 18 large-scale studies in the aftermath of the Bhopal disaster. However, despite positive findings of long-term damage, and despite the protests of the primary investigator, these studies were all prematurely ended within ten years, just as conclusive evidence of damage in the second generation was appearing.

Except for a population-based cancer registry [which is seriously flawed] there has been no official initiative to generate information on the long-term health consequences of the disaster involving some of the most toxic chemicals known to humankind. While individual researchers have carried out studies involving specific organs and body systems, and independent professional groups have carried out epidemiological studies, these have been sporadic and all are outdated.

Lack of research into the possible genetic and reproductive ramifications of gas exposure, and now of exposure to contaminated water, have seriously handicapped efforts to understand and respond to the effects on the next generation in affected communities.

What is Known

- Women who were pregnant during or following the disaster had extremely high rates of spontaneous abortion. A 1985 study by Medico Friends Circle (MFC) found that in addition to spontaneous abortion and stillbirths, women pregnant at time exhibited diminished foetal movements and menstrual disturbances. Fetuses who survived the gas disaster suffered from severe malformations. Birth defects continue to occur among gas and water contamination affected families at a higher rate than average.
- A study carried out by Sambhavna and published in the Journal of the American Medical Association (JAMA) in 2003 showed that children conceived and born after the disaster to exposed parents were significantly different from children of the same age who were born to unexposed parents. The children born to exposed parents were shorter, thinner, lighter, and had smaller heads. Sons of exposed parents showed abnormal growth in which their upper bodies were disproportionately smaller than their lower bodies.

TIMELINE

1984 Women who were pregnant at the time of the gas leak suffered extremely high rates of pregnancy loss.

1987 Dr. Daya Varma finds that pregnant mice exposed to MIC lost their pregnancies 73% of the time

1989 Dr. N.R. Bhandari of the ICMR reports delayed physical and mental development in children of exposed mothers

1991 Bhandari's study was ended up prematurely despite recommendations by committee that it be continued through puberty and cover sexual and immunological functions.

2003 A study published in the Journal of the American Medical Association (JAMA) finds selective growth retardation and hormonal problems in children born to exposed parents.

TODAY Countless unknown children in Bhopal are suffering from a range of congenital defects, malformations, growth disorders, and other health problems with without acknowledgment or attention to their needs.



- ICMR studies, although prematurely terminated, did show that children of exposed mothers had delayed physical and mental development and lower values for anthropometric parameters such as height and mid-arm circumference, as presented by the researcher Dr. Bhandari in 1989.

- These findings are consistent with what little is known about the nature of methyl isocyanate (MIC), the gas that leaked from the factory. Trimethylamine, one of MIC's breakdown products, has been reported to produce selective growth retardation of male progeny of mice, while Dr. Daya Varma, MD, has found that MIC exposure can cause pregnancy loss in mice.

These studies, while wholly inadequate to effectively guide a response to this crisis, confirm the need for further study of the effects of gas exposure on the next generation.

The problem of second generation damage resulting from gas exposure in 1984 is one that will affect tens of thousands, and potentially many more in the future, and it needs to be addressed immediately. **Yet the government has only very scanty information on this issue, and no plans for the health care or special assistance needed for the next generation.**

What We Need and Who Must Provide It

A national commission must commission comprehensive studies on Bhopal's next generation to fully document the problem and its likely implications, and organize a health care and rehabilitation program in Bhopal geared to the needs of next generation survivors. The central government and its Ministry of Chemicals and Fertilizers is responsible for creating the National Commission. In 1990 when the Indian Supreme court revisited the 1989 civil settlement agreement with the Union Carbide Corporation over liabilities arising from the Bhopal gas disaster, it stated that the government would fund and manage any further medical needs arising out of the gas disaster.

WE DEMAND that the central government set up a National Commission on Bhopal with the necessary authority and funds to rigorously monitor for at least the next 30 years the health of the second and third generations of families poisoned by Union Carbide / Dow Chemical. We demand that appropriate and effective treatment and care is provided in perpetuity for all generations found to be affected. The commission must have active participation of non-government doctors, scientists, and representatives of survivor's organizations.



This padyatra is our march for justice and dignity. We shall struggle until our last breath.

21 years is enough!

*Bhopal Gas Peedit Mahila Stationery Karmachari Sangh +91 755 93031 32959 • Bhopal Gas Peedit Mahila Purush Sangharsh Morcha +91 755 93290 26319 • Bhopal Group for Information and Action +91 755 98261 67369
Bhopal ki Aawaaz +91 755 98261 82226 • www.bhopal.net/march*