

'India building specialised labs to assess nuclear radiation damage'

New Delhi: Scientists at INMAS are developing three new specialised laboratories which they say could boost India's nuclear preparedness and help save thousands of lives in case of an atomic war or a nuclear disaster.

Biodosimetry labs are specialised centres for assisting medical management of radiation exposure in case of a nuclear disaster.

Ideally, they should be connected with similar labs globally to help each other as a single country will not be able to tackle nuclear disaster alone, said Aseem Bhatnagar, Additional Director at the Institute of Nuclear Medicine & Allied Sciences (INMAS) here.

As part of the emergency preparedness for nuclear disasters, the International Atomic Energy Agency (IAEA) and the World Health Organization (WHO) have made it mandatory for every country to develop Biodosimetry laboratories, he said.

According to experts, Biodosimetry labs alone can assess the severity of the damage caused by radiation during nuclear disasters in any part of the world. This test is considered universally valid.

The mandatory test at the laboratory will ascertain the quantum of the exposure a person has suffered and also the possibility of their survival, they said.

"During radioactive accidents, thousands of patients may be rushed to hospitals. The blood of such patients will have damaged components in proportion to the radiation received that this test assess," A K Singh, Director General of Life Sciences at the DRDO, told PTI.

"Biodosimetry labs employ a test called Dicentric Chromosomal test. Laborious work is needed for three to four days and only then one can report on the severity of the damage," he added.

While the network of such labs is already strong in European countries and the US, which realized its importance after the 2001 terrorist attack on World Trade Centre in New York, India has so far lagged behind, noted NK Chaudhary, a senior scientist at INMAS.

Since the first such lab was set up in 1988 at the Bhabha Atomic Research Centre in Mumbai, India could add just three more in the years that followed with the last one coming up at INMAS in 2016, Chaudhary said.

The two remaining labs were constructed at the Indira Gandhi Centre for Atomic Research in Kalpakkam and a private hospital in Chennai, both in Tamil Nadu, he said.

INMAS is now working overtime to add three more of such laboratories in civil domain, including Bhopal Memorial Hospital, Bhopal, KS Hegde Medical Academy, Mangalore and the Maulan Azad Medical College, Delhi.

Singh said that the new labs will be functional once the accreditation with the IAEA is done. Experts believe another reason to expand the network is the limitations of a lab to handle only six to seven samples at a given point of time.