

Toxicity testing



In addition to the destruction, direct loss of property and lives, the disaster of the World Trade Center had a wide variety of detrimental effects a substantial percentage of which are related to toxicology. The major concern after the disaster of the World Trade Center was the airborne toxicology which threatened human health in a radius of more than 6 miles from the site. The dust which issued out into the air due to the collapse of the World Trade Center tower included a wide range of toxic elements and compound having highly injurious effects on human health. The airborne dust from the collapse and fumes from the burning of the towers blanketed Lower Manhattan with dust containing a complex mixture of asbestos, various carcinogenic metals, dioxins, benzene, glass fiber, PolyChlorinated Biphenyl, Polycyclic Aromatic Hydrocarbons and Volatile Organic Compounds. Most of these chemicals are very dangerous for human health and can cause diseases which not only affect the infected individual but some of them can also get transferred to next generations (Greenberg, 2003). The immediate response to the situation was not very effective and a substantial number of people were treated for diseases caused by the toxicology of the dust from World Trade Center. National Toxicology Program run by the National Institute of Environmental Health Sciences took various preventive measures for the prevention and control of airborne infections and diseases in such a situation which included preventive exercises programs for the public and reducing the allowable amount of chemicals and materials like asbestos in buildings. However the effectiveness of these programs cannot be tested and thus a risk of outbreak of diseases and infections still exist. Moreover the use of harmful chemicals, like asbestos and VOCs in the construction of buildings should be banned and environment friendly and hygienic materials

and compounds should be developed to replace them (Dwyer, Doane & Hinman, 1997). References Dwyer, J., Doane, T., & Hinman, M. (1997). Environmental Toxicology and Risk Assessment: modeling and risk assessment (Vol. 6). ASTM International. Greenberg, M. (2003). Occupational, Industrial, and Environmental Toxicology. Elsevier Health Sciences.