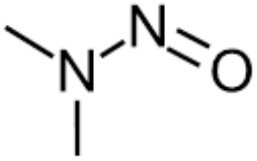
CAS 62-75-9

N-Nitrosodimethylamine (NDMA)

$C_2H_6N_2O$

VERMONT DEPARTMENT OF HEALTH



Summary of Health Effects

N-Nitrosodimethylamine (NDMA) can cause cancer in animals and may cause cancer in humans.

How is NDMA used?

Today, NDMA is mostly used as a research chemical.[1] Previously, it was used as a plasticizer for rubber, and as a solvent in the fiber and plastics industry.[1]

Toxicity: What are its health effects?

NDMA is reasonably anticipated to be a human carcinogen, according to the National Toxicology Program.[1] NDMA is listed as a carcinogen on California's Proposition 65 list.[2] The Environmental Protection Agency classified NDMA as a probable human carcinogen.[3,4]

NDMA has been tested on many species of animals, and tumors were observed in all the species tested.[1] Tumors appeared primarily in the liver, respiratory tract, kidney and blood vessels.[1] Certain prepared foods, such as cured meats, may contain N-nitroso compounds.[1]

Exposure: How can a person come in contact with it?

A person can come in contact with NDMA by eating certain prepared foods, drinking contaminated water, and breathing in cigarette smoke and contaminated air.[3] They also may come in contact with it by using personal care products or household goods that contain NDMA. Infants may come in contact with NDMA through the use of rubber baby bottle nipples and pacifiers.[5]

The 2014 National Health and Nutrition Examination Survey (NHANES) report did not include data for NDMA.

References

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3. U.S. Environmental Protection Agency, Technology Transfer Network (2000). *Hazard summary for N-nitrosodimethylamine*. Retrieved from www.epa.gov/sites/production/files/2016-09/documents/n-nitrosodimethylamine.pdf

4. U.S. Environmental Protection Agency (1987). *Integrated Risk Information System (IRIS) for N-nitrosodimethylamine*. Retrieved from cfpub.epa.gov/ncea/iris2/chemicalLanding.cfm?substance_nmbr=45

5. Agency for Toxic Substances and Disease Registry (ATSDR). *Toxicological profile for N-nitrosodimethylamine*. Public Health Service, U.S. Department of Health and Human Services, Atlanta, GA. 1989. Retrieved from www.atsdr.cdc.gov/toxprofiles/tp141.pdf