

Ethylene oxide
C₂H₄O
[CAS No. 75-21-8]
Reproductive toxicant: Group 1

Several epidemiology studies have shown a positive correlation between occupational exposure to ethylene oxide and adverse pregnancy outcomes. Increased spontaneous abortion rates were reported among female workers, typically in hospital staff engaged in sterilizing instruments, in Finland¹⁾, the United States²⁾, and South Africa³⁾. Many animal studies have shown germ cell mutagenicity/genotoxicity and developmental toxicity of ethylene oxide, including fetal malformation and death, in mice⁴⁻⁷⁾ and rats⁸⁾. Based on this evidence, ethylene oxide is classified as a Group 1 reproductive toxicant.

References

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- 5) Generoso WM, Rutledge JC, Cain KT, et al. Exposure of female mice to ethylene oxide within hours after mating leads to fetal malformation and death. *Mutat Res* 1987; 176: 269–74.
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