

The LC₅₀ values were lower (higher toxicity) for restrained rats. For the respective exposure-duration values of 10,754, 4,318, 2,890 and 1,888 ppm were obtained. The RD50 for rats exposed to CO was 15,000 ppm. The COHb values were 60% or higher in rats that had died after unrestrained exposure and 50% or higher in rats that had died after restrained exposure.

Darmer et al. (1972) reported an LC₅₀ of 14,200 ppm for 5 min of exposure. Haskell Laboratory (1978) [in E.I. du Point de Nemours (1981)] obtained an LC₅₀ of 4,070 ppm for a 30-min exposure. Hartzell et al. (1985) reported an LC₅₀ of 8,636 ppm for a 15-min exposure and 5,207 ppm for a 30-min exposure. Kimmerle (1974) reported an LC₅₀ of 5,500 ppm for a 30-min and 4,670 ppm for a 60-min exposure.

Rose et al. (1970) reported an LC₅₀ of 2,070 mg/m³ (95% C.I. 1,831-2,241 mg/m³, 1,807, 1,598-1,956 ppm) for a 4 h exposure in male Sprague-Dawley rats. The COHb in animals that had died was between 50% and 80%.

3.1.2. Mice

Pesce et al. (1987) exposed groups of about 100 OF₁-strain mice/age group/sex to 5.5 Torr (about 7,200 ppm; final analytic concentration) for 76 min or to 4.4 Torr (about 5,800 ppm) for 146 min. For the 76-min exposure, survival rates were 36% for 31-day-old males and 22% for 184-day-old males. Of the exposed females, 57% of 31-day-old females and 63% of 184-day-old females survived. After exposure for 146 min, survival rates were 40% for 34-day-old males, 27% for 85-day-old males, 24% for 230-day-old males, and 27% for 387-day-old males 48% for 34-day-old females, 67% for 85-day-old females, and 56% for 387-day-old females. Except for the about 1-month-old mice, male mice showed a significantly lower survival than females. Survival was not significantly influenced by age.

Winston and Roberts (1978) investigated the influence of age on lethal effects of CO on mice (strain not stated; male mice were used in all groups, except for the two youngest groups that comprised both males and females). Animals of different age were exposed to CO at 2,000 ppm for up to 6 h in stainless steel exposure chambers. The analytic concentration was determined by an automated gas chromatograph. Mortality occurred in 3 of 37 2-day-old mice, 21 of 32 17-day-old mice, 16 of 20 30-day-old mice, 11 of 17 54-day-old mice, 10 of 20 108-day-old mice, and 6 of 18 150-day-old mice. The animals of the youngest and that of the oldest age group were found to be more resistant to CO. These two groups were also found less susceptible to lethal effects from hypoxic hypoxia when mice were exposed to a reduced oxygen concentration of 7.5%.

Hilado et al. (1978) reported 30-min LC₅₀ values of 3,570 ppm for Swiss-Webster mice and 8,000 ppm for ICR mice. Respiratory distress was the only sign observed during the exposures.