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Effects of Administration of N-Nitrosodialkylamines and N-Nitrodiethylamine on Hepatic UDP-Glucuronosyltransferase Activity in Wistar Rats*

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N-Nitrosodiethylamine (NEN) and N-nitrodiethylamine (NEA) are carcinogens and in vitro activators of hepatic UDP-glucuronosyltransferase (GT) toward 2aminophenol (AP) and 4-nitrophenol (NP). These compounds were intraperitoneally administered to male Wistar rats for 7 days and GT activities were determined toward AP, NP, phenolphthalein (PH) and testosterone (TS). Administration of 30 or 20 mg/kg dose of NEN caused marked decrease of liver and body weights, and did not affect hepatic GT activities. Injection of 10 mg/kg dose of NEN did not affect liver and body weights, and increased the maximally activated GT activities toward AP and NP. In contrast, 30 mg/kg dose of NEA, did not affect either liver and body weights or GT activities. N-Nitrosodimethylamine (NMN), which is a carcinogen and a weak in vitro AP GT activator, was more toxic than NEN, and 3.6 mg/kg dose of NMN appears to induce GT toward NP and AP. Administration of 46.5 mg/kg Nnitrosodibutylamine (NBN), which is a carcinogen but not a GT activator, did not affect GT activities or liver and body weights.

^{*} 本報告は Chem.-Biol. Interact., 66, 49-59 (1988) に発表.