

S U M M A R Y

The present studies serve as a preliminary investigation of the relationship between metabolism and toxicity of DMN. It is difficult at this point to draw any conclusion, as there still are some limitations in making a meaningful interpretation. However, the results suggested that:

- 1) PB pretreatment protected the animals against acute toxicity of DMN, caused an increase in the formation of 7-MeG but had almost no effect on the production of CO₂.
- 2) 3-Methylcholanthrene pretreatment increases both acute toxicity and the conversion of DMN to CO₂ but it did not affect DNA alkylation at 7-MeG.
- 3) Benz-(κ)-pyrene has almost no effect on acute toxicity and metabolism of DMN.
- 4) There was no correlation between DNA alkylation at 7-MeG and acute toxicity.
- 5) The metabolic pathways of DMN and fate of DMN in the body are not completely known. It is likely that other pathway(s) of metabolism (in addition to scheme in fig. 5) may be operating simultaneously as DMN is breaking down to formaldehyde, CO₂ and an alkylating agent. This "unidentified" pathway(s) may be responsible for the conversion of DMN to a toxic metabolite.

B I O G R A P H Y

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