

# Melatonin prevents damage elicited by the organophosphorous pesticide diazinon on mouse sperm DNA

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Toxic effects of pesticides are commonly associated with DNA damage. To evaluate the effect of the organophosphate diazinon on sperm DNA and to test whether melatonin could prevent this damage, male mice were intraperitoneally treated with melatonin, diazinon (1/3 or 2/3 LD50) or both; cauda epididymal spermatozoa were obtained on days 1 and 32 postinjection and tested for DNA alterations. On day 1, sperm from diazinon-treated mice showed augmented DNA breakages and reduced chromatin packaging, whilst DNA damage increased only in the diazinon 2/3 LD50 group. Micronucleus test of bone marrow cells demonstrated somatic cell chromosomal damage in both diazinon-treated groups. Pretreatment with melatonin before diazinon acute administration improved all parameters studied on day 1 pi. The organophosphorous pesticide diazinon is a dose-dependent testicular toxicant that alters the sperm DNA structure; melatonin is able to prevent this damage. © 2008 Elsevier Inc. All rights reserved.