US EPA ARCHIVE DOCUMENT
The inquiry requests information concerning toxic reactions and cholinesterase alterations associated with flea collar use and misuse on exposed animals and humans. I am enclosing selected published papers on DDVP (dichlorvos, or Vapona), as follows:

Human Inhalation Studies
Evaluation of Human Health Hazards on Use of Dichlorvos (DDVP), Especially in Resin Strips
Effects of DDVP Aerosols on Blood Cholinesterase of Fogging Machine Operators
Chronic Toxicity Studies with DDVP in Dogs and Rats, Including Observations on Rat Reproduction
Teratogenic Studies with Dichlorvos in Rabbits
Exposure of Newborn Babies to Vapona Insecticide
Some Toxicity Aspects of Dichlorvos Flea Collars in Cats
Long Term Exposure of Factory Workers to DDVP
Evaluation of Feline Dichlorvos Flea Collar
Assorted published abstracts
Health and Safety Problems Involved in Use of Vapona as a Domestic Insecticide
Metabolism of $^{14}C$-Vapona in Rats After Administration by Oral and Inhalation Routes

Bibliographies

Flea collars currently marketed contain one or more of the following: DDVP, Naled (dibrom), Sevin (carbaryl), or Dursban (chlorpyrifos). Considerations in approval of the collars from the safety standpoint include the above considerations, and including safety to the pet and to children handling the pet and collar.
The predominant toxicity observed with the collars is dermatitis on the neck of the cat or dog; the dermatitis frequently is instigated or magnified by the collar being applied too tightly. Measureable cholinesterase inhibition may occur, especially in cats, but generally is of no serious consequence except in cats wearing a dog collar; the user should follow directions, which include cutting off the excess length of the collar, and not using a dog collar on cats.

Other signs of toxicity often attributed to the collar frequently are due to other, unrelated factors.

Roland A. Gessert, D.V.M.
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