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FROM *J.F. Welch*
J.F. Welch, Vice President

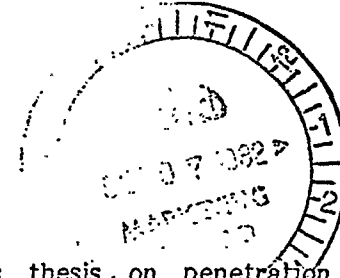
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SUBJECT Transmigration of Asbestos

ACTION REQUIRED: Review for information

Internal Correspondence

DATE September 2, 1982



Enclosed is the abstract of a Master's thesis on penetration or transmigration of ingested asbestos. The study confirms the recently-released findings of Hallenbeck et al that there is no evidence of transmigration of asbestos in the gastrointestinal tract of rats. Full copies of the thesis are available from AACPP upon request. This research will be developed into an "A/C Advisory" and trade press release.

If you have any questions, please do not hesitate to call.

JFW/ccw

Enclosure

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TRANSMIGRATION OF INGESTED

ASBESTOS IN THE RAT

INSTITUTE OF OCCUPATIONAL
AND
ENVIRONMENTAL HEALTH
MONTREAL, CANADA

BY

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A thesis presented to the University of Surrey in partial
fulfilment of the requirements for the degree of Master
of Science in Toxicology.

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September 1981

Abstract

There is disagreement about whether or not asbestos fibres present in food and drinking water can migrate into and through the walls of the gastrointestinal tract in sufficient number to cause adverse systemic or local effects. In this investigation tissues of the gastrointestinal tract of rats were examined by light microscopy following injection of a suspension containing amosite fibres into the wall of the duodenum, following oral administration of amosite to healthy animals for a 5 day period and following oral administration of amosite for periods up to 7 days to animals with induced gastrointestinal ulcers.

Injection of amosite into the wall of the gastrointestinal tract resulted in the production of granulomatous lesions characterised by large numbers of macrophages in which crystals with the polarising characteristics of amosite fibres were observed. There were no histopathological abnormalities in the gut wall of the healthy animals and intracellular fibres were not observed in the animals with ulcers, following the ingestion of asbestos. There was no evidence, therefore, of widespread transmigration of asbestos from the gastrointestinal tract of rats, even under conditions of loss of the mucosa. The implications of these results are discussed in light of other published work.

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