

FILE NAME: Industrial Hygiene Foundation (IHF)

DATE: 1937-1957

DOC#: IHF100

DOCUMENT DESCRIPTION: Reference Cards

1937 - 1957

I. H. DIGEST

CLASSIFIED SUBJECT

#1239-12/45

AUTHOR:
AUTHOR'S POSITION
AND ADDRESS:

R.B. Fisher, R.L. Thorne & Van Cott

FELLOWSHIP
NUMBER
FC

FILE NUMBER

762

TITLE: Paligorskite, a possible asbestos substitute.

PUB. DESIGNATION
AND SERIAL NO.:
PLACE PUBLISHED
AND PUBLISHER:

U.S. Bur. of Mines
Inf. Circ. No. 7313

EDITION:

DATE: Mar. '45 VOL.

LIST
PRICE:

REVIEWED IN:

VOL. PP. DATE

PAGES: 5
DISCUSSION (PP.):
REFERENCES:
CONCLUSIONS:
TABLES:

GRAPHS:
ILLUSTRATIONS:
MAPS:
COST DATA:
INDEX AUTH. SERIAL

GENERAL:
REVIEW:
POPULAR:
ENGINEERING:
ORIGINAL
AVAILABLE AT:

THEORETICAL:
MATHEMATICAL:
EXPERIMENTAL:
STATISTICAL:

ECONOMIC:
ADMINISTRATIVE:
PROPAGANDA:

EXCELLENT:
GOOD:
FAIR:
USELESS
FOR PURPOSE:

CALL
NO.

ABSTRACT:
Paligorskite is probably a variety of asbestos usually termed mountain leather.
A deposit of paligorskite has been found on an Alaskan island, and it may find
a number of uses if present in sufficient quantity.

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BY: FFR

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CONT'D

100-4746

AUTHOR: W.E. Fleischer, F.J. Viles, Jr., R.L. Gade and Philip Linker

TITLE: A health survey of pipe covering operations in constructing naval vessels

75

ORIG. REPT.
JUL 67

VOL.

CG

9-15

DATE

Jan. 1965

ABSTRACT

VOL.

PP.

DATE

(1) The character of asbestos pipe covering industry on board naval vessels is such that conclusions drawn from other asbestos industries such as textiles, cannot be applied. (2) The operations of hand saw cutting, grinding, cement mixing, and installation on board ship should be equipped with exhaust ventilation to keep the total dust concentration low. (3) The incidence of asbestosis among pipe coverers in the shipyards studied was low, 0.29 per cent or three cases out of 1074. In view of the nature of shipyard pipe covering work, this low incidence is not surprising. (4) Since each of the three cases of asbestosis had worked at asbestos pipe covering in shipyards for more than 20 years, it may be concluded that such pipe covering is not a dangerous occupation -- Authors' conclusions.

Authors' conclusions

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NEILSON INSURANCE, PITTSBURGH, PA.

favour the retention of particles within the lungs. (5) Particles under 5 microns in length restricted cellular motility more than larger particles, for the reason that they were more readily phagocytosed. It would seem that wandering phagocytes are rarely able to ingest particles larger than 10 microns. Giant cells sometimes formed in tissue cultures, apparently by fusion of two or more ordinary phagocytes, and were then able to engulf larger particles or clusters of particles. (6) There was no evidence of the formation of asbestos bodies in these experiments, nor have we noted the appearance of brown granular pigment like that seen in the lungs of experimental animals.

-- Authors' summary

MEYERSON INSTITUTE, PITTSBURGH, PA.

4409-447				FELLOWSHIP NUMBER NFC		FILE NUMBER 752	
AUTHOR: L. Noro							
TITLE: Histology of asbestosis.							
ORIG. REPR.	VOL.	PP.	DATE	ABSTR. REPR.	VOL.	PP.	DATE
Acta Pathol. & Micro- biol. (Scand.)	23	53-59	1946				
ABSTRACT: Two workers in an asbestos factory died under circumstances which indicated that the cause of death was their trade. When the workers of this factory were examined roentgenologically asbestosis was found in 65 per cent of the 167 workers examined. The microscopic picture of asbestosis is characterized by a reaction caused by the needles in the tissue, which becomes manifest in exudate cell infiltration, accompanied by numerous giant cells containing foreign particles and an increase of interstitial connective tissue and fibrosis. Noro is inclined to think that in the pathogenesis of asbestosis the mechanical factors are the most important, although the chemical factors may have some significance in a later phase. — J.A.M.A.							
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CLASSIFIED SUBJECT #148-2/48		FELLOWSHIP NUMBER NEC		FILE NUMBER 752	
AUTHOR: Luton, Champeix and Faure					
TITLE: Asbestosis of the lungs.					
ORIG. REFS.: Arch. d. mal. profess.	VOL. 7	PP. 299 ff.	DATE 1946	ABSTR. REFS.: Occ. Med.	VOL. 4 PP. 234 DATE Aug. '47

ABSTRACT

A review of the literature reveals no previous cases of asbestosis in France, but the authors have seen several cases in a factory in which asbestos is used, and in which they make regular examinations. Details are given in one case of a man of 64, exposed to concentrations of 48 to 62 mg. of dust per cubic meter, total silica 40%, and free silica 4.3 to 14.6%. Complaints of weakness, dyspnea, coughing, and loss of weight were noted in 1943. Thoracic expansion was 2 cm. In the sputum asbestosis bodies were found but no tubercle bacilli. Roentgenography showed much more fibrosis than usual in the lower third of the lungs. During the next two years the symptoms became more severe.

-- From Occ. Med.

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NEILSON INSTITUTE, PITTSBURGH, PA.

CLASSIFIED SUBJECT

#407-4/47

FELLOWSHIP
NUMBER
NFC

FILE NUMBER

752

AUTHOR:

J.H. Skavlem and R.J. Ritterhoff

TITLE:

Coexistent pulmonary asbestosis and sarcoidosis.

ORIG. REFS.:

Am.J. Path.

VOL.

PP.

DATE

ABSTN. REFS.:

VOL.

PP.

DATE

22

493-517

May '46

JIM&T

29

29

Mar. '47

ABSTRACT:

This is a necropsy report of a 42-year old man who died a respiratory death after 11 months of increasing severe exertional dyspnea. Previously the patient had worked for 25 years in an asbestos plant. The pathological study revealed a coexistent asbestosis and sarcoidosis of both lungs. — J.I.R.&T.

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MRILSON INSTITUTE, PITTSBURGH, PA.

CLASSIFIED SUBJECT

#234-2/47

FELLOWSHIP

NUMBER

NPC

FILE NUMBER

752

AUTHOR: E.J. King, J.W. Clegg and V.M. Rae

TITLE: Effect of asbestos, and of asbestos and aluminum, on lungs of rabbits.

ORIG. REFS.

VOL.

PP.

DATE

ABSTR. REFS.

VOL.

PP.

DATE

Thorax

1

188-197 Sept. 46

JAMA

133

208

Jan. 1

1947

ABSTRACT:

The purpose of the experiments described by King and his associates was to test whether short fiber asbestos is less damaging in the lungs of the rabbit than is long fiber asbestos and whether metallic aluminum will suppress any toxic effect produced by fiber asbestos. Four groups of animals were tested. All groups showed a foreign body reaction in the lungs. In animals in the long fiber experiments there developed a nodular reticulosis comparable with the experimental silicotic nodule. In animals in the short fiber experiment there developed a diffuse interstitial reticulosis. The addition of aluminum did not afford any benefit in any group. — J.A.M.A.

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MILLON INSTITUTE, PITTSBURGH, PA.

CLASSIFIED SUBJECT <u>71045-9/47</u>		PELLOWSHIP NUMBER <u>NFC</u>	FILE NUMBER <u>752</u>
AUTHOR: <u>C. Wegelius</u>			
TITLE: <u>Changes in the lungs in 126 cases of asbestosis observed in Finland.</u>			
ORIG. REFS.	VOL.	PP.	DATE
<u>Acta Radiologica</u>	<u>28</u>	<u>139-152</u>	<u>1947</u>
ABST. REFS.		VOL.	PP.
<u>JIB&T</u>		<u>29</u>	<u>91</u>
		<u>Sept.</u>	

ABSTRACT:

Asbestosis of the lungs is an industrial disease not often hitherto observed in Scandinavia, only five cases have been published from Norway. In Finland, where a considerable asbestos industry has been established for a couple of decades, asbestosis of the lungs appears to occur to an appreciable extent. The author gives an account of 126 cases of asbestosis of the lungs, 94 or 75% of these cases being the mild, 23 or 18% in the moderate and 9 or 7% in the advanced stage of asbestosis. The roentgenological characteristics of the changes in the lungs, the differential diagnosis, the classification in different stages and the importance of the time of exposure are discussed in detail. The different stages of asbestosis of the lungs are illustrated by typical pictures. --

Author's summary.

Author's summary

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CLASSIFIED SUBJECT 7-178 2/47		FELLOWSHIP NUMBER NFC		FILE NUMBER 327 752	
AUTHOR: P. Luton, J. Champeix and P. Faure					
TITLE: The significance of the presence of asbestos bodies in the sputum of asbestos workers.					
ORIG. REFS.:	VOL.	PP.	DATE	ABSTR. REFS.:	VOL. PP. DATE
Arch. malad. profess. (French)	8	56-58	1947	Ind. Hyg. Index	1 3-4 Nov.- Dec. '47
ABSTRACT: 33 ref., 7 photomicrographs					
The authors examined 176 persons who worked or had worked with asbestos. They find that asbestos bodies appear somewhat early in the sputum of these workers, sometimes after only 20 days from the time of exposure. These fibers may persist even after cessation of exposure, but occur in almost all workers exposed to asbestos dust, whether they exhibit functional or radiographic evidence of asbestosis or not. Brown or golden yellow bodies are seen in the sputum along with uncolored fibers or spicules. The presence of these bodies, more or less scattered, indicates that the subject has inhaled asbestos dust, but it does not necessarily signify that asbestosis exists. In other words, the discovery of asbestos bodies in the sputum is only one in the ensemble of elements which permit such a diagnosis. It is true that in the majority of cases where asbestosis is predicated by reason of the intensity of functional manifestations and radiographic signs, numerous asbestos bodies are noted, massed together, and displaying a radiate formation. As such, they are identical to the clumps that are observed on histological examination of the lungs of deceased cases, in the alveoli. -- Ind. Hyg. Index					
DATE EXAMINED:		BY: FFR: Ind. Hyg. Index		PURPOSE OF SEARCH:	
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CLASSIFIED SUBJECT #327-3/17	FELLOWSHIP NUMBER FC	FILE NUMBER 752
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AUTHOR: Anon. Safety Rev. (U.S. Navy)

TITLE: Asbestos dust.

ORIG. REF.	VOL.	PP.	DATE	ANSTR. REFS.	VOL.	PP.	DATE
Safety Rev.	4	13	Jan.'47				

ABSTRACT:

The brief article calls attention to the hazard of exposure to asbestos dust and the need of adequate localized ventilation. All working places with possible exposure should be checked for asbestos dust, and where mechanical exhaust ventilation must be supplemented by wearing of personal protective equipment, it should conform to Bureau of Mines specifications.

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MELLON INSTITUTE, PITTSBURGH, PA.

				FELLOWSHIP NUMBER FC		FILE NUMBER 752	
AUTHOR: T.H. Belt, J. Friedmann and E.J. King							
TITLE: The effect of asbestos on tissue cultures: a comparative study with quartz and coal dust.							
ORIG. REFS.: J. Path. & Bact.		VOL. 59	PP. 159-164	DATE 1947	ABSTR. REFS.:		VOL. PP. DATE
ABSTRACT: (1) Phagocytosis, even of small particles of asbestos, took place slowly in tissue cultures and a considerable portion of the asbestos dust, approximately 50 per cent, remained untouched, though within range of phagocytes throughout the experiments. Compared with coal or quartz, asbestos was less readily phagocytosed, particle size being equal. (2) Asbestos particles in small amount had little or no toxic effect on living cells in tissue cultures. The growth of fibroblasts was neither retarded nor accelerated and no necrosis of cells was observed as a result of contact with asbestos particles, while fatty change appeared to occur more slowly in asbestos phagocytes than in coal phagocytes. (3) Asbestos particles underwent no visible change, and in particular no visible diminution in size, after having been ingested by phagocytes for as long as five weeks. (4) The motility of wandering phagocytes was decreased after the ingestion of asbestos particles. This effect, not necessarily of a toxic character, may be deleterious in the case of cells within the lungs, since it tends to restrict the migration of cells and so							
DATE EXAMINED:		Authors' summary		PURPOSE OF SEARCH:		CONT'D. ✓	
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than general incidence--all in cases of medium--or advanced grade--asbestosis. This figure is in accordance with the experience of other workers, and calls for further study. Tuberculosis occurred in six cases, but it is suggested that this incidence is not significant; this is not quite convincing. Gardner stated that experimental asbestosis does not predispose to tuberculosis. (Unfortunately the occupational histories of these cases are not complete).

-- Brit. J. Ind. Med.

CLASSIFIED SUBJECT 4765-7/49		FELLOWSHIP NUMBER REC		FILE NUMBER 752-33	
AUTHOR J. D. Hindley-Smith					
TITLE Some medical problems of the asbestos cement industry.					
ORIG. REFL.	VOL.	PP.	DATE	ABSTR. REFL.	DATE
Brit. J. Phys. Med.	10	50	Mar.-Apr. 1947	Occ. Med.	Oct. '47
ABSTRACT: The author encountered no incipient cases of asbestosis, and only two or three of long-standing chronic disease, in five years' experience in an asbestos cement factory, showing that ventilation and enclosure were adequate. A dermatitis occurring in some workmen was found to be caused by an abrasive constituent of the cement, other than the asbestos. Cleanliness and the use of a barrier cream were effective in preventing it.					
DATE EXAMINED		PURPOSE OF SEARCH		CONT'D	
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FORM 77

MELLON INSTITUTE, PITTSBURGH, PA.

7-388-8/48

AUTHOR:

R. Desnuelles, I. Rousseau, M. Giroux and A. Soliris
Asbestosis and pulmonary tuberculosis.

125

FELLOWSHIP
NUMBER

HEC

FILE NUM.

756

TITLE

ORIG. REF.

Sem. Hop. Paris
(French)

VOL.

25

PP.

1820

DATE

1947

ABSTR. REF.

Brit. J. Ind. Med.

VOL.

5

PP.

100

Apr.

ABSTRACT:

The authors report from Quebec on asbestosis in the Canadian mines and on animal experiments. They disagree with Gardner's statements that pneumoconiosis due to asbestos is not an important factor in the production and progress of pulmonary tuberculosis, and that the presence of asbestos bodies in the sputum has no value in the diagnosis of asbestosis. Several cases of asbestosis are described; in one, death was due to tuberculosis and asbestosis, giving support although not proof for the authors' theory. Two cases of asbestosis with lung cancer are also described briefly. In animal experiments by Giroux, lung lesions and asbestos bodies were produced in guinea pigs but not in rabbits or dogs. In these animals the author traces the formation of asbestos bodies: fibers reaching the alveoli are rapidly covered by phagocytic cells, movement of the fibers results in microscopic bleeding from damaged alveolar walls; the hemoglobin from the liberated red cells is taken up by the phagocytes which already enclose the asbestos fibers. Subcutaneous or intratesticular injections into guinea pigs of suspensions of

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EXAMINED:

BY: EFR:Brit. J.
Ind. Med.

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-- From Brit. J. Ind. Med.

[illegible]

CLASSIFIED SUBJECT

#1046-9/47

FELLOWSHIP
NUMBER

MPC

FILE NUMBER

752

AUTHOR: P. Luton and J. Champeix

TITLE: Asbestosis.

ORIG. REFS.

VOL.

PP.

DATE

ABSTR. REFS.

VOL.

PP.

DATE

Arch. Mal. Prof.

7

365-378

1947

JH&T

29

91

Sept. '47

ABSTRACT:

The authors list the following symptoms of asbestosis: (1) Functional signs; (2) Radiological findings; (3) Sputum, characterized by the presence of asbestos fibers and bodies. After a presentation of several case histories and their accompanying x-ray films and sputum photographs, it is concluded that diagnosis can only be made by a combination of observations: functional, radiological, sputum. Because of the progressive nature of the disease, yearly examinations should be made with comparison of the measurements of respiratory function (spirometry, etc.) and x-rays. But functional signs must guide the physician when a change of environment is advisable, and when the worker can be said to have contracted asbestosis. -- From J.I.H.&T.

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MELLON INSTITUTE, PITTSBURGH, PA.

FORM 37

10M 6-44

CLASSIFIED SUBJECT

150

36

FELLOWSHIP
NUMBER

NFC

FILE NUMBER

752

AUTHOR: K.M. Lynch and W.M. Cannon

TITLE: Asbestosis: VI Analysis of Forty Necropsied Cases.

ORIG. REFS.:

Dis. Chest.

VOL.

14

PP.

874-880

DATE

1948

ABSTN. REFS.:

Brit. J. Ind. Med.

VOL.

6

PP.

268-269

DATE

Oct '49

The authors report an analysis of 40 cases in which asbestosis was found at necropsy. Cases are divided into minor, medium, and advanced grades, the advance of the disease and the prominence of asbestosis bodies showing a direct relation to the duration of exposure. In 4 of 14 cases of advanced grade, pulmonary tuberculosis was the primary cause of death. Only in cases of recent exposure was recent fibrosis found, this providing support for Gardner's belief that fibrosis does not progress indefinitely after cessation of exposure. Presence of asbestosis bodies is not invariable in experimentally produced asbestosis, but is more typical of human asbestosis. Lung damage occurs before the formation of asbestosis bodies, which may represent an attempt by the tissues to segregate the particles; they persist in the lung indefinitely. Pleural fibrosis is an outstanding, though not invariable, feature of asbestosis; the reason for this is not clear as the particles do not reach the pleura. The occurrence in asbestosis of nodular fibrosis of silicotic type, which King and others have produced experimentally, was confirmed in 8 cases. Carcinoma of the lung occurred in three out of 40 cases--an incidence of 7.5 per cent, which is seven times greater

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5738
AUTHOR: A Bianchini and G. Canova

FELLOWSHIP
NUMBER
NFC

FILE #
752

TITLE: Pulmonary Asbestosis; Anatomopathologic Study of a Case.

ORIG. REF.
Med. d. lavoro
Italian

VOL. 40
PP. 161

DATE
Jan-July, 1940

ABSTR. REF. #
Arch. Ind. Hyg. & Occ. Med. 1 362

A man 40 years old had worked in a factory for 22 consecutive years, applying insulating material to articles of asbestos. He never complained about respiratory disorders, and he died as the result of a streetcar accident. During the necropsy the lungs were found to be the seat of extensive asbestosis. The author's direct attention to the disproportion between the gross features described and the awareness of trouble. The results prove the importance of prophylactic and therapeutic treatment and economic assistance to asbestos workers generally, particularly to those who apply insulating material. -- Condensed from Arch. Ind. Hyg. & Occ. Med.

MELLEN INSTITUTE, PITTSBURGH, PA.

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MELLON INSTITUTE, PITTSBURGH, PA.

CLASSIFIED SUBJECT

AUTHOR: Editorial

TITLE: Asbestosis and Cancer of the lung.

ORIG. REFS.: J.A.M.A.

VOL. 140

PP. 1219-20

DATE Aug 13-49

ABSTR. REFS.:

VOL.

PP.

DATE

867 Asbestosis and Cancer of the Lung. Editorial.
J.A.M.A. 140, 1219-1220 (Aug. 13, 1949).

Records of English, American and German physicians and The Annual Report of the Chief Inspector of Factories in England for 1947 show that the occurrence of cancer of the lung is related to pulmonary asbestosis. This relation is supported by the following observations: (1) The incidence rate of cancer of the lungs in asbestosis patients is 10 to 15 times as high as among the general population. (2) The male-female ratio is more nearly equal than it is for the general population, which indicates that an environmental and evidently occupational carcinogen tended to equalize the incidence rate of cancer of the lungs for both sexes. Recent experimental observations support this interpretation of clinical evidence.

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Digest
EX. 178

MELLON INSTITUTE, PITTSBURGH, PA.

17/49	1247	475	415	NUMBER FC	FILE NUMBER 752		
AUTHOR: Virginia Cameron							
TITLE: The Cost of Research on Tuberculosis in the United States. Analysis of Allocations in 1947-1948.							
ORIG. REFS.	VOL.	PP.	DATE	ABSTR. REFS.	VOL.	PP.	DATE
Am. Rev. Tuberc.	60	393-405	Oct. 1949				

1267 The Cost of Research on Tuberculosis in the United States. Analysis of Allocations in 1947-1948. Virginia Cameron. Am. Rev. Tuberc. 60, 393-405 (Oct. 1949).

The present research programs of various agencies are outlined, and their contributions to research on tuberculosis are summarized. The total cost was over six million dollars. Official health agencies account for 56.8% of the total, manufacturing firms 32.8%, and the remaining 10.4% is supported by universities, foundations, and voluntary health agencies. Most of the commercial firms are manufacturers of x-ray apparatus or pharmaceutical houses. However, other industries, principally light and heavy metal manufacturing and mining operations, made a notable contribution (\$83,550) during the period. Fifty percent of this amount was designated for research on silicosis and tuberculosis.

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MELLON INSTITUTE, PITTSBURGH, PA.

CLASSIFIED SUBJECT				FELLOWSHIP NUMBER		FILE NUMBER	
#1146 11/50				NFC		753	
AUTHOR: H. Ollivier, P. Morand, and R. Brun.							
TITLE: Granulomata of the Skin Due to Asbestos							
ORIG. REFS.	VOL.	PP.	DATE	ABSTR. REFS.	VOL.	PP.	DATE
Arch. Malad. Professionnelles (French)	516-517	10	1949	Bull. Hyg.	25	482-485	May 1950

A man who was working with asbestos sheets wounded the palm of his hand slightly. Two weeks later, at the site of the cut, a swelling which was increasing in size appeared. There was no inflammation and the swelling was hard at the center. The small white nucleus of this core was seen under the microscope to be composed of needles of asbestos together with a mass of crystalline matter. This matter was identified as cholesterol, which formation would seem to indicate a fundamental and biochemical defensive process of the body against aggression by asbestos.

-- Condensed from Bull. Hyg.

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FOLLOWING NUMBER
NFC
FILE NUMBER
752

AUTHOR: P. Cartier

TITLE: A Contribution to the Study of Asbestosis.

ORIG. REF.	VOL.	PP.	DATE	ABSTR. REF.	VOL.	PP.	DATE
Arch. Malad. Profess. (Fr.)	10	589-595	1949	Arch. Ind. Hyg. & Occ. Med.	3	428	4/51

The author has been in medical charge of 3,242 men employed in asbestos mines in Canada, where over 70 per cent of the world's supply of asbestos is mined. Cases of asbestosis were found only in those who had been employed for at least 14 years and exposed to air containing at least 5 million particles of asbestos fibers per cu. ft., the fibers being from 10 to 250 microns in length. The outstanding feature of this report is the mildness of any pulmonary trouble among the asbestos miners compared to that reported in the United States and Great Britain as occurring in factories where asbestos is spun and woven. No clinical symptoms of pulmonary fibrosis were present. No case of pure asbestosis was detected in those under age 60, and no physical incapacity was evident. Cases of tuberculosis were not more frequent among the miners than among the clerical staff and the rest of the community, although that incidence was high. It was difficult to ascribe any cardiac affections present to asbestosis, because of the late age at which it appeared. Postmortem findings and roentgenologic examinations indicate that asbestosis is a pathological entity; but among the miners it develops so slowly as not to shorten working life, and there is no evidence that it predisposes to tuberculosis. The conclusions reached are supported by the opinions of experts at Saranac. -- Cond. from Bull. Hyg.

MELLON INSTITUTE, PITTSBURGH, PA.

CLASSIFIED SUBJECT		FOLLOWING NUMBER		FILE NUMBER	
H253 9/32		NFC		752	
AUTHOR: H. Myers					
TITLE: Asbestosis					
DATE RECD.	VOL.	PP.	DATE	DATE RECD.	VOL.
Postgraduate Med. J.	25	631-638	Dec. 1949	Bull. Hyg.	25
					477-478
					May 1950

Asbestos and talc are the only two silicates which have been shown to produce pneumoconiosis. Gardner, in 1938, suggested, on the basis of animal experiments that the effect produced by asbestos was mechanical, since it was produced only by long fibers. A later authority made the observation that workers exposed to very short-fiber asbestos were not affected by it. Asbestosis was officially recognized as an industrial disease in 1930. The condition is thought to be due to blocking of the finer bronchioles by long fibers which seem to irritate the bronchial wall and cause fibrosis. Tuberculosis and carcinoma of the lungs may follow, as complications. Recognition of the disease, and precautions which have been taken have lessened its severity and incidence.

-- Condensed from Bull. Hyg.

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Digest
EX. 180

REGISTERED SUBJECT

1142 151

FELLOWSHIP
NUMBER

FILE NUMBER

NFC

752

AUTHOR: J. Champaix and J. Bouteville

Electron Microscopy of Asbestos's Bodies and the Fibers of Asbestos.

NO. ACFS.

VOL.

PP

DATE

INSTR. REF.

VOL.

PP.

DATE

Arch. Maladies Profess
(Fr.)

11

607

1950

Brit. J. Ind. Med.

8

198

7/51

Asbestosis bodies recovered from sputum have a central fiber of asbestos coated with a colloidal gel, which is probably protein. Removal of the enveloping gel by micromanipulation reveals some transparency of the edges of the asbestos fiber, believed to result from solution. Fibers shorter than 10 microns are not found in the bodies and it is suggested that the smaller fibers dissolve completely. On this evidence the authors suggest that pulmonary fibrosis may result from solution of asbestos rather than from some physical irritation. -- Brit. J. Ind. Med.

MEMORIAL INSTITUTE OF FORENSIC PA

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ABSTRACT PLANA FOR REFERENCE

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CLASSIFIED SUBJECT

83 152

FELLOWSHIP
NUMBER

NEC

FILE NUMBER

752

AUTHOR:

A. Bohme

TITLE:

Results of Periodical Examinations of Workers in an Asbestos Factory

ORIG. REFS.	VOL.	PP.	DATE	ABSTR. REFS.	VOL.	PP.	DATE
Beitrag z. Silikose Forschung	11	27/34	1951	Bull. Hyg.	26	511	5/51
		(German)					

Since radiological supervision and control measures were adopted in an asbestos factory in 1936, the dust hazard has been greatly reduced, as shown by comparing results of surveys in 1936, 1940, and 1949. A comparison of different working places shows that the risk is low in spinning and weaving, but high in preparation, carding and brake polishing. A table shows results for 14 cases from 1936 to 1949. Some progressed, others did not. Inquiries among former workers reveal little if any tendency to progression after the dust exposure has ceased. This is in contrast to silicosis. On the other hand a personal factor exists, as in silicosis, as a number of workers do not get asbestosis in spite of high dust exposures.

Progressive tuberculosis is rare, only two cases being found, both started in the parts of the lung least affected by asbestosis. One combination of asbestosis and carcinoma of the lung was found. The main result of this study is the demonstration that the hazard can be reduced by dust control.

--Cond. from Bull. Hyg. --

MELLON INSTITUTE, PITTSBURGH, PA.

436 4/52		FELLOWSHIP NUMBER NFC		FILE NUMBER 752	
AUTHOR: W. Behrens					
TITLE: Experimental asbestosis.					
ORIG. REFS.:	VOL.	PP.	DATE	ABSTR. REFS.:	VOL. PP.
Schweiz. z. allg. path. u. bakt.	14	275-97	1951	Bull. Hyg.	26 1181 12/5
ABSTRACT:					

Pure chrysolite asbestos was injected intraperitoneally and intra-tracheally into mice and rats. The fibers varied from 5 to 180 microns in length. Unsuccessful attempts to secure fibers of standard length are described. The general picture is one of non-specific focal fibrosis resulting from the introduction of foreign bodies. No solution or toxic action of the asbestosis could be demonstrated. Asbestosis bodies were formed. The theories of the pathogenesis of asbestosis are discussed.

-- Cond. from Bull. Hyg.

DATE EXAMINED:	BY:	PURPOSE OF SEARCH:	CONT'D.
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CLASSIFIED SUBJECT

1909 9/52

FELLOWSHIP
NUMBER

752

FILL NUMBER

752

AUTHOR: R. Stoll, R. Bass, and A. A. Angrist.

TITLE: Asbestosis Associated with Bronchiogenic Carcinoma.

CRIG. REFS.:

Arch. Intern. Med.
(In German)

VOL.

88

PP.

831-834

DATE

Dec. 51

ABSTR. REFS.:

Bull. Hyg.

VOL.

27

PP.

444

DATE

5-52

AB

Data for statistical proof of any association of asbestosis with pulmonary carcinoma are hard to collect, but three investigators have found carcinoma in 7.5 to 14.8% of cases of asbestosis. A case is reported in which a worker had been exposed to asbestos for 6 years and had refused to wear a respirator. He came under notice with weakness and a persistent cough. Clumps of malignant cells were seen in the bone marrow, and x-ray showed generalized large discrete oval shadows indicative of pulmonary metastases. After death, modules varying to 4 cm. in diameter were found scattered throughout both lungs, with interstitial fibrosis. Large areas of necrosis existed throughout the lungs, and typical asbestos bodies were seen inside and outside the tumor areas. Metastases were found in the kidneys, brain, and liver. The opinion is suggested that the silicate in asbestos must itself be directly carcinogenic. It establishes an additional reason for preventive measures in the use of asbestos.

DATA
FAN

-- Cond. from Bull. Hyg.

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Digest
EX. 182

PUBLISHED NUMBER	FILE NUMBER
NFC	52

AUTHOR: J. Clereh

TITLE: Research into Pulmonary Asbestosis in Belgium

ORIG. REF.	VOL.	PP.	DATE	ABST. REF.	VOL.	PP.	DATE
Arch. Belges med. sociale, hyg., med. du travail et med. legale	8	557-565	11/51	Bull. Hys.	26	402	2/51

ABSTRACT:

The investigation concerns the fibro-cement industry, in which asbestos is crushed and mixed with cement. Enclosed apparatus prevents most of the dust from escaping; in the most dusty locations, 20 to 40 million particles per cubic foot were found, with 50% under 5 microns. The workers have been examined periodically over a period of three years. Out of 75 men employed for seven to over thirty years, there were four doubtful cases, and only one presented x-ray shadows indicating pneumoconiosis. The man died of progressive circulatory insufficiency, and details of post-mortem findings are given.

DATE EXAMINED:	PURPOSE OF SEARCH:	CONT'D.

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MELLON INSTITUTE, PITTSBURGH, PA.

FORM 17-24

Indurated nodules and asbestosis bodies were found throughout the lungs, but no tubercle bacilli. The bodies were seen in fibrous zones, in the alveoli, and even included within giant phagocytes. This man, aged 49, had been totally incapacitated with dyspnea on exertion and cardiac failure. In others, asbestos particles were found in 10 out of 12 samples of sputum, and asbestosis bodies in 3 samples, but the findings were not associated with x-ray shadows indicating fibrosis. The evidence is against much danger arising from the manufacture of fibro-cement.

-- Cond. from Bull. Hyg.

CLASSIFIED SUBJECT

FELLOWSHIP
NUMBER

FILE NUMBER

nfc

752

AUTHOR: P. Luton, J. Champeix. and P. Faure.

TITLE: A Case of pulmonary asbestosis, with its development followed by
X-ray and its post-mortem study.

ORIG. REFS.:	VOL.	PP.	DATE	ABSTR. REFS.:	VOL.	PP.	DATE
Arch. maladies profess	12	629-33	1951	Bull. Hyg.	27	942	10-52

The case reported is said to have been the first one of asbestosis known to have occurred in France. The man had been exposed to high concentrations of asbestos for 11 years. Symptoms and progressive x-ray findings are described. After death the lungs showed general thickening throughout, especially of the plurae, but with no localized nodules. Many asbestos bodies were seen, isolated and in groups, together with giant cells and mineral particles. No evidence of tuberculosis was found. The dust particles could be traced not only in the lung vessels, but also in the vessels of the liver, kidneys and spleen. The action of asbestos is apparently mechanical rather than chemical.

-- Cond. from Bull. Hyg.

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PURPOSE
OF SEARCH:

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CLASSIFIED SUBJECT 218 2/52				FELLOWSHIP NUMBER NFC		FILE NUMBER 752	
AUTHOR: P. Lepine and O. Croissant							
TITLE: A morphological study with the electron microscope of particles of asbestos found in the air.							
ORIG. REFS.: Ann. Inst. Pasteur	VOL. 80	PP. 305-8	DATE 3/51	ABSTR. REFS.: Bull. Hyg.	VOL. 26	PP. 1000	DATE 10/51

Six samples of airborne dust from workplaces in Quebec where asbestos is used were examined with the electron microscope after removal of all but the most minute particles. The dust was found to contain crystalline needles, smaller in size but similar to those seen in an ordinary microscope; these needles comprised 65 to 75% of the particles. The remainder consisted of amorphous particles, mostly of serpentine. The needles had a diameter of 0.028 micron; they occurred in bundles about 0.85 micron or more in diameter. Such particles could readily gain access to the alveoli and undergo phagocytosis, with formation of the tissue lesions seen in asbestosis. Photomicrographs of the particles are shown.

-- Cond. from Bull. Hyg.

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OF SEARCH:

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284 3/63

8	FELLOWSHIP NUMBER	FILE NUMBER
	nfc	752

AUTHOR: H. Bastenier, H. Denolin, A. Decoster, and R. Denolin-Reubens.
 TITLE: A clinical and pathological study of a case of pulmonayr asbestoses.

ORIG. REFS.	VOL.	PP.	DATE	ABSTR. REFS.	VOL.	PP.	DATE
Arch. belges med. sociale, hyg., med.	10	61-70	Feb. 52	Bull. Hyg.	27	1126	12-52
travail et med. legale (French)							

A diagnosis of asbestosis must depend upon a history of occupational exposure to asbestos dust, associated with effects on the respiratory organs. A case is reported in which a woman had worked for 25 years weaving asbestos in a factory with heavy dust exposure. The symptoms described are typical. The authors compared this case with those of uncomplicated silicosis; in the latter residual air is frequently increased, expiration is prolonged, and the maximum respiratory capacity is reduced, but hyperpnea is less, rapid breathing is not so intense, and anoxemia is never so important during effort, as in asbestosis. These differences are stressed as important when necessity may arise in determining the occupational origin of a case with obscure diagnosis.

-- Cond. from Bull. Hyg.

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CLASSIFIED SUBJECT

604

6/83

FELLOWSHIP
NUMBER

nfc

FILE NUMBER

752

AUTHOR: W. Behrens, Jr.

TITLE: The clinical picture and pathology of asbestosis.

ORIG. REFS.

Z. Unfallmed. u.
Berufkrankh.

VOL.

45

PP.

129-40

DATE

June 15,
1952

ABSTR. REFS.

Bull. Hyg.

VOL.

28

PP.

192

DATE

3-53

ABSTRACT:

179-897 (Sent. 15-1952)

This paper presents an extensive review of literature on asbestosis including distribution and types of asbestos, its mining, treatment, and use, dust hazards, and effects of length of exposure of the dust in different concentrations. Symptomatology, diagnosis, and x-ray findings in the different stages of asbestosis are described. Special mention is made of the association of asbestosis with carcinoma, which is much more frequent than that of silicosis. Post-mortem reports from the literature indicate that in 309 cases of asbestosis there were 44 lung carcinomas (14.2%), whereas in 2,204 cases of silicosis only 32 carcinomas were found (1.4%). The experience of the association of tuberculosis and asbestosis varies greatly in different countries. English investigators have recorded a high rate of tuberculous infection in asbestos workers, but it is a rare complication in America and the rate is low in Germany. The macroscopic and microscopic appearances of the lungs are described, and the nature and significance of asbestosis bodies are discussed and an extensive reference list dealing with that controversial subject is given.

-- Cond. from Bull. Hyg.

MELION INSTITUTE, PITTSBURGH, PA.

FORM 72-2

CLASSIFIED SUBJECT

75

153

FELLOWSHIP
NUMBER

nfc

FILE NUMBER

752

AUTHOR: M. A. Kovnatskii and others.

TITLE: Silicatosis: etiology, pathogenesis, and clinical treatment.

ORIG. REFS.:	VOL.	PP.	DATE	ABSTR. REFS.:	VOL.	PP.	DATE
Gigiena i Sanit. (Russian)	No. 8	28-32	1952	Chem. Absts.	46	114000	1/25/52

ABSTC

A review is given of the disease caused by particles of silicates, rather than those of the type producing silicosis proper. A study of the disease caused by asbestos particles showed that the chemical and biological features are increased rate of respiration (compensatory) and in stages the level of blood saturation with oxygen is essentially normal, although changes in the myocardium are evident on the electrocardiogram. The tone of the veins is reduced, and the permeability of capillary walls suffers a decline in a considerable number of cases. This affects the oxidative processes as shown by the increase of oxidized glutathione and a decrease of total glutathione.

-- Chem. Absts.

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MELLON INSTITUTE, PITTSBURGH, PA.

CLASSIFIED SUBJECT	1	FELLOWSHIP NUMBER	752
73 1/54		nfc	

AUTHOR: J. Ruttner

TITLE: Asbestosis bodies and pseudo-asbestosis bodies.

ORIG. REFS.	VOL.	PP.	DATE	ABSTR. REFS.	VOL.	PP.	DATE
Schweiz. Z. Allgem. Pathol. u. Bakteriolog.	15	628-31	1952	Bull. Hyg.	28	719	Sept. '53
		(German)					

The literature on asbestosis bodies is reviewed. Similar products were found by the author in a lung which only contained carborundum and graphite; the bodies were formed around plates and needles of carborundum. The protein and iron which form the bulk of the "bodies" must come from the lung tissues and not from the mineral matter of the dust. Similar bodies could also be produced in vitro but they have not so far been found in animal experiments.

-- Bull. Hyg.

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MELLON INSTITUTE, PITTSBURGH, PA.

674	6/52		FELLOWSHIP NUMBER FC	FILE NUMBER 752			
AUTHOR: A. J. Lanza							
TITLE: Asbestosis							
Paper read before Fourth Conference of McIntyre Research Found. on Silicosis							
ORIG. REFS.:	VOL.	PP.	DATE	ABSTR. REFS.:	VOL.	PP.	DATE
		2 pp	/1952				

The action of asbestosis on the body is briefly reviewed. It is pointed out that asbestosis is regarded much more seriously in Great Britain than in Canada or the United States; the British believe it is worse than silicosis and often leads to cancer, while in America cancer resulting from asbestosis is practically non-existent.

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MEILLON INSTITUTE, PITTSBURGH, PA.

CLASSIFIED SUBJECT

605 6/53

FELLOWSHIP
NUMBER

nfc

FILE NUMBER

752

AUTHOR: F. Boemke

TITLE: Lung carcinoma caused by asbestos inhalation.

ORIG. REFS.:

VOL.

PP.

DATE

ABSTR. REFS.:

VOL.

PP.

DAT

Med. Monatsschr.
(German)

7

77-81

1953

Chem. Absts.

4

4471-55-10-5

The relation between fibrotic changes caused by asbestos deposits in the lung and carcinoma is discussed. The lower lobe is the site of predilection. Characteristic are the multicentered developments of flat epithelium carcinoma.

-- Chem. Absts.

DATE

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OF SEARCH:

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CLASSIFIED SUBJECT

#262 3/54

FELLOWSHIP
NUMBER

nfc

FILE NUMBER

752

AUTHOR:

G. Farris

TITLE:

Asbestos warts and other dermatoses in workers with lagging materials.

ORIG. REFS.:

Rass. med. ind.
(Italian)

VOL.

PP.

DATE

ABSTR. REFS.:

VOL.

PP.

DATE

22 1-17

Jan-Feb
1953

Bull. Hyg.

28

953

Nov. '53

The author has investigated cases of warts on the hands of 29 workers with lagging materials, including asbestos cord which is wound around pipes, various asbestos-containing slabs, and mixtures of asbestos and cement to be molded to the shape of the tank or other object to be insulated. One to four warts were found in every case. They are due to asbestos fibers which penetrate into the epidermis and become lodged in the corium or true skin. The epidermis shows acanthosis (thickening of the prickle-cell layer) and hyperkeratosis (increased horny tissue) and the corium shows a granulomatous type of reaction with the appearance of giant cells in some cases. Exudative dermatitis may also be present. This condition is attributed to the combined action of the hygroscopic and alkaline cement and the irritating asbestos fibers. The gross and microscopic appearances of the lesions are illustrated.

-- Cond. from Bull. Hyg.

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CLASSIFIED SUBJECT

550 5/8-4

FELLOWSHIP
NUMBER

nfc

FILE NUMBER

752

AUTHOR:

A. S. Ramaswamy, D. S. Venkatesh, and R. Rama Rao

TITLE:

The nature of lesions caused by asbestos and mica in experimental pneumoconiosis in guinea pigs.

ORIG. REF.:

J. Indian Inst.
Sci.

VOL.

PP.

DATE

ABST. REF.

VOL.

PP.

DATE

35 319-31
Sect. A

Oct. '53

Bull. Hyg.

29

172

Feb '54

Guinea pigs were subjected to intratracheal injections of mica and asbestos dusts. Stress is laid on the development, after long periods, of lesions in other organs besides the lungs, especially in the adrenal glands. Mica dust was found to lead to some degree of nodular formation in the lungs, but the asbestos dust set up diffuse fibrosis only. These differences are portrayed in a series of photomicrographs. Mica induced hypertrophy of the adrenal cortex with extensive foamy disintegration of the cortical cells; asbestos induced lesser changes, but small areas of necrosis were occasionally found in the zona fasciculata and zona reticulata. In a theoretical discussion, the authors attempt to draw a relation between the atomic structure of mica and asbestos and the pathological lesions in the lungs and other organs. Their theory, however, leaves many points unexplained.--Cond. from Bull. Hyg.

DATE

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OF SEARCH

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CLASSIFIED SUBJECT	FELLOWSHIP NUMBER	FILE NUMBER
8-54 905	nfc	752

AUTHOR: V. Wyss.

TITLE: The presence of asbestos fibess in urine of workers exposed to asbestos hazard.

ORIG. REPO.	VOL.	PP.	DATE	ABSTR. REPO.	VOL.	PP.	DATE
Rass. med. ind. (Italian)	22	55-56	1953	Biol. Absts.	28	1580	July '54

ABSTRACT:

In urinary sediment of two asbestos workers asbestos fibers were seen; the same finding was detected in urine of two female patients suffering from asbestosis, who had left their work seven years before. -- Biol. Absts.

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CLASSIFIED SUBJECT				FELLOWSHIP NUMBER		FILE NUMBER	
55 1/55				NPC		722	
AUTHOR: W. C. Hueper.							
TITLE: Experimental studies in metal cancerigenesis. 6. Tissue reactions in rats and rabbits after parenteral introduction of suspensions of arsenic, beryllium, or asbestos in lanolin.							
ORIG. REFS.	VOL.	PP.	DATE	ABSTR. REFS.	VOL.	PP.	DATE
J. Natl. Cancer Inst.	15	113-129	(1954)	Chem. Absts.	48	13043	11/10/1954

55

Experimental Studies in Metal Cancerigenesis. 6. Tissue Reactions in Rats and Rabbits after Parenteral Introduction of Suspensions of Arsenic, Beryllium, or Asbestos in Lanolin. W. C. Hueper.
J. Natl. Cancer Inst. 15, 113-129 (1954).

When powdered arsenic, beryllium, or asbestos in lanolin was injected into the marrow cavity of the femur, pleural cavity, or paranasal sinuses of rats, there was no development of any significant number of cancers, either at the site of deposition or remotely, causally related to the chemicals introduced. Similar negative results were obtained with lanolin alone. The sarcoma attack rate at the site of the injection for the 250 rats used stands at 0.8%, contrasting sharply with that of 30% for rats injected with nickel suspensions and 20% for rats given parenteral

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			(over)

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CLASSIFIED SUBJECT

FELLOWSHIP
NUMBER

FILE NUMBER

1299

12/54

MFC

752

AUTHOR: J. Krausler and R. Seyss.

TITLE: Early diagnosis of asbestosis by enlarged radiographs.

ORIG. REFS.:

German

VOL.

PP.

DATE

ABSTR. REFS.:

VOL.

PP.

DATE

Z. Unfallmed. u.

47

59-64

Mar 15 '54

Bull. Hyg.

29

829

8/54

Berufskrankh.

After a brief description of asbestosis and the changes in the lung tissue in the early stages, the authors describe a radiographic technique with a fine focus. Of 16 asbestos workers, with 1 to 18 year's exposure, eight showed changes in the lung tissue with the enlargement technique; two of these showed no change by normal technique, and in the other six cases the degree of change shown was minimal.

-- Cond. from Bull. Hyg.

BURGH, PA.

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CLASSIFIED SUBJECT	FELLOWSHIP NUMBER	FILE NUMBER
4-4 1053	Sc	752

AUTHOR: J. F. Knox and J. Beattie.

TITLE: Mineral content of the lungs after exposure to asbestos dust.

ORIG. REFS.	VOL.	PP.	DATE	ABSTR. REFS.	VOL.	PP.	DATE
Arch. Ind. Hyg. & Occ. Med.	10	23-29	(July '54)				

ABSTRACT:

The mineral content of the lung parenchyma, the lung hilar region, and the tissues of the pleural and subpleural regions of the lung has been determined in lungs from 27 workers in the asbestos-textile industry. The exposure time varied from five to 33 years, and the time interval between the last exposure to dust and death (survival time) was from less than one year to 21 years. There was an indication that the mineral material found in the lungs increased in amount as the exposure time lengthened. The amount so accumulated varied considerably from person to person. As the survival time increased, the mineral content of the lung tended to decline but again at a very variable rate. The severity of the asbestotic lesions in the lungs found at death was related not to the mineral content but to the sum of the exposure and survival times.

-- Authors' summary

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PHILADELPHIA, PA.

FORM 12

CLASSIFIED SUBJECT		FELLOWSHIP NUMBER		FILE NUMBER	
94-4 / 611		fc		752	
AUTHOR: J. F. Knox and J. Beattie.					
TITLE: Distribution of mineral particles and fibers in the lung after exposure to asbestos dust.					
ORIG. REFS.:	VOL.	PP.	DATE	ABSTR. REFS.:	VOL.
Arch. Ind. Hyg. & Occ. Med.	10	30-36	(July '54)		
ABSTRACT:					

The particle-size distributions in the incombustible and acid-insoluble residues from the lungs of 27 persons who had been exposed to asbestos dust were determined. The number of particles with greatest lengths in excess of 26 microns was considerable up to the eighth year after the last exposure to asbestos dust and then sharply fell. The number of particles within the size ranges of five microns and less and between five and 15 microns remained constant over a very long period in those cases which showed no sign of asbestosis or minimal fibrotic change. The cases of severe asbestosis showed a significant rise in the numbers of such particles.

It is considered that the mechanism which is concerned with the production of human asbestosis is not the same as that which is responsible for the production of asbestotic changes in experimental animals exposed to high concentrations of asbestos dust. The appearance of such changes seems to be related to the breakdown of asbestosis bodies which may liberate some fibrogenic agent.

-- Authors' summary

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CLASSIFIED SUBJECT

855

7/55

FELLOWSHIP
NUMBER

NFC

FILE NUMBER

752

AUTHOR: F. Leicher.

TITLE: Primary cortical-cell tumor of the peritoneum in a case of asbestosis.

ORIG. REFS.: German,

VOL.

PP.

DATE

ABSTR. REFS.:

VOL.

PP.

DATE

Arch. Gewerbepathol. 13 | 382-392(1954)

Gewerbehyg.

A case of asbestosis following long exposure to asbestos is described. In addition to typical symptoms and findings, leptomenigitis was present and tubercle bacilli were found in the spinal fluid. The patient died with cachexia. Autopsy showed tuberculosis of the lumbar spine with bilateral psoas abscess and mixed infection in both lungs. Asbestosis, stage two, was found in the lungs with definite fibrosis; there was slight asbestosis in the lymphatic glands, and asbestos bodies were found in the spleen. On the peritoneum of the mesentery and over the peritoneal cavity there were thickened patches and many small nodules; a flat tumor, half the size of a hand and 1 cm. in thickness, was attached to the peritoneum on the under side of the diaphragm. The results of the examination of the tumor are fully described and illustrated. Asbestos was found in the tumor tissues by x-ray diffraction. It is uncertain how the asbestos reached the peritoneal cavity; the most probable route was thought to be by direct penetration of the asbestos fibers from the lung through the pleura and thence through the diaphragm.

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MELLON INSTITUTE, PITTSBURGH, PA.

FORM 77 5-54

Digest
EX. 184

CLASSIFIED SUBJECT

FELLOWSHIP
NUMBER

FILE NUMBER

NFC

752

AUTHOR: Queries and minor notes, JAMA

TITLE: Asbestosis.

ORIG. REFS.:

VOL.

PP.

DATE

ABSTR. REFS.:

VOL.

PP.

DATE

J. Am. Med. Assn. 156 1546 (Dec. 18 '54)

A 50-year-old man worked at covering pipe with asbestos insulation from 1940 to 1945. The question is the possibility that pulmonary fibrosis evident on roentgenograms in 1952 was due to asbestosis when the films had been normal in 1949. The answer is that the cause of the fibrosis must be sought among other sources than the 1940-45 occupation. Little evidence exists of progression of asbestosis after cessation of exposure to asbestos fibers. Moreover, exposure would have had to be much more severe than in the man's occupation in order to produce asbestosis, and it would have manifested itself in the 1949 roentgenogram.

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NEILON INSTITUTE, PITTSBURGH, PA.

CLASSIFIED SUBJECT	FELLOWSHIP NUMBER		FILE NUMBER	
379 3/56	NFC		753	
AUTHOR: G. Jacob and H. Bohlig.				
TITLE: Incidence and characteristics of lung cancer in asbestos workers.				
ORIG. REFS.: German.	VOL.	PP.	DATE	ABSTR. REFS.:
Arch. Gewerbepath.	14	10-28	(1955)	Bull. Hyg.
Gewerbehyg.				
	VOL.	PP.	DATE	
	30	1080	12/55	

This is a study of the incidence of lung cancer among asbestos workers in Dresden. The international literature is based exclusively on the results of autopsies; the incidence among asbestos workers appears to vary between 12 and 17%. In Dresden, however, from research into cases at the clinic and among asbestos workers, it appears to be rare, it being estimated that only about one-fourth of these workers have an effective exposure to the dust. In cooperation with the radiological and radium institutes the authors reviewed the cases of asbestosis reported since the middle of the 1930s. These numbered 339 in all stages; they are classified according to stage and sex. Silicosis was found in eight males. In five females and ten males (4.4% of the total) active open tuberculosis was found. Four fatal cases of lung cancer in asbestos workers, which occurred in Dresden up to 1954, are described. A long discussion of the literature on cancer among asbestos workers includes an examination of the characteristics of the disease; these are no longer convincing evidence of a high incidence of cancer in asbestosis. In the future, cases of cancer of the lung in asbestosis should not be published individually but should always be considered in the framework of the whole asbestos industry in the region.

-- Cond. from Bull. Hyg.

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MELLON INSTITUTE, PITTSBURGH, PA.

CLASSIFIED SUBJECT

895 1156

FELLOWSHIP
NUMBER

FILE NUMBER

AUTHOR

R. S. Speirs and U. Wenck:

NFC

752

TITLE

Local inflammatory response produced by solutions sterilized with asbestos type filters.

ORIG. REFL.

VOL.

PP.

DATE

ABSTR. REFL.

VOL.

PP.

DATE

Proc. Soc. Exptl.

Biol. Med.

88

89-93

(Jan '55)

Biol. Absts.

29

2142

9/55

It was demonstrated that filtering through an asbestos type filter disc will change the local cellular responses of the organism to that solution. This reaction is due to particles and fibers which have pulled off the disc and are present in the filtrate at the time of injection. A similar eosinophilia appeared following injections of asbestos and talc, but not following silica, cotton, or paper fibers. Ground glass and mica produced only slight increases in the number of local eosinophils. It was pointed out that precautions should be taken to avoid accidental introduction of asbestos fibers from Seitz filters into serums and other biological materials intended for injection. These experiments demonstrate that a study of the local cellular responses to an injected material can lead to a better understanding of the effects of a solution upon an organism.

-- Biol. Absts.

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RESEARCH

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CLASSIFIED SUBJECT

572

5/55

FELLOWSHIP
NUMBER

FC

FILE NUMBER

752

AUTHOR: G. W. Wright.

TITLE: Functional abnormalities of industrial pulmonary fibrosis.

ORIG. REFS.

VOL.

PP.

DATE

ABSTN. REFS.

VOL.

PP.

DATE

Arch. ¹⁰⁴ ~~Gen.~~ Health 11 183-211 (Mar. '55)Functional Abnormalities of Industrial Pulmonary Fibrosis. G. W. Wright.

The author describes the function of the respiratory and cardiocirculatory apparatus in a simplified form for the benefit of lay persons, and discusses the methods of quantitating some of the physiologic aspects of the respiratory and circulatory systems. He shows how the results of these methods indicate silicosis in its various stages. The typical appearances and clinical conditions in asbestosis are then described and contrasted with those in silicosis. As in silicosis, there is a gross correlation between intensity and duration of exposure, but no evidence is found on the least exposure necessary to produce asbestosis. The physiologic abnormalities are recognizably different in the earlier stage of the two diseases, but in the terminal stage the distinction may not be entirely clear and may lead to confusion. A further difficulty in diagnosis is the frequent coexistence of the diseases. Both may be roentgenologically manifest without recognizable physical impairment.

DATE

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PURPOSE

OF SEARCH

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ABSTRACT BLANK FOR GENERAL USE

BIRCH, PA.

FORM 1

572 5/155

AUTHOR: P. Cartier.

TITLE: Some clinical observations of asbestosis in mine and mill workers.

ORIG. REFS.: Arch. Ind. Health VOL. 11 PP. 183-211 DATE (Mar. '55) AGSTP. REFS.: VOL. PP.

BUREAU, PA.

FELLOWSHIP NUMBER: FC FILE NUMBER: 752

Some Clinical Observations of Asbestosis in Mine and Mill Workers.
P. Cartier.

Statistics and comments are presented on 128 cases of asbestosis observed by the author over a period of eight years. In his experience, no cases of asbestosis of clinical importance have been diagnosed by the pathologist without previous detection by the roentgenologist. The wide discrepancy in the appreciation of the degree of asbestosis by different pathologists leads to confusion, especially before a compensation board. The limitations of the table are obvious, but it shows that the clinical status of 43 cases is good and that 59 employees in the early stages of asbestosis are able to work without discomfort. For the remaining 29 cases, no good correlation between degree of asbestosis and clinical status has been found.

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572	5/55								
AUTHOR: O. A. Sander.		FELLOWSHIP NUMBER: FC		FILE NUMBER: 752					

TITLE: Asbestosis as differentiated from other pneumoconioses.

ORIG. REF.	VOL.	PP.	DATE	ABSTR. REF.	VOL.	PP.	DATE
Arch. Occ. Health	11	183-211	(Mar. '55)				

Asbestosis as Differentiated from Other Pneumoconioses. O. A. Sander.

Difficulties in differential diagnosis are considered. All possible causes of the pathology revealed by the chest film must be considered. Poorly studied cases result in misdiagnoses which not only are embarrassing to the physician but which may cause irreversible harm to the patient. Every obscure case should be thoroughly investigated so that such unfortunate situations do not arise.

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CLASSIFIED SUBJECT

1138

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FELLOWSHIP
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FILE NUMBER

752

AUTHOR: H. Bastenier, H. Denolin, A. de Coster, and M. Englent.

TITLE: A study of respiration in pulmonary asbestosis.

ORIG. REFS.: French, =

VOL.

PP.

DATE

ABSTR. REFS.:

VOL.

PP.

DATE

Arch. maladies

16

546-553

1955

Bull. Hyg.

31

544

5/56

profess.

In order to test the respiratory value of lungs affected with asbestosis nine cases were closely studied. The seven men and two women had been exposed to asbestos dust, 1,000 to 2,000 particles per cu. m., for 18 to 30 years. The patients displayed definite symptoms of asbestosis with troublesome cough and dyspnea, and all showed x-ray shadows like ground glass extending over both lungs. No tubercle bacilli were found in any case. A definite reduction was found in vital capacity, but the maximum expiratory volume was satisfactory. Breathing, however, was accelerated by hyperventilation. At rest breathing was sufficient and satisfactory, but on exertion dyspnea appeared, varying considerably according to the pathological lesions in the lungs. These functional changes were in no way different from those seen in other cases of pneumoconiosis. Varying emphysema was found, but no special strain was thrown upon the heart.

-- Contd. from Bull. Hyg.

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572

5/55

FELLOWSHIP
NUMBER

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FILE NUMBER

752

AUTHOR: A. J. Lanza.

TITLE: Recent trends in industrial health.

ORIG. REFS.

VOL.

PP.

DATE

ABSTR. REFS.

VOL.

PP.

DATE

Arch. Occ. Health

11

183-211

(Mar. '55)

Recent Trends in Industrial Health. A. J. Lanza.

This short address serves as an introduction to the scientific papers and emphasizes the need of continued progress in the study of dust diseases.

URON, PA.

MELLON INSTITUTE.

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FORM 11

572

5/55

FELLOWSHIP
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FILE NUMBER

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752

AUTHOR: ~~Arch. Occ. Health~~ (Lanza, Lynch, Bristol, Wright, Cartier, & Sander).

TITLE: Symposium on occupational diseases of the lungs.

ORIG. REFS.:

VOL.

PP.

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ABSTR. REFS.:

VOL.

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DATE

Arch. Occ. Health 11 183-211 (Mar. '55)

Symposium on Occupational Diseases of the Lungs. Arch. Ind. Health 11,
183-211 (Mar. 1955).

The following papers were presented at the Symposium on Occupational Diseases of the Lungs, sponsored by the Massachusetts Medical Society in cooperation with the Institute of Industrial Medicine of New York University, at Post-Graduate Medical School, Boston, Oct. 28, 1953. Asbestosis is the main theme of the papers.

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6/68

FELLOWSHIP
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FILE NUMBER

FC

752

AUTHOR: L. J. Bristol.

TITLE: Roentgenologic aspects of silicosis and asbestosis.

ORIG. REFS.

VOL.

PP.

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VOL.

PP.

Arch. Soc. Health

11

183-211

(Mar. '55)

Roentgenologic Aspects of Silicosis and Asbestosis. L. J. Bristol.

Typical roentgenograms show the appearance of silicosis and of asbestosis in the three stages of each and of silicosis with tuberculosis. The functional impairment in silicosis is due to diffuse obstructive emphysema, and x-ray examination in full expiration aids in evaluating the presence or absence of this complication. On the other hand, not all cases of asbestosis have a breathing problem. Expiratory films are not of much value in determining the presence or absence of respiratory impairment in these cases. Some persons with slight x-ray changes indicating asbestosis, show definite functional impairment. This situation does not occur in silicosis.

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MELLON INSTITUTE, PITTSBURGH, PA.

1113 9/1/55

FELLOWSHIP
NUMBER

FILE NUMBER

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752

AUTHOR: R. Doll.

TITLE: Mortality from lung cancer in asbestos workers.

ORIG. REFS.	VOL.	PP.	DATE	ABSTR. REFS.	VOL.	PP.	DA
Brit. J. Ind. Med.	12	81-86	(Apr. 1955)				

ABSTRACT:

1113 Mortality from Lung Cancer in Asbestos Workers. R. Doll. Brit. J. Ind. Med. 12, 81-86 (Apr. 1955).

In necropsies of 105 persons who had been employed at an asbestos works, lung cancer was found in 18 instances. In 15 cases asbestosis was also found. These 15 workers were employed at least nine years before 1923, when dust control regulations became effective. An additional 113 men who had been exposed to asbestos dust for 20 years were followed up and their mortality was compared with that of the whole male population. Thirty-nine deaths occurred in the group whereas 15.4 were expected. The excess was entirely due to excess deaths from lung cancer (11 against 0.8 expected) and from

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EX. 185

other respiratory and cardiovascular diseases (22 against 7.6 expected). All the cases of lung cancer were confirmed histologically and all were associated with asbestosis. From the data it is concluded that lung cancer is a specific hazard of asbestos workers and that the average risk among men employed for 20 years or more has been of the order of ten times that experienced by the general population. The risk has become progressively less as the duration of employment under the old dusty conditions has decreased.-- Cond. from author's summary

CLASSIFIED SUBJECT

1234 10/55

FELLOWSHIP

NUMBER

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FILE NUMBER

752

AUTHOR: K. W. Smith.

TITLE: Pulmonary disability in asbestos workers.

ORIG. REF.

VOL.

PP.

DATE

ACCTR. REPR.

VOL.

PP.

DATE

Arch. Ind. Health 12 198-203 (Aug. '55)

Respiratory disease experience among several thousand male and female asbestos workers in the United States and Canada is reported. Of all workers exposed to the fibers, very few develop asbestosis. This disease is insidious in onset and progresses slowly with continued exposure, causing respiratory embarrassment and cardiac failure. Expansion of the lung is difficult, and there is impaired gas transfer through the lung. Diffuse, obstructive emphysema is not common. The typical x-ray pattern cannot be confused with other pneumoconioses. An x-ray survey of 708 employees in a milling operation showed that the majority had normal x-ray patterns, that ten or more years of exposure were necessary to produce x-ray changes, and that no cases of asbestosis were found who had worked less than 20 years in the dust. The incidence and duration of nonoccupational respiratory disease were not increased by exposure. Asbestos does not predispose to tuberculosis, nor does it aggravate an apparently healed lesion. There are several reasons for different opinions expressed concerning the relationship of asbestosis.

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MELLON INSTITUTE, PITTSBURGH, PA.

FORM 11-57

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5/57

FELLOWSHIP
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FILE NUMBER

752

AUTHOR: M. Navratil, V. Krecek, and L. Cvachova.

TITLE: Results of functional respiratory and circulatory tests of workers exposed to asbestos dust over a number of years.

ORIG. REFS.: Czech.

VOL.

PP.

DATE

ABSTR. REFS.:

VOL.

PP.

DATE

Pracovni Lekarstvi

8

329-333 1956

Bull. Hyg.

32

460

5/57

ABSTRACT:

Sixty workers exposed to asbestos dust were classified according to severity of asbestosis and according to age. They were subjected to functional tests for prolonged expiration and for ventilatory coefficients, and to electrocardiography. In the over 50 age group, quite apart from all radiological data, a drop in vital capacity is found, due not merely to age but also to emphysema which was detected in 19 patients. The ventilation coefficients in the asbestosis-free and early asbestosis groups were within normal limits. In those with advanced asbestosis there was a distinct drop in the ventilation coefficients, due to fibrosis and associated pathological conditions. The differences in the carbon dioxide ventilation coefficients and in the vital capacity figures were on the limit of significance. Hypertrophy of the right heart was present in two subjects with advanced asbestosis.

-- Cond. from Bull. Hyg

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MELLON INSTITUTE, PITTSBURGH, PA.

CLASSIFIED SUBJECT

1190 9/50

FELLOWSHIP
NUMBER

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FILE NUMBER

753

AUTHOR: H. Bohlig and G. Jacob.

TITLE: New viewpoints on pulmonary cancer in asbestos workers.

ORIG. REFS.: German.

VOL.

PP.

DATE

ABSTR. REFS.:

VOL.

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DATE

Deut. med. Wochschr. 81, 231-233 Feb. 17, 1956 J. Am. Med. Assn. 161 916 6/30/56

The following distinguishing features have been attributed to the lung cancer that has been recognized as an occupational disease of asbestos workers: (1) increased incidence; (2) development at an early age; (3) dependence on duration of exposure to asbestos dust; (4) a latent period between onset of exposure and the appearance of the cancer; (5) the localization; (6) the histological structure; and (7) the multicentral origin. The authors discuss each of these points, and show that there is little clear evidence to support any of these assumptions, with exceptions noted. Women workers in the asbestos industry have lung cancer more often, and at an earlier age than do other women, but the same is not true of men. Malignant growths of the pleura seem to occur more often in asbestos workers than in other persons. The multicentral development is observed also in workers exposed to cobalt and to chromates. The study of the pathogenesis is still in the state of hypotheses, and the theory of mechanical pathogenesis is given most consideration. Microtraumas and asbestos bodies are always found in the pulmonary cancers of asbestos workers, but the authors feel that this does not necessarily prove the mechanical theory. They cite several factors that speak against a purely mechanical pathogenesis of asbestos cancer, but they concede that the development of so-called asbestos warts proves the irritating effect of asbestos on human tissues.

-- Cond. from J. Am. Med. Assn.

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MEILLON INSTITUTE, PITTSBURGH, PA.

1189	9/56		FELLOWSHIP NUMBER FC	FILE NUMBER 752
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AUTHOR: E. R. Wiese and W. E. B. Hall.

TITLE: Asbestosis: report of a case.

ORIG. REFS.	VOL.	PP.	DATE	ABSTR. REFS.	VOL.	PP.	C
Diseases of Chest	30	229, 230	Aug. '56				

The history and autopsy findings in a fatal case of asbestosis are reported. Conditions described include: absence of the middle lobe of the right lung; greatly enlarged heart; wide spread, sharply demarcated development of fibrosis; and degeneration of collagen in extensive irregular fields. These and other conditions are described fully. Fine needles representing the original asbestos fibers were seen. Small asbestos bodies were seen in a few areas of focal fibrosis, although they had not appeared in the sputum.

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FORM 77 10M 5-55

J. Frost, J. Georg, and P. T. Møller.

NFC 752

Asbestosis with pleural calcification among insulation workers.

Danish Med. Bull. 3 202-204 Nov. '56 Bull. Hyg.

VOL. 32 260 3/-

In Denmark only a few persons manipulate insulation products including asbestos, kieselguhr, magnesia, glass wool, and rock wool. The first two have been regarded as fibrogenic to the lungs when their dust is inhaled. In order to ascertain any occupational risk in the work 31 workers with more than 20 years' exposure, of 52 years average age, were carefully examined clinically and by x-ray. Abnormalities were found in the surprising number of 22. A total of nine exhibited fine mottling indicative of pulmonary asbestosis. In 19 patients pleural changes were seen, which were due to adhesions and extensive thickening with calcification. The abnormalities in the pleura were so widespread in some instances as to obliterate other pathological changes. The calcification is unusual and may be ascribed to combined exposure to calcium and magnesium in the presence of fibrogenic asbestos dust. Sample analyses of the kieselguhr in use did not reveal the presence of alpha-quartz. The finding of pronounced bilateral pleural changes in the present series definitely points to an occupational origin.

-- Cord. from Bull. Hyg.

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CLASSIFIED SUBJECT

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4/57

FELLOWSHIP
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FILE NUMBER

753

AUTHOR: K. M. Lynch, F. A. McIver, and J. R. Cain.

TITLE: Pulmonary tumors in mice exposed to asbestos dust.

ORIG. REFS.:

VOL.

PP.

DATE

ABSTR. REFS.:

VOL.

PP.

DATE

Arch. Ind. Health

15 207-214

Mar.'57

ABSTRACT

Mice of a selected strain (AC F₁) were exposed to a dusty atmosphere containing asbestos floats of a type used by others experimentally, at 150 to 500 million particles per cubic foot. The largest single experimental group consisted of 127 animals killed at 19 months after exposure for 17 months. This group was compared with 222 control animals. Primary lung tumors were demonstrated microscopically in 46% of the dusted mice and in 36% of the controls. Multiple pulmonary tumors were demonstrated in 18% of the dusted animals and in 8% of the control animals. No significant histologic or cytologic difference was observed between tumors in the two groups. No clear-cut proof of malignancy was found in any of the lung tumors studied. The authors have been unable to demonstrate any proof of the carcinogenicity of asbestos under the conditions of the experiment, but the increased incidence of multiple lung tumors in dusted animals must be regarded as a possible accentuation by the inhalation of asbestos dust of an existing tendency to develop lung tumors. Future experiments with asbestos should include the use of larger animals, probably monkeys. The equivocal nature of this report does not answer the questions raised by accumulating clinical evidence that asbestosis is strongly associated with, and therefore is a possible cause of, pulmonary carcinoma in man. -- Adapted from authors' summary

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219

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NFC

752

AUTHOR: E. Sartorelli.

TITLE: Severe asbestosis with alveo-capillary block syndrome.

ORIG. REFS.: Italian.

VOL.

PP.

DATE

ABSTR. REFS.:

VOL.

PP.

DATE

Med. lavoro

48

358-362

1957

Bull. Hyg.

32

969

Oct. '57

ABSTRACT:

The author reports a case of severe asbestosis in a man aged 57 who was employed for seven years in a very dusty asbestos factory. Three years after commencing work the patient complained of dyspnea on exercise, with slight sputum, the condition became progressively worse and finally he was sent to a sanatorium as a case of combined tuberculosis and asbestosis with a disability of 50%. After two years, in spite of his respiratory symptoms, he started work as a general laborer, and was admitted to the author's clinic three years later with a recurrence of chest symptoms. No tubercle bacilli were found. X-ray of the chest showed intense reticulation especially in the medio-basal regions, small zones of fibrosis in the right apico-clavicular area and thickening of the pleura at the left base. Tests of respiratory function showed dyspnea on repose and markedly so on exercise, and while respirometry gave only slight alteration from normal, the oxygen saturation was only 90%. The diagnosis of advanced asbestosis was made on account of the marked respiratory insufficiency, absence of tuberculosis, increased erythrocyte sedimentation rate and hypergammaglobulinemia.

-- Cond. from Bull. Hyg.

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