PLAINTIFF'S EXHIBIT AIA-92

Ress

OUTLINE OF PROPOSED MONOGRAPH ON ASBESTOSIS

Saranac Laboratory Study under Grant from Asbestos Association

PART I HUMAN ASBESTOSIS

I Human Pathology - a study of 25 autopsy cases, Illustrated

2 X-ray Patterns in Asbestosis, Illustrated

3 Ash and Mineral Values in Human Asbestosis

4 Complications of Asbestosis

(a) Susceptibility to infection

i Tuberculous
ii Non-Tuberculous
iii Cancer of the lung

5 Disablility, causes and comparison with silicosis

6 Diagnosis

(a) History of adequate exposure
(b) X-ray film pattern
(c) Physical examination
(d) Asbestosis bodies in sputum, their significance

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PART II Experimental Asbestosis

I Methods

(a) Inhalation exposure to plant dusts.
(b) Injection into lungs through trachea of pure minerals.
(c) Injection of pure minerals into other organs.

2 Species Susceptibility

Man, guinea pigs, rabbits, cats, white mice and rats, dogs.

3 Peculiar Characteristics of Asbestosis

(a) Unusual localizaion of chrysotile fibre in lungs.
(b) Rate of resultant tissue reaction more rapid than to quartz.
(c) Reaction to chrysotile not progressive after exposure ceases; again the reverse of the situation in silicosis.
(d) Asbestosis Bodies

i Composition and methods of formation.
ii Occurence in different species.
iii Formation does not parallel development of fibrosis.
iv Gradual disappearance after exposure ceases.

4 Comparative Effects of Different Asbestiform minerals.

(a) Canadian Chrysotile.
(b) Arizona Chrysotile, low iron.
(c) Crocidolite
i Bolivian specimen, stiff and elastic.
ii South African, soft and flexible.
(d) Anthophyllite
(e) Amosite.
(f) Tremolite.

5 Effects of Control Minerals

(a) Grannular Serpentine, same chemical composition as chrysotile.
(b) Glass Wool, a synthetic silicate fibre.
(c) Brucite, a fibrous magnesium hydroxide almost free of silica

6 Chemical Composition of Asbestiform minerals in Relation to Irritation.

(a) Nothing in composition correlated with relative irritatin capacity.
(b) Preliminary acid treatment

i Hydrochloric acid
ii Carbonic acid

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(c) Effects of Aluminum

7 Physical Properties in Relation to Irritation

(a) Length of fibre
(b) Effect of Crushing
(c) Heat treatment

8 Nature and Significance of Asbestosis Body

(a) Formation
(b) Protective effect preventing further irritation
(c) Ultimate solubility in tissue

9 Theories of Action of Asbestiform Minerals

(a) Chemical - reasons for considering invalid
(b) Mechanical - experimental demonstration of.

10 Complications

(a) Infection, tuberculosis and other varieties
(b) Cancer of lung - experimental data suggestive but not proven

11 Disability

12 Essential Features of Hazardous Exposure

(a) Nature of dust - fibrous component and size factors
(b) Atmospheric Concentrations - probably lower than for quartz

i Inadequacy of standard impinger sampling method which does not collect the dangerous fibres
ii Electrostatic precipitator sampling preferable but method must be modified

(c) Duration of Exposure

13 Recommendations for a New Standard of Safe Atmospheric Concentrations of Asbestos Dust

(a) The Quasi-official standard of 4 to 5 million particles per cu. ft.
(b) Work upon better method of sampling

(c) Necessity for comparison of results with X-ray findings in employees

14 Prevention

(a) Chemical means not practical

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i Acidosis necessary to dissolve fibre in lungs worse than Asbestosis
ii Aluminum Therapy inapplicable
iii Chief reliance still upon dust prevention with special emphasis upon the fibrous components

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