FILE NAME: Johns-Manville (JMA)

DATE: 1964-1967

DOC#: JMA296

DOCUMENT DESCRIPTION: Asbestos Research Report, Newspaper Articles with Memo and Letter

Scientific American

October 30, 1964
DESK MEMO

PRESS RELATIONS - Scientific American Inquiry

John Purcell, editorial assistant on SCIENTIFIC AMERICAN (MU 8 3900), telephoned to request background information on product uses of asbestos fiber.

He stated he was working on an article being developed from news releases he had received from his New York Academy of Science Conference of October 19, 20, and 21. (Asbestos - Cancer)

In our own particular press relations interest in general and SCIENTIFIC AMERICAN editorial interest in particular, we mentioned to Mr. Purcell that there were some disagreements between the doctors and scientists attending the conference regarding the content of the releases he had received. Specifically, we mentioned to him the Smathers statement and suggested that he may wish to contact the Academy to clarify the situation and his own editorial interest. Mr. Purcell stated that he sincerely appreciated our bringing this to his attention in as much as his editors are particularly interested in maintaining scientific character of SCIENTIFIC AMERICAN and would not wish to be party to publishing sensationalism.

We forwarded a copy of the Smathers statement and a copy of the Asbestos the Magic Mineral to comply with his information request.

Walt Goodwin

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KWS | WG
CLS

November 6, 1964
DESK MEMO

PRESS RELATIONS - Scientific American

John Purcell, editorial assistant of SCIENTIFIC AMERICAN telephoned to report status on the forthcoming article on Asbestos and Cancer. (Re memo October 30th).

Specifically, he stated, they are currently developing the article along a scientific line based on one or two of the papers delivered at the New York Academy of Science Conference held on October 19, 20 and 21. He stated that the article would not utilize information contained in the three releases distributed by the New York Acamedy, but rely on comments taken from the various abstracts.

Specifically, the article would concentrate on the statistical studies developed in the Asbestos Workers and the Thompson report. He further stated that the article would not make specific conclusions regarding the connection between Asbestos and Cancer, but would refer to the need for further investigations in this area. Tentatively, the article is scheduled for the December issue.

We thank Mr. Purcell for his consideration for keeping us informed on the developments and reiterated our offer to be of any further assistance on asbestos background material that may be at our disposal.

Walt Goodwin

Walt Goodwin

NOTE: Scientific American
Circulation - 335,000
Readership - Engineers, Scientists, Technical Executives and informed laymen, throughout industry and government.

Cancer Experts Eye Asbestos in Alarm

By JOSEPHINE ROBERTSON

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Asbestos, used in more than 3,000 American products from textiles to insulation and flooring, has recently become a subject of international concern as a cause of cancer.

ONE IN A SERIES

Inhalation of asbestos dust was said to be a rapidly growing health problem in the world's industrial countries, at a three-day international conference on the "biological hazards of asbestos" sponsored in New York by the New York Academy of Sciences.

The United States uses more of the world's annual production of 3,055,000 short tons than any other nation. For this reason a number of American scientists at the conference indicated that a thorough study of the asbestos-cancer problem was needed here in order to define it so solutions could be sought logically.

Satisfactory information concerning the occurrence of sickness and death among American asbestos workers was said to be largely lacking or unavailable.

THREE NEW YORK researchers were able to study a small segment of the asbestos-cancer problem through cooperation of the New York and New Jersey locals of the International Association of Heat and Frost Insulators and Asbestos Workers.

These researchers were Dr. Irving J. Selikoff, Dr. Jacob Churg and Dr. E. Cuyler Hammond.

Dr. Hammond is director of statistical research of the American Cancer Society.

They investigated 307 consecutive deaths of persons who were union members from Dec. 31, 1942, and Dec. 31, 1962. Of the 307 deaths it was found that 124 were from cancer and 17 from asbestosis a disease from inhalation of asbestos dust. These cause accounted for about 45% of the deaths.

The cancers were: lun carcinoma, 53; digestive tra carcinoma, 35; mesotheliom a recently described asbesto related cancer arising fro linings of the chest and ab dominal wall cavities, 9, an other cancers, 27.

The New York doctors co

Continued on Page 5, Col. 1

THE PLAIN DEALER January 12, 1965,
Cleveland, Ohio

Cancer Experts Eye Asbestos Perils

From First Page

cluded the lung cancers, the mesotheliomas and probably 34 of the digestive tract cancers appeared to be "significant complications of asbestos inhalation.

IN THE UNITED STATES, one in six deaths from all causes is from cancer. Among the asbestos insulation workers studied, more than one in three deaths was from cancer.

From such circumstantial evidence the need for protection of such workers from inhalation of asbestos becomes clear.

These workers represent only one small sampling of the thousands who are exposed to asbestos. They were said to be "primarily engaged in construction work in which they have relatively light intermittent exposure to asbestos-containing insulation materials."

They did not include "non-union, maintenance or sprayed insulation workers, or those who do insulation work as members of other unions, such as longshoremen, ship builders, oil-burner and boiler repairmen, railroad, sheetmetal workers, laborers and others in various trades."

There is almost no information about the effects of asbestos products on American consumers and those incidentally exposed to it.

SOME RESEARCHERS from foreign countries reported development of cancer in wives of asbestos workers, who washed their husbands' clothes, in dry cleaners who handled such clothes, in people living in the neighborhood of asbestos factories or along the route by which asbestos was hauled.

The asbestos industry is only one of many believed to involve increased cancer hazards to workers and the public, that are being handled inadequately or not at all.

"Over half of the industrial plants in this country lack basic industrial hygiene control measures. The most serious deficiency is in the provision of adequate preventive measures in small plants of less than 500 employes, which accounts for two thirds of the (national) work force."

The above statement is from the report of a committee formed at the request of Surgeon General Luther L. Terry to develop a program to improve environmental health. The committee, headed by Dr. Paul M. Gross, professor of chemistry, Duke University, spent a year on the assignment.

One of the committee's recommendations will be carried out with the establishment of a national center for environmental sciences "for an enhanced and major national effort in environmental health." The center will cost more than $25 million. It will be situated on a 400-acre tract in South Carolina in the Raleigh-Durham-Chapel Hill area, it was announced last week.

IT IS BELIEVED that scarcely the surface has been scratched in uncovering American occupational disease hazards. During the past year an analysis of lung cancer mortality by occupation in the entire United States, has revealed 11 occupations with significantly high mortality rates from lung disease. This was reported recently by Dr. Robert J. Anderson, chief of the Bureau of State Services of the U.S. Public Health Service.

Workmen listed as having significantly high lung cancer mortality rates were: blacksmiths, forgemen, hammermen, carpenters, auto mechanics and repairmen, metal molders, construction painters, paperhangers and glaziers, plumbers and pipefitters, stationary engineers, tailors and furriers, tinsmiths, coppersmiths and sheet metal workers, operatives in primary metal industries and elevator operators.

An occupational health section in the report by Dr. Gross' committee concluded: "There is a widening gap between the new materials being created and an understanding of their effects on living systems . . . The industrial worker is first exposed to the chemicals that find their way into home use.

"Industry is the incubator for problems of more far-reaching consequence and alert, scientifically sound and unbiased investigations of occupational health problems can provide bases for later community-wide investigations."

Next: The Personal Smog.

May 11, 1966

ASBESTOS RESEARCH

I. Asbestos Textile Institute

1961 - J-M representatives first made presentation and proposal to the A.T.I. Health Committee and Board of Governors concerning a U. S. Public Health Service study of the health factors in the asbestos textile industry.

1963 - A.T.I. agreed to participate, and discussions were had with U.S.P.H.S. to undertake the study.

1964 - The engineering studies at the participating plants began.

1965 - Participating companies supplied, per U.S.P.H.S. specifications, employment history data.

In June, Certain-Teed, Flintkote and Johns-Manville agreed to participate in the study of employees in the asbestos cement operations.

A. U. S. Public Health Service

1. L. J. Cralley, M.D., reported at the 1965 American Industrial Hygiene Association meeting the planning and instrumentation portion of this study.

2. Dr. Cralley will present a paper at the Pittsburgh meeting of the I.A.H.A. next week covering the progress of the study and observations to date.

3. He is preparing a paper for presentation at the Vienna Conference in September 1966 before the 15th International Congress of Occupational Health.

4. The U.S.P.H.S. has contracted with the Industrial Hygiene Foundation for animal experimentation on the effect of asbestos fibre contaminance.

II. Dr. I. J. Selikoff

Dr. Selikoff, in 1960, received a grant from the Asbestos Workers Union to study the health of union members in the New York-New Jersey metropolitan area. We understand this covered approximately 1,500 insulation workers.

In 1961, Dr. Selikoff contacted Dr. K. W. Smith, and subsequently visited Jeffrey Mine, Research, and Manville plant.

In 1964, Dr. Selikoff chairmaned and presented papers at the Conference on the Biological Effects of Asbestos, sponsored by the New York Academy of Sciences.

In 1965, Dr. Selikoff made numerous presentations concerning the hazards of asbestos and Fiber Glass through several communications media.

In 1966, a U.S.P.H.S. grant was made to Dr. Selikoff at his Mount Sinai Hospital Research Center of $350,000 to study the effect of asbestos in the general public.

III. Quebec Asbestos Manufacturers Association

1957 - Through J-M instigation, sponsored an "Epidemiological Study of Lung Cancer in Asbestos Miners." This was through the services of the Industrial Hygiene Foundation.

1960 - Participated in the A.T.I. discussions of the U.S.P.H.S. study proposal.

1965 - Developed the concept of Q.A.M.A. Research Institute.

1966 - Established the Asbestos Health Research Council. K. V. Lindell and Ivan Sabourin were appointed as the principal directors.

Appointed a Scientific Committee with responsibility for the development and direction of the research efforts composed of:

Dr. George W. Wright, Chairman - outstanding physiologist at St. Luke's Hospital, Cleveland, Ohio

Dr. Daniel Braun, Medical Director of U. S. Steel (formerly of Industrial Hygiene Foundation)

Dr. John Beattie, Director of the Cardiff Pneumoconiosis Research Institute, Cambridge, England

Dr. Marvin Kushner, Professor of Pathology at New York University

Dr. Fernand Gregoire, Professor of Pathology

It is proposed that offices will be established in Montreal with minimum staff, and that the research projects involving special facilities and competence will be contracted for with appropriate agencies.

An epidemiological study up-dating the 1957 Industrial Hygiene Foundation study will be undertaken.

IV. National Insulation Manufacturers Association

1966 - The newly formed Health and Safety Committee held their first meeting yesterday, May 10. W. L. VanDerbeek and C. L. Sheckler represented J-M.

The evaluation of the erosion problem in Fiber Glass Air Duct was determined to be the first research effort. Owens-Corning has been having work done at the Kettering Laboratories in this area and agreed to turn over the data from this study to the Committee. Further research will be predicated on the status of these findings.

The Committee will function as a clearing house for information concerning union and jurisdictional activities, further attacks by Dr. Selikoff, and others, and State and Federal legislation affecting the industry.

The Committee will develop educational information and contacts to maintain and improve relationships with insulation contractors and consumers.

V. Johns-Manville

1964 - Research Report on:

1. "Petrographic and X-Ray Diffraction Analyses of Brake Lining Wear Dusts," and

2. "Micro-Aire Duct - Air Erosion of Microscopic Particles."

1965-66 - In conjunction with the Q.A.M.A. activities, W. C. Streib has had consultations with several English and European doctors and has done some work on "Organic Extractables in Asbestos."

THE CAPE ASBESTOS COMPANY LIMITED
114 PARK STREET
LONDON, W.1
GROSVENOR 6022

CHAIRMAN'S ROOM

12th January, 1967.

Mr. C. B. Burnett,
Johns-Manville Corporation,
22 East Fortieth Street,
NEW YORK 16, N.Y.,
U.S.A.

Dear Chet,

It has at last been possible for me to collect the comments on the draft dealing with Asbestos and Human Health which you left with me in October.

Both Dr. Smither, who is our Company Medical Adviser, and Dr. Knox, the Medical Consultant of the Asbestosis Research Council, have considered the paper and I think I can do no better than attach their notes, which in the main deal with the detailed medical aspects of the arguments put forward. A number of these are quite important in the extent to which they qualify some of the assertions in the draft. Medical experts have been known to differ before, but our doctors' comments are well documented as you can see.

In this country, the situation with regard to the health hazards of asbestos has for some time, I believe, been in a more critical phase than that which exists in the United States. The topic is one which the Ministry of Labour, Trades Unions, authorities at the docks and the Press are at present extremely sensitive about. We have therefore become most cautious in our attitude to statements made by the industry which are subject to close examination and criticism. Both in this Company and in the Asbestosis Research Council we have from time to time in the last year or so discussed the possibility of producing a paper such as this draft which would effectually refute statements, many of which are exaggerated and inaccurate, and which appear with increasing frequency in various quarters. Each time we have felt that the inconclusiveness of the evidence available to us, the changing state of our knowledge about the subject, and other considerations have made it impossible for us to frame a statement which would not of necessity be either hedged around with so many provisos as to negate its usefulness, or be couched in general terms the accuracy of which could be challenged.

The climate in the United States is probably quite different, and it is, of course, a matter for your judgement to assess the effect that the issue of such a document will have, as well as to be satisfied with its form and content. I would, however, recommend that the comments by the two doctors are given full consideration before the final draft is approved.

Continued/

Mr. C. B. Burnett,
Johns-Manville Corporation,
New York.

12th January, 1967.

While our attitude may well be felt to be somewhat negative, I would not like you to think that we are doing nothing to counteract adverse statements. We have approached the matter in another and admittedly indirect way by the publication of reports by the Asbestosis Research Council, copies of the first two of which I enclose. More on these lines are planned dealing with methods of prevention and control of the emission of dust in the use of asbestos in various fields.

I am sorry that these comments are not as constructive as I would wish them to be and that it has taken some time to collect them. If, however, there is any way in which you think we could be more helpful please do not hesitate to let me know.

Yours sincerely,

R. H. Dent.

RHD/ab
Encs.

ASBESTOS AND HUMAN HEALTH. DRAFT 10/13/66.

Comments by W.J. Smither.

1. Pg. 1. para 3. 'No longer considered a common health hazard'.

Comment.

'It is remarkable that no large-scale observations on the incidence, morbidity and mortality rates of asbestosis and asbestos cancers have been published by the giant American asbestos industry.'(1)

'The continued insistence of some industrial parties that reliable decisions on such aspects can be based on what is called deceptively "sound clinical judgement" often merely reflects an objectionable desire to escape from an unpleasant situation into a wishful dreamland in which profits are properly protected against just compensation claims.' (2)

'Whether the introduction of such protective procedures has succeeded in totally eliminating asbestotic hazards for the workers employed in such plants, however, remains to be seen because of the often relatively long latent period which may elapse before asbestosis may become syptomatically manifest even after workers have left such hazardous operations.' (3)

Information on the number and variety of exposed workers and on the occurrence and incidence of asbestosis and of asbestos cancers among them is most fragmentary in all countries, especially in the United States and Canada.....' (4)

W.C. Hueper. National Cancer Institute, Bethesda, Md.
Annals of the New York Academy of Sciences.
Vol. 132. Art. 1. (1) Pg. 185 (2) Pg. 186
(3) Pg. 190 (4) Pg. 192.

N.B. Subsequent references to this publication will be headed 'Annals'.

2. Pg. 1. Para 4. '.....which is now generally controlled'.

Comments:

'For example, Wood and Gloyne (1934), when reporting the first 100 cases of asbestosis, said, There is good reason to believe that the disease is now under control.' However, J.C. McVittie's figures (1965) for new cases of asbestosis, diagnosed in the United Kingdom in individuals only exposed after this pronouncement show how wrong it was....'

Pg. 695. Annals. J.C. Gilson.

3. Pg. 1. para 5. '...and treatment are well understood'.

Comment:

A statement which may be true, but is certainly misleading. It is well understood that there is no treatment.

4. Pg. 1., para. 6. 'Recently....published....suggestions that lung cancer may be associated with exposure to asbestos'.

Comment:

The word recently is somewhat inaccurate. On page 7, in para 2, of this document Schepers is quoted: 'Thus the high prevalence of neoplasia which was reported several decades ago.'.....

In England, Gloyne 1935. In America Lynch and Smith 1935.

5. Pg. 3. para. 6. 'Suggestions associating lung cancer with asbestos have neither been confirmed nor disproved by experimentation nor by many observations of asbestos miners and fabricating workers.'

Comment:

'A report on a similarly defined population of 1,266 white male asbestos products workers followed for over twenty years shows nearly a three to one excess for respiratory cancer.'

Pg. 164. Annals: P.E. Enterline.

'In the period 1961-1963, no less than 42 of 77 male asbestosis death certificates also recorded a cancer or mesothelioma, a percentage of 54.5.....' Pg. 512. Annals: W.D. Buchanan.

'Of the 307 deaths (in N.Y.C. Asbestos Insulation Workers)... Fifty-three were attributed to bronchogenic carcinoma. Ten were attributed to mesothelioma.....Pg. 523. Annals: Hammond and Selikoff.

'Lung cancer and neoplasms of the pleura are significantly increased among asbestos workers in the Dresden area when compared with the general population of this area of corresponding age and sex.' Page 546. Annals: Jacob and Anspach.

'Although six cases of mesothelioma of the pleura occurred in people occupationally exposed to asbestos dust; three of them had worked with crocidolite and amosite besides chrysotile.' Pg. 574 Annals: Vigliani Et. Al.

'A puzzling feature of the South African investigations is that although the country produces approximately the same amount of crocidolite, amosite and chrysotile (if Swaziland is included), no case of mesothelioma has been reported from either of the other areas in spite of an intensive investigation.' Pg. 576 Annals: J.C. Wagne

'Certain American investigators who have examined the relationship between exposure to asbestos and mesothelioma in the U.S.A. have suggested that in the past crocidolite consumption there was a negligible proportion of the total asbestos consumption, leading them to suggest that mesothelioma is a neoplastic hazard of asbestos exposure and not necessarily a problem only of crocidolite'

Selikoff. I.J. Churg, J. and Hammond E.C. (1964)

'Relation between Exposure to Asbestos and Mesothelioma'.

New Eng. J. of Med. 272, 560.

N.B. Knox's figures are frequently quoted to show that the risk of malignancy no longer exists. It is important to realise what Knox actually said:

'It must be remembered, however, that the experience of these groups is relatively short, and that no matter how many man-years of experience are accumulated by men who have just completed their twenty (or ten) years, this cannot give any certain indication of what their fate will be in ten, twenty or thirty years time.' Pg. 531. Annals: J.F. Knox.

'It is possible that specific occupational hazards to life have been completely eliminated, but it is not now possible to assert this with confidence and further detailed observations are needed.' Pg. 535. Annals: J.F. Knox.

Pg. 5. 'the distinct possibility that the subjects of their studies may not have been exposed to asbestos of any type whatsoever.

Comment:

All references previously quoted in these comments refer to asbestos workers or post-mortem series with incontrovertible evidence of asbestos exposure.

Comment: Pg. 7.

Dr. Schepers' personal impressions and speculative opinions should be contrasted with the carefully documented and statistically analysed contrary views presented by most other participants in the conference, previously quoted.

Page. 8. 'Of great relevance to the alleged link between asbestosis and cancer is the fact that the diagnosis of asbestosis itself still is difficult.

Comment:

This cannot apply to post-mortem series which are the basis for the association of lung cancer and asbestosis in this country.

'Payment of benefits is subject to confirmation that death resulted from the disease, normally based on post-mortem findings. Pg. 508. Annals: J.C. Buchanan.

Pg. 9. 'Most medical authorities believe that asbestosis is static'

Pg. 10. 'Most specialists observe that the lesions of asbestosis are non-progressive.'

Comment:

The opposite conclusion is well supported by the annual statutory examinations of certified cases of asbestosis in this country where a steady progression in disability is common experience, even after removal from exposure.

Page. 9. } 'The difficulty of diagnosing asbestosis' 1955.
Page. 10. } Comment:

The "Williams" mentioned at the top of page 10, published in 1961, in Thorax, (the same Journal as the article quoted written by Williams and Hugh-Jones) the following statements: (Thorax 1961 Vol. 16. No. 3.

'There appeared to be good correlation between the functional changes during life and the findings at necropsy'. Pg. 279.

'There appears to be little doubt now that there is an increased incidence of carcinoma of the lung in this disease'. Pg. 279

Pg. 10. 'While asbestotic fibroses are limited to the area of the included asbestos particle.'

Comment:

'Our findings of little fibrosis about large collections of bodies in the upper lobes....Some of the largest clumps of bodies were in the fibrosed areas, but often they were scanty there and frequent in normal areas of the same lung.'

Heard and Williams, 'Thorax' 1961. Vol. 16. No. 3.)

Pg. 10.) Vorwald et. al.
Pg. 11.)
Comment:

The mechanical theory and the lack of progression of asbestosis as enunciated are no longer accepted.

Holt, Mills and Young, (J. Path and Bact. Vol. 87 No. 1. Pp. 15-23, 1964), after a critical analysis of the Vorwald experiments and comparison with their own findings, say:

'All we would conclude from their inhalation experiments is that serpentine is less likely to produce fibrosis than is chrysotile.

'Chrysotile dust of small particle size rapidly produces fibrotic lesions of the lungs when inhaled by rats.'

Davis (Br. J. Experimental Path. Volxliv No. 4. August 1963) after critical consideration of the Vorwald experiments says:

'In this electron microscope study no evidence for gross mechanical damage by asbestos fibres has seen.....'

Pg. 11. Gross and Smith are the only authors quoted who appear to believe that asbestosis is non-progressive. Their article is speculative, with no experimental or clinical evidence to support it. In contrast, To their line 24 p.11, Davis, (previously quoted reference) says 'It is not unusual to find crystals that have penetrated the nuclear membrances.....'

Pg. 13 - 16. Comment:

The argument about the identification of the asbestos body is of minor relevance.

Pg. 17. The Braun and Truan study.

Comment:

'If one conducts a careful study of the data by Braun and Truan, it becomes readily apparent that the study does not disprove the association of lung cancer and asbestos exposure, because of certain inherent weaknesses of the study itself

.....Actually the incidence of lung cancer did increase with length of employment, and the grouping by category of exposure was not adequate for the negative observation by Braun and Truan, relativ to this.

.....It is the len th of employment rather than smoker classification which is important here.

.....When one realises that there are 133 persons lost to the cohort, that all others who left employment not covered by insurance were not identified, and that the addition of only three cases would have changed the statistical observations recorded by Braun and Truan, it would seem that the conclusions developed by them are on rather tenuous grounds.

.....Basically there was not a uniform application of criteria relative to the study group and the controls, in that only 'Proven' cases in the study group were accepted, while causes of death as certified were accepted for the controls.

.....Furthermore, a comparison for the rates of lung cancer in the countries in which the mines are located shows a rate of 18.9 compared with 9.4/100,000 for the adjacent counties, a more logical comparison.

.....A number of other points could be made, but I feel enough has been presented to make it evident that I feel Braun and Truan's conclusion of a negative association of lung cancer and asbestos not to be justified. Interestingly, Cartier previously reported two mesotheliomas among this same group of asbestos miners.

Pg. 592 - Page 593. Annals: Hanauso.

Pg. 19. Dr. Kenneth W. Smith.

Comment:

This is the almost only statement which one is prepared to accept as showing the results of a reasonable experiment.

Pg. 20. Summary.

1. Agreed.
2. Completely at variance with my own experience.
3. This cannot apply to post-mortem series on which most of the evidence in this country is based, and on which all of my own evidence is based.
4. Agreed. Asbestosis at post-mortem is not diagnosed in this country simply on the presence of asbestos bodies.
5. Unless more evidence is forthcoming as a result of further studies, this statement must be challenged. According to Dr. Hueper (see page 1 of these notes) such evidence was 'fragmentary' in 1964. According to Dr. Mancuso (see page 5 of these notes) the evidence supporting conclusion 5 given in the Braun and Truan report has so much inherent weakness that it cannot be accepted.
6. Agreed.
7. Agreed.

Dr.W.J. Smither.

WJS/JV
9.1.67.