

reventable and have made the it of those affected, national

ne has come for an authoritative national sickness data nationally, able, but not insuperable. The ise certification of the illness te occupational history. Exning this information even in d indicates, therefore, that the ion of selected kinds of illness, ted areas of the country. In ime is impracticable, but since y occupational, demonstrably te of knowledge, it should be a n the first and last groups, and

Table XXV. The component but what is the explanation of Do they indicate a deteriora- al diseases in the past decade? lack of data such as have been theless, there are some useful tion and the proportion fully purpose, the gross total of all s notified is not a reliable index poisoning (which includes not of allied substances generally lceration more often than not, and cause absence from work iformly notified); also, quite edly distort the overall picture n in 1943 and 1947. As will a was most creditably handled out of the 296 cases of chrome efore, we exclude the cases of tals in brackets in Table XXV re over the nine years. Then ses is some 13% less and the

respect of the notifications of whole, have steadily increased 25 years ago. Nowadays the nosed and notified in the early ancerous, and in many cases when preventive treatment is painlessly and quickly by low y microscopical examination ous stage. The increase in nature of things a measure of han an indication of increase in but nevertheless it distorts the

increased by 60 in number or is in the right direction. It

will be seen from Table XXIV that of the excess, 47 cases were due to Carbon Monoxide, mainly (29) in group (d) of Table, viz., cases other than Blastfurnace, Power or Coal Gas. The Blastfurnace cases in 1947 were actually one less than 1939, a most creditable achievement.

Pneumoconiosis

Regarding the pneumoconioses, the matter is rather more complicated, and it is necessary to split up the figures (which relate to deaths only).

TABLE XXVI

	1939	1940	1941	1942	1943	1944	1945	1946	1947
Silicosis (coal miners)	439 (197)	522 (232)	406 (196)	417 (230)	470 (276)	445 (277)	508 (323)	553 (343)	558 (347)
Asbestosis	18	11	17	11	3	10	11	16	15
Other pneumoconioses (coal miners) ...	—	—	—	6	7	38 (34)	85 (64)	86 (76)	246 (230)
Totals	457	533	423	434	485	493	604	655	819

From this we see that two-thirds of the increase (362) of the 1947 figure over that for 1939 is accounted for by the figure for "other pneumoconioses" which related almost entirely to coal mining. Moreover, in 1947 there were 347 deaths from silicosis in coal miners as compared with 197 in 1939—the difference (150) more than accounting for the remaining one-third of the increase.

We are left, therefore, with an apparently stable position over these nine years regarding the mortality from silicosis in factories and, as already mentioned, it is necessary to relate back such deaths to conditions of work obtaining over a varying number of years previously.

Regarding the apparent increase in coal miners, many factors contribute, I understand. Amongst these seem to be the recognition of the importance of pneumoconiosis as a disease of coal miners as distinct from silicosis; the comprehensive reports of the Medical Research Council in 1942 on Chronic Pulmonary Diseases in South Wales coal miners, and the wide extension of the compensation schemes, especially in including pneumoconiosis, have produced a much higher public awareness of these diseases and their impact on the miner, and, with a greatly increased use of radiography, a much higher standard of diagnosis.

Dermatitis

The figures given in Table XXV are based on arrangements for voluntary reporting aimed at improvements, where practicable, in precautionary measures rather than at statistical accuracy. The compensation statistics, however, for the scheduled "dermatitis produced by dust or liquids" indicate that there were, in 1947 compared with 1939, more than twice as many such cases in the wide occupational field. The two-thirds increase in Table XXV is supporting evidence that there are more cases of industrial dermatitis in factories now than formerly. It does not follow, of course, that the incidence rate is actually higher in those industries in which dermatitis is a well recognised risk so that more careful precautions are taken by employers and workers concerned; but a more satisfactory system of classifying dermatitis cases is being devised and a detailed analysis of the 1947 figures is not at present available.

In 1941 nearly all (90%) of the compensated dermatitis cases were voluntarily notified: the comparable figures for 1939 and 1947 were 56% and 42% respectively. Industry does a valuable service to industrial health by voluntarily reporting cases of dermatitis and it is to be hoped that this assistance will be maintained towards the control of factors favouring a high incidence of dermatitis.

TABLE XXXII
FATAL CASES INVESTIGATED UP TO END OF 1947

	Number of Deaths	Average age at Death	Duration of Employment in years		
			Longest	Shortest	Average
SILICOSIS					
Pottery :-					
Silicosis	505	60.9	62.0	2.8	39.0
Silicosis with Tuberculosis	387	55.2	67.0	5.0	34.6
Sandstone :-					
Silicosis	200	58.9	60.0	9.0	39.4
Silicosis with Tuberculosis	204	56.6	55.0	5.0	37.2
Grinding of Metals :-					
Silicosis	91	58.2	56.0	14.0	36.3
Silicosis with Tuberculosis	186	53.5	53.0	2.8	32.7
Sandblasting :-					
Silicosis	57	48.7	28.0	1.7	12.0
Silicosis with Tuberculosis	91	45.8	46.0	2.0	13.2
Manufacture of Scouring Powders :-					
Silicosis	12	38.1	37.0	2.3	8.4
Silicosis with Tuberculosis	6	40.8	11.2	2.0	7.0
Miscellaneous :-					
Silicosis	172	54.1	57.0	1.5	22.9
Silicosis with Tuberculosis	172	50.0	50.0	0.7	25.7
Total:					
Silicosis	1,037	55.2	62.0	1.5	34.3
Silicosis with Tuberculosis	1,046	53.6	67.0	0.7	31.3
ASBESTOSIS					
Asbestosis	160	47.5	48.0	0.5	14.9
Asbestosis with Tuberculosis	72	39.0	29.0	0.8	10.4

Asbestosis and Carcinoma of Lung

During the 23 years 1924 to 1946 inclusive, 235 deaths, either caused by Asbestosis* or in which Asbestosis has been proved at autopsy have come to our notice.

Cancer of the lungs or pleura was found to be present either as a cause of death or as a concomitant in 31 (13.2%) of these 235 cases. One case, a male aged 77, diagnosed post mortem as "Sarcoma" of lung has been excluded and is not included in the above or subsequent figures, as the diagnosis was considered to be unreliable.

The 225 cases of asbestosis and the 31 cases of asbestosis complicated by carcinoma of the lungs or pleura grouped according to age are shown in Table XXXIII. A further grouping according to age and sex is shown in Table XXXIV. It will be seen that of the 128 male deaths, 22 (17.2%) were complicated by carcinoma of the lungs or pleura and of the 107 female deaths, 6 (5.4%) were similarly affected.

TABLE XXXIII

Age in Years	Asbestosis	Asbestosis and Carcinoma of lung	Per cent.
15-24	9	—	—
25-34	42	2	4.8
35-44	71	4	5.6
45-54	53	10	18.9
55-64	43	11	25.6
65 and over	17	4	23.5
Total	235	31	13.2

* The Expression "Asbestosis" here includes Asbestosis accompanied by Pulmonary Tuberculosis

Accidents Associated with Electricity (included elsewhere in Table)

(16)

147

141

TABLE XXXIV

Age in Years	Males			Females		
	Asbestosis	Asbestosis and Carcinoma of lung	Per cent.	Asbestosis	Asbestosis and Carcinoma of lung	Per cent.
15-24	3	—	—	6	—	—
25-34	9	—	—	33	2	6.1
35-44	30	—	—	41	4	9.8
45-54	36	9	25.0	17	1	5.9
55-64	37	11	29.7	6	—	—
65 and over	13	2	15.4	4	2	50.0
Total ...	128	22	17.2	107	9	8.4

Age at Death

The mean ages at death of the cases of asbestosis and of asbestosis complicated by carcinoma of the lungs or pleura are shown in Table XXXV. The mean ages distinguished for males and females are shown in the first four columns and combined in the last two columns.

The mean age at death for asbestosis is 44.2 years and for asbestosis with carcinoma of the lung, 52.1 years.

TABLE XXXV

	Males		Females		Total	
	Asbestosis	Asbestosis and carcinoma of lung	Asbestosis	Asbestosis and carcinoma of lung	Asbestosis	Asbestosis and carcinoma of lung
Mean age at death in years ...	49.2	55.2	38.1	44.6	44.2	52.1
Standard Deviation	12.4	5.9	10.1	13.96	16.0	10.3
Range in years...	19-77	46-70	22-72	32-71	19-77	32-71

Exposure to Asbestos Dust

The mean durations of exposure in years to the hazard of breathing asbestos dust are shown in Table XXXVI to compare the exposure of the cases of asbestosis and asbestosis and carcinoma of lung. The sexes are differentiated in the first four columns and combined in the last two.

Those cases of asbestosis developing carcinoma of the lung show a mean exposure of 16.5 years compared with 13.4 years exposure for those cases dying with no evidence of carcinoma of the lung.

An attempt was made to classify the cases according to dustiness of occupation. This had to be abandoned owing to the frequency with which workers are transferred from process to process and to the fact that dusty and less dusty processes are often carried out in close proximity.

TABLE XXXVI

	Males		Females		Total	
	Asbestosis	Asbestosis and carcinoma of lung	Asbestosis	Asbestosis and carcinoma of lung	Asbestosis	Asbestosis and carcinoma of lung
Mean duration of exposure in years ...	18.5	20.1	7.8	7.6	13.4	16.5
Standard Deviation	15.5	9.9	6.8	4.6	8.7	10.3
Range in years	2-40	6-40	0.5-32	1.5-16	0.5-48	1.5-40

Asbestosis and Carcinoma of Lung compared with Silicosis and Carcinoma of Lung

For the purpose of comparing the above figures of cases of Asbestosis and Carcinoma of the lung with some similar disease the 6,884 cases of silicosis occurring between 1930 and 1946 were analysed.

Ninety-one of these 6,884 cases of silicosis or 1.32% were found to have carcinoma of the lungs or pleura at post mortem.

The average age at death of those dying of silicosis and carcinoma of the lung was 59.4 years.

Summary

Thirty-one cases of carcinoma of lungs and pleura were found at autopsy of 235 cases of Asbestosis. That is 13.2%.

The average age at death of those suffering from carcinoma of lung was 52.1 years compared with 44.2 years for those with asbestosis alone.

The average duration of exposure to asbestos dust was 16.5 years for those cases complicated by carcinoma of lung, compared with 13.4 years for those not so complicated.

Out of 6,884 cases of silicosis at post mortem, 91 (or 1.32%) had carcinoma of the lungs and pleura.

The average age at death of these cases of silicosis and carcinoma of lung was 59.4 years.

Dermatitis in 1947.

There were in 1947, 4,884 voluntarily notified cases of dermatitis. The corresponding figure for 1946 was 6,166. A more satisfactory system of classification of dermatitis is being devised and at present no analysis of the 1947 cases has been made.

At a firm engaged in developing and processing colour films, 10 cases of dermatitis, among about 600 workers, occurred. While metal, a developer, was believed to have given rise to some cases, it was thought possible that a mould, the growth of which coincided with the use of phosphoric acid in some of the dye solutions might have caused some of the skin lesions. The mould thrived on the inside and outside of ducting woodwork and was easily dislodged by cleaning. The part played by this mould in the occurrence of dermatitis has not been proved conclusively but in two of the suspected cases there was an extension of the affected skin areas after work had ceased, while clinically the skin lesions appeared infective in origin. An interesting point was the presence in the mould of mites identified as belonging to the family Anoctidae and probably a species of *Histiogonia Yostio serratum meguin*.