

Figure 4

Dosage Study: Dr. J.C. McDonald

Mortality Study - Equivalent average death rates/1000

Deaths to December 1969

Males Born Between 1891 - 1920

mppcf - years fibres/ml years	Dust Group					
	< 10	10-	100-	200-	400-	800+
	< 23	23-	230-	460-	920-	1840+
All causes	365	355	354	313	323	395
Cancer of bronchus, trachea, lung	10.3	13.1	13.4	15.5	21.4	32.1
Abdominal Cancers	18.0	13.6	18.7	11.6	26.3	28.7
Pneumoconiosis	1.6	1.5	0.8	4.9	4.9	23.6

Dr. John Knox, then Medical Director for Turner Brothers Asbestos Company, Ltd., in England, studied workers employed over various periods of time in one TBA plant in Rochdale. There was no dust control at this facility prior to 1933, when primitive dust control equipment was installed.

Dr. Knox divided his study group three ways: those who had over ten years work experience in the plant prior to installation of dust control equipment; those who had some exposure prior to 1933 when dust control began, but less than ten years total exposure; and those who had no exposure at all prior to 1933, and had only worked in the plant under dust control conditions. All of the people in the three groups had at least 30 years of exposure, with or without controls.

Comparing the death rate of these three groups to the standard mortality tables (available from the British government and showing expected death rates for certain segments of the general population), Dr. Knox was able to analyze the effects of dust control.

In the group with the heaviest exposure, Dr. Knox found that while ten deaths would be the norm, in reality there were 15. In group two with only some heavy exposure, about eight deaths would have been expected, but there were only six. In the last group, which had worked in the plant only after dust control equipment was installed, the expected number of deaths was five, but only two were recorded. (Figure 5).

Dr. Knox' study is a dramatic illustration of the effectiveness of dust control, proving that the lives of employees can be protected even by the use of the simplest kinds of equipment.

SMOKING AND ASBESTOS

Another important point that resulted from medical studies is that smoking and asbestos do not mix. In his study, Dr. Selikoff found that all but one of the cases of bronchogenic cancer were