

Government statisticians in England (1970's) conducted a study of the relationship between smoking and lung cancer. They studied thousands of men from 25 occupational groups and reported data on smoking levels and lung cancer mortality.

The **Smoking Index** is the number of cigarettes smoked per day by men in each occupation relative to the number smoked by all men in all occupations. The smoking index is 100 if men in an occupation are exactly average in their smoking, below 100 if they smoke less than average, and above 100 if they smoke more than average.

The **Mortality Index** is a standardized mortality ratio for deaths from lung cancer measured relative to the entire population of men of the same ages as those studied. If the mortality index is greater or less than 100 when there are more or fewer deaths from lung cancer than would be expected based on the experience of all English men.

Occupational Group	Smoking Index	Mortality Index
Farmers, foresters, and fisherman	77	84
Miners and quarrymen	137	116
Gas, coke and chemical makers	117	123
Glass and ceramic makers	94	128
Furnace, forge, foundry, and rolling mill workers	116	155
Electrical and electronics workers	102	101
Engineering and allied trades	111	118
Wood workers	93	113
Leather workers	88	104
Textile workers	102	88
Clothing workers	91	104
Food, drink, and tobacco workers	104	129
Paper and printing workers	107	86
Makers of other products	112	96

Construction workers	113	144
Painters and decorators	110	139
Drivers of stationary engines, cranes, etc.	125	113
Laborers not included elsewhere	133	146
Transport and communications workers	115	128
Warehousemen, storekeepers, packers, and bottlers	105	115
Clerical workers	87	79
Sales workers	91	85
Service, sport, and recreation workers	100	120
Administrators and managers	76	60
Professionals, technical workers, and artists	66	51

Data Source: <http://lib.stat.cmu.edu/DASL/Datafiles/SmokingandCancer.html>

Reference: Moore, David S., and George P. McCabe (1989). Introduction to the Practice of Statistics. Original source: Occupational Mortality: The Registrar General's Decennial Supplement for England and Wales, 1970-1972, Her Majesty's Stationery Office, London, 1978.