

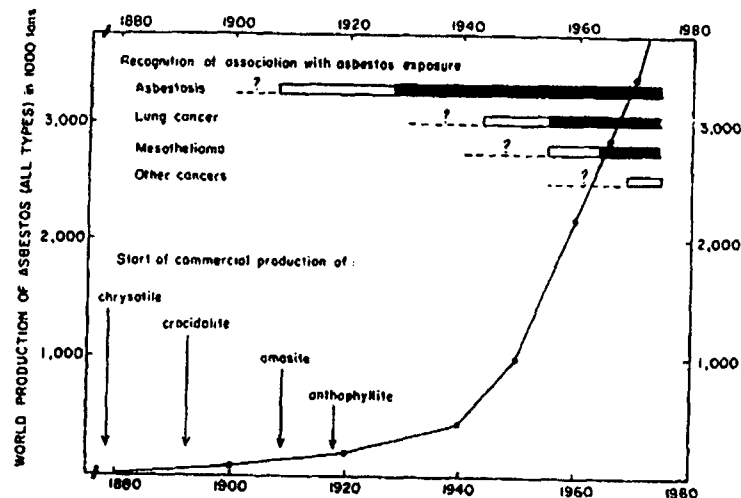


Fig. 2. Diagrammatic representation of the growth of the asbestos industry and the recognition of the associated biologic effects. The following symbols indicate the association with asbestos: ? = suspected; = probable; = established.

purpose of the present review is to evaluate current information, particularly that obtained from epidemiologic studies, in light of the implications of this knowledge for clinical practice.

The Asbestos Minerals

Physical Characteristics and Fiber Types

The physician may well question the relevance of the physics and chemistry of the asbestos minerals to the state of his art. The answer is contained in Gilson's summary of the 1964 New York Conference on the "Biological Effects of Asbestos" (5), in which he identified one of the

questions requiring further investigation: "Is the type of asbestos an important factor in the risk of asbestosis, bronchial carcinoma, mesothelioma, and other tumors?" Because subsequent observations have suggested that this is so (see later in this review), knowledge of the type of asbestos to which a person has been exposed should guide the practicing physician in establishing a diagnosis and estimating a prognosis.

Asbestos is the general term given to a group of minerals that are fibrous in character and resistant to high temperatures, the two qualities on which their industrial use depends. The most important commercial fibers (shown in table

TABLE 1
PATHOLOGIC EFFECTS OF ASBESTOS EXPOSURE IN MAN

Organ	Effect	Association with Asbestos Exposure*	Reference
Skin	Asbestos corns	Established	5-9
Larynx	Carcinoma	Possible	11-14
Lungs	"Asbestos" bodies and/or fibers	Established	5-9
	Diffuse interstitial fibrosis (asbestosis)	Established	5-9
	Carcinoma (bronchial)	Cofactor with cigarettes	5-9
Pleura	Hyaline plaques and calcification	Established	5-9
	Malignant mesothelioma	Established†	5-9
	Pleural effusion	Possible	10
Peritoneum	Malignant mesothelioma	Established†	5-9
Gastrointestinal tract	Neoplasia	Established	5-9
Ovary	Carcinoma	Remotely possible	15
Breast	Carcinoma	Remotely possible	16

* Association thought to be causal, except where indicated.

† Association, not cause, established.

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