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厚生労働省健康局水道課

## 水道管に使用されている石綿セメント管について

### 1. 石綿セメント管を通過した水道水の健康影響

- (1)平成4年(1992年)に改正した水道水質基準の検討時にアスベスト（石綿）の毒性を評価したが、アスベストは呼吸器からの吸入に比べ経口摂取に伴う毒性はきわめて小さく、また、水道水中のアスベストの存在量は問題となるレベルにないことから、水質基準の設定を行わないとしたところ。
- (2)世界保健機関(WHO)が策定・公表している飲料水水質ガイドラインにおいても、飲料水中のアスベストについては、“健康影響の観点からガイドライン値を定める必要はないと結論できる。”としているところ(次ページ参照)。

### 2. 日本における石綿セメント管の布設状況

年度	石綿セメント管の管路延長(km)	水道管路総延長(km)	割合(%)
S55	86,871	340,257	25.5
S62	77,264	424,545	18.2
H2	67,733	455,722	14.9
H7	47,506	506,325	9.4
H12	26,791	554,131	4.8
H13	23,656	562,478	4.2
H14	21,071	572,141	3.7
H15	18,710	578,890	3.2

水道統計より

(参考)外国における石綿セメント管の使用割合

国	石綿セメント管路延長(km)	石綿セメント管割合	年
イギリス		1 %未満	1989
オランダ	約37,000	40.5%	1988
西ドイツ	約30,000	11 %	1989
フランス	約 6,000	2.8%	1988
タイ	約 6,800	55.9%	-

(財)水道管路技術センター（当時）調べ

### **12.9 Asbestos**

Asbestos is introduced into water by the dissolution of asbestos-containing minerals and ores as well as from industrial effluents, atmospheric pollution and asbestocement pipes in the distribution system. Exfoliation of asbestos fibres from asbestocement pipes is related to the aggressiveness of the water supply. Limited data indicate that exposure to airborne asbestos released from tap water during showers or humidification is negligible.

Asbestos is a known human carcinogen by the inhalation route. Although well studied, there has been little convincing evidence of the carcinogenicity of ingested asbestos in epidemiological studies of populations with drinking-water supplies containing high concentrations of asbestos. Moreover, in extensive studies in animal species, asbestos has not consistently increased the incidence of tumours of the gastrointestinal tract. There is, therefore, no consistent evidence that ingested asbestos is hazardous to health, and thus it is concluded that there is no need to establish a healthbased guideline value for asbestos in drinking-water.

#### ***History of guideline development***

The 1958, 1963 and 1971 WHO International Standards for Drinking-water did not refer to asbestos. In the first edition of the Guidelines for Drinking-water Quality, published in 1984, it was noted that available data were insufficient to determine whether a guideline value was needed for asbestos. The 1993 Guidelines concluded that there was no consistent evidence that ingested asbestos was hazardous to health and that there was therefore no need to establish a health-based guideline value for asbestos in drinking-water.

#### ***Assessment date***

The risk assessment was originally conducted in 1993. The Final Task Force Meeting in 2003 agreed that this risk assessment be brought forward to this edition of the Guidelines for Drinking-water Quality.

#### ***Principal reference***

WHO (2003) Asbestos in drinking-water. Background document for preparation of WHO Guidelines for drinking-water quality. Geneva, World Health Organization (WHO/SDE/WSH/03.04/2).