Collegium Ramazzini

"...a bridge between the world of scientific discovery and the social and political centres which must act on these discoveries..."

CALL FOR AN INTERNATIONAL BAN ON ASBESTOS

To eliminate the burden of disease and death that is caused worldwide by exposure to asbestos, the Collegium Ramazzini calls for an immediate ban on all mining and use of asbestos. To be effective, this ban must be international in scope and must be enforced in every country in the world.

Asbestos is an occupational and environmental hazard of catastrophic proportion. Asbestos has been responsible for over 200,000 deaths in the United States, and it will cause millions more deaths worldwide. The profound tragedy of the asbestos epidemic is that all illnesses and deaths related to asbestos are entirely preventable.

Safer substitutes for asbestos exist, and they have been introduced successfully in many nations. The grave hazards of exposure to asbestos and the availability of safer substitute materials have led a growing number of countries to eliminate all import and use of asbestos. In the United States, there has occurred drastic reduction of asbestos usage. Asbestos has been banned by Sweden, Norway, Denmark, The Netherlands, Finland, Germany, Italy, Belgium, France, Austria, Poland, and Saudi Arabia.

The Collegium Ramazzini

The Collegium Ramazzini is an international academic society that examines critical issues in occupational and environmental medicine. The Collegium is dedicated to the prevention of disease and the promotion of health. The Collegium derives its name from Bernardino Ramazzini, the father of occupational medicine, a professor of medicine of the Universities of Modena and Padua in the late 1600s and the early 1700s. The Collegium is comprised of 180 physicians and scientists from 35 countries, each of whom is elected to membership. The Collegium is independent of commercial interests.

Background

The health consequences of asbestos in contemporary industrial society have been documented extensively in the world scientific literature. The toll of illnesses and deaths among asbestos workers in mining, construction, and heavy industry is well known. The pioneering work of British, South African, and Italian investigators (Doll, 1955; Wagner, Speggs, Marchan, 1960; Vigliani, Mottura, Maranzana, 1964) laid the foundation for definitive investigations by Irvin J. Selikoff and his colleagues of insulation workers in the United States. Selikoff's monumental studies showed, first, the greatly increased mortality experience of insulation workers (Selikoff, Hammond, Churg, 1964) and, later, the synergistic relationship between tobacco smoking and asbestos work (Selikoff, Hammond, Churg, 1969). Men who were followed more than 20 years from first onset of exposure sustained excessive risks of lung cancer and mesothelioma, as well as risk of other neoplasias (Selikoff, Seidman, 1991). These risks affect not only asbestos workers, but their families and neighbors (from material on clothing or plant emissions), users of products that contain asbestos, and the public at large.

Asbestos is a commercial term applied to certain fibrous minerals with the properties of thermal resistance, tensile strength, and acoustic insulation. Asbestos minerals are divided into two groups: serpentine and amphibole. There is only one type of asbestos derived from serpentine minerals, chrysotile, also known as white asbestos. Amphibole minerals include five asbestos species: amosite, crocidolite, tremolite, anthophyllite, and actinolite. Two of these are commercially valuable: amosite, or brown asbestos, and crocidolite, or blue asbestos. The other amphibole minerals are of little commercial importance.

All forms of asbestos cause asbestosis, a progressive fibrotic disease of the lungs. All can cause lung cancer and malignant mesothelioma (IPCS, 1988: Dement, Brown, Okun, 1994). Asbestos has

been declared a proven human carcinogen by the U. S. Environmental Protection Agency (EPA) and by the International Agency for Research on Cancer of the World Health Organization (EPA, 1986; IARC, 1987). Early indications that chrysotile might be much safer than other forms of asbestos have not been confirmed (UNEP, ILO, WHO, 1998). The preponderance of scientific evidence to date demonstrates that chrysotile, too, causes cancers, including lung cancer and mesothelioma (Smith, Wright, 1996; Stayner, Dankovic, Lemen, 1996). Canadian chrysotile that is amphibole-free still is associated with mesotheliomas (Frank, Dodson, Williams, 1998).

A leading asbestos researcher, Julian Peto, and his colleagues predict that deaths from mesothelioma among men in Western Europe will increase from just over 5,000 in 1998 to about 9,000 by the year 2018. In Western Europe alone, past asbestos exposure will cause a quarter of a million deaths from mesothelioma over the next 35 years. The number of lung cancer deaths caused by asbestos is at least equal to the number of mesotheliomas, suggesting that there will be more than half a million asbestos cancer deaths in Western Europe over the next 35 years (Peto et al, 1999). In Sweeden, Jarvholm has reported that the number of deaths caused each year by malignant mesothelioma is greater than the number of deaths caused in that country by all workplace injuries (Javholm, Englund, Albin, 1999).

The need for a ban

An immediate international ban on the mining and use of asbestos is necessary because the risks cannot be controlled by technology or by regulation of work practices. The strictest occupational exposure limits in the world for chrysotile asbestos (0.1 f/cc) are estimated to be associated with lifetime risks of 4/1,000 for lung cancer and 2/1,000n for asbestosis (Stayner et al, 1997). These exposure limits can be technically achieved in the United States and in a few other highly industrialized countries, but the residual risks still are too high to be acceptable. In newly industrializing countries engaged in mining, manufacturing, and construction, asbestos exposures are often much higher, and the potential for epidemics of asbestos disease is greatly increased (Giannasi, Thebaud-Mony, 1997; Izmerov, Flovskaya, Kovalevskiy, 1998).

Scientists and responsible authorities in countries still allowing the use of asbestos should have no illusions that "A controlled use" of asbestos is a realistic alternative to a ban. Moreover, even the best workplace controls cannot prevent occupational and environmental exposures to products in use or to waste. Environmental exposure from the continued use of asbestos still is a serious problem. A recent study of women residing in communities in Canadian asbestos mining areas found a seven fold increase in the mortality rate from pleural cancer (Camus, Siemiatycki, Meek, 1998). Large quantities of asbestos remain as a legacy of past construction practices in many thousands of schools, homes, and commercial buildings in developed countries, and are now accumulating in thousands of communities in developing countries.

An international ban on mining and use of asbestos is necessary because country-by-country actions have shifted rather than eliminated the health risks of asbestos. The asbestos industry has a powerful influence over public policy in many countries. In the United States, the asbestos industry succeeded in 1991 in overturning the EPA=s recommended ban and phase-out of asbestos by a technical ruling in the courts, Canada, Russia, and other asbestos-exporting countries have developed major markets in the newly industrializing nations. Conditions of current asbestos use in developing countries now resemble those that existed in the industrialized countries before the dangers of asbestos were widely recognized.

The commercial tactics of the asbestos industry are very similar to those of the tobacco industry. In the absence of international sanctions, losses resulting from reduced cigarette consumption in the developed countries are offset by heavy selling to the Third World. In similar fashion, the industrially developed world has responded to the asbestos health catastrophe with a progressive ban on the use of asbestos. In response, the asbestos industry is progressively transferring its commercial activities and the health hazards to the Third World.

Multinational asbestos corporations present a deplorable history of international exploitation. These firms have opened large and profitable internal and export markets in Brazil elsewhere in Latin

America, and in India, Thailand, Nigeria, Angola, Mexico, Uruguay, and Argentina. Brazil is now the fifth largest producer and consumer of asbestos in the world, after Russia, Canada, Kazakstan, and China. While asbestos use in the United States amounts to less than 100 g per citizen per year, asbestos use in Brazil averages more than 1,000 g per citizen per year. In third-world countries, use of asbestos has been increasing at an annual rate of about 7 percent.

Conclusion

The grave health hazards of asbestos are entirely preventable. The health risks of asbestos exposure are not acceptable in either industrially developed or newly industrializing nations. Moreover, suitable, safe substitutes for asbestos are available. An immediate worldwide ban on the production and use of asbestos is long overdue, fully justified and absolutely necessary.

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Collegium Ramazzini
International Headquarters
Castello dei Pio
41012 Carpi (MO)
ITALY
General Secretariat
Castello di Bentivoglio
40010 Bentivoglio (BO)
ITALY
Tel.: 39-051-6640650
Fax: 39-051-6640223