



**World Health  
Organization**

# **Lessons and recommendations for elimination of asbestos-related diseases**

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# Background

- Asbestos is the most important occupational and environmental carcinogen
  - One third of the deaths from occupational cancer are caused by asbestos
- World Health Assembly Resolution 58.22 (2005) on Cancer Prevention and Control
  - Countries should pay special attention to cancers for which avoidable exposure is a factor
- Thirteenth Session of ILO/WHO Joint Committee on Occupational Health (2003)
  - Special efforts to elimination of silica and asbestos-related diseases
- World Health Assembly Resolution 60.26 (2007) Workers' Health. Global Plan of Action
  - WHO global campaign on elimination of asbestos-related disease

## *All types of asbestos are hazardous to health*

- Asbestosis and pleural plaque
- Lung cancer – biggest problem
- Mesothelioma – highly specific to occupational and non-occupational exposures to asbestos
- No threshold has been identified for carcinogenic risk of all asbestos types, incl. chrysotile
- Both active and passive smoking increase the risk of lung cancer from asbestos



Mesothelioma

## *Summary of the conclusions from WHO assessments*

1. All types of asbestos cause asbestosis, mesothelioma and lung cancer
2. No safe threshold level of exposure has been identified
3. Safer substitutes exist
4. Exposure of workers and other users of asbestos containing products is extremely difficult to control
5. Asbestos abatement is very costly and hard to be carried out in a completely safe way



Working with asbestos-containing materials requires enormous measures for protection

# WHO recommendations for elimination of asbestos-related diseases

- Elimination of the exposure
  - Recognize that stopping the use of asbestos is the most effective preventive measure
  - Provide information about safer substitutes
  - Develop economic and technological mechanisms to stimulate substitution
- Asbestos abatement
  - Avoid exposure during asbestos removal
  - Develop regulatory and workplace control measures for asbestos abatement
- Medical surveillance
  - Improve early diagnosis, treatment, rehabilitation and compensation of asbestos-related diseases
  - establish registries of people with current and past exposures



# *Use of chrysotile in the countries without effective regulation*



Working with asbestos



Typical asbestos cement (AC) roofing in the countries where asbestos is not phased out

# *WHO position on elimination of asbestos-related diseases*

[http://www.who.int/occupational\\_health/publications/asbestosrelateddisease/en/index.html](http://www.who.int/occupational_health/publications/asbestosrelateddisease/en/index.html)



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**Elimination of  
asbestos-  
related diseases**

World Health Assembly Resolution 58.22 from 2005 on cancer prevention and control urged Member States to pay special attention to cancers for which avoidable exposure is a factor, particularly exposure to chemicals at the workplace and the environment. Asbestos is one of the most important occupational carcinogens causing about half of the deaths from occupational cancer (1;2).

Available in Arabic, Chinese, English, French, Russian and Spanish



**Всемирная  
организация  
здравоохранения**

**Ликвидация болезней,  
вызываемых асбестом**

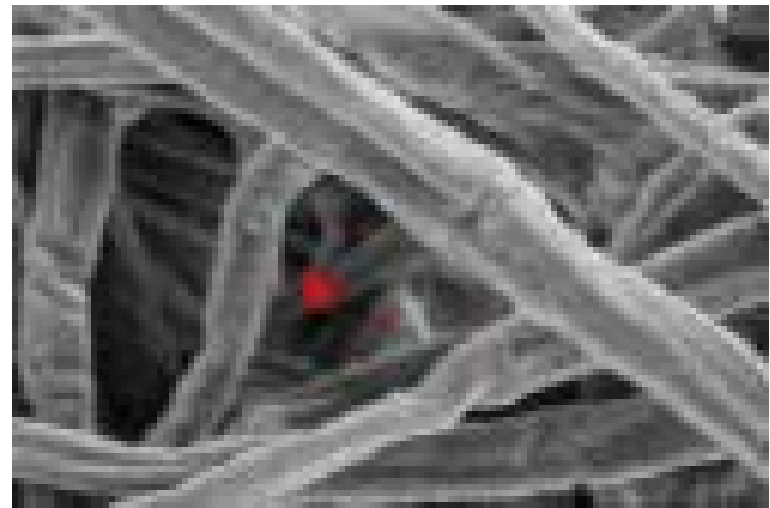
Всемирная ассамблея здравоохранения в резолюции 58.22, принятой в 2005 г., о предупреждении рака и борьбе с ним призвала государства-члены обращать особое внимание на те виды онкологических заболеваний, вызываемых такими причинами, которых можно избежать, в особенности воздействием химических веществ на рабочих местах и в окружающей среде. Асбест является одним из наиболее значительных профессиональных канцерогенов, на долю которого приходится примерно половина всех случаев смерти от рака, вызванного профессиональными обстоятельствами (1;2). Кроме того, Тринадцатая сессия Совместного комитета МОТ/ВОЗ по профессиональной гигиене в 2003 г рекомендовала обратить особое внимание на ликвидацию болезней, вызываемых асбестом (3).



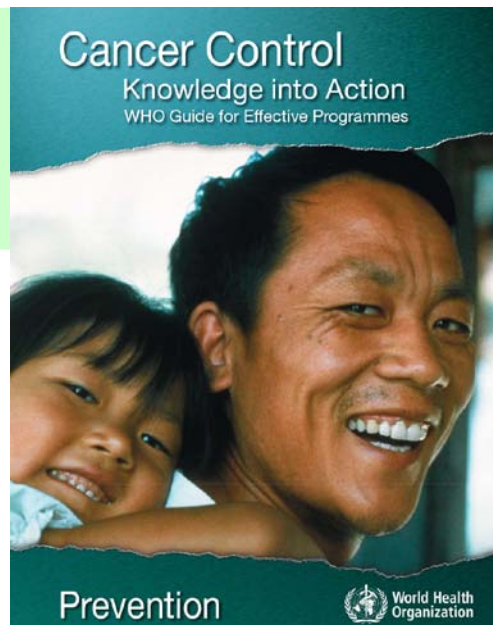


## *There are safer substitutes to asbestos*

- Fibre substitutes, e.g.:
  - short fibre attapulgite
  - carbon fibres
  - non-respirable cellulose fibres
  - non-biopersistent synthetic vitreous fibres
  - natural wollastonite
  - xonolite



WHO Workshop on Mechanisms of  
Fibre Carcinogenesis and  
Assessment of Chrysotile  
Asbestos Substitutes, 8-12  
November 2005, Lyon



# WHO recommendations on prevention of cancer

<http://www.who.int/cancer/modules/Prevention%20Module.pdf>

**Table 6. Stepwise approach to reduce exposure to environmental carcinogens**

Core	Expanded	Desirable
<ul style="list-style-type: none"> <li>○ Stop using all forms of asbestos</li> <li>○ Provide safe drinking water</li> <li>○ Reduce use of biomass and coal for heating and cooking at home, and promote use of clean</li> </ul>	<ul style="list-style-type: none"> <li>○ Assess the cancer burden attributable to environmental carcinogens</li> <li>○ Introduce regulations to restrict trade and use of known human carcinogens</li> <li>○ Develop and enforce requirements to prevent release into the environment of carcinogens from industrial.</li> </ul>	<ul style="list-style-type: none"> <li>○ Strengthen national capacities to establish links between cancer morbidity and environmental pollution</li> <li>○ Develop national environmental health action plans</li> <li>○ Organize monitoring of persistent organic pollutants and other environmental pollutants with</li> </ul>

# Future steps by WHO

- Launch a global campaign on elimination of asbestos-related diseases (jointly with ILO, other UN agencies, civil and business society, trade unions)
- Implement WHO Module for Cancer Prevention
- Provide supports to the Member States jointly with ILO for the development of **national programmes for elimination of asbestos-related diseases** (the Parma Declaration, 2010)



## *ILO Asbestos Convention No 162 from 1986*

To date, ratified by 32 countries and widely voluntary applied



**Asbestos**  
**100,000**  
Asbestos claims 100,000 lives each year

International Labour Organization  
Workers' Group

Safety and health is a right  
**Ratify now!**

No. **162**  
Asbestos  
Convention

See full text of Convention  
and more information:  
[www.ilo.org/ratify](http://www.ilo.org/ratify)

The poster features a dark blue background with a silhouette of a person's torso and lungs. White dashed lines represent asbestos fibers falling from the top and entering the lungs. The text is in white and red, with the ILO logo in the top right corner.

# General principles

- National policies and regulations
- Prescription of protective, preventive and control measures
- Review of laws in the light of technological progress and scientific knowledge
- Responsibilities of employers and workers
- System of inspection for enforcement



# Protective and preventive measures

## Prevention and control of exposure (Art.9)

- adequate engineering controls, work practices occupational hygiene
- prescription of special rules and procedures for use of asbestos or products containing asbestos or certain work practices

## Special measures (Art.10)

when necessary to protect the health of workers and technically practicable:

- replacement of asbestos by other materials scientifically evaluated as harmless or less harmful
- total or partial prohibition of asbestos or asbestos-cement materials in certain work practices



Working with asbestos-containing materials requires enormous measures for protection



## *Protective and preventive measures (cont'd)*

- Prohibition: crocidolite, spraying all types
- Notification of use of asbestos by employers
- Producers', Manufactures' and Suppliers' responsibilities for labelling
- Prescription of exposure limits by law
- Measures to prevent or control the release of asbestos dust into air
- When protective measures do not bring exposure within exposure limits, employer will provide respiratory personal protection and special protective clothing
- Respiratory protection to be used as supplementary, temporary, emergency or exceptional measure and **not as alternative to technical control**

## *Protective and preventive measures (cont'd)*

### Demolition and removal of asbestos

- to be undertaken only by employers or contractors recognized by the competent authority as qualified to carry out such works

### Clothing and washing facilities

- to be provided by the employer, cleaning carried out under controlled conditions, prohibited to be taken home

### Asbestos waste disposal

- to be disposed by employers without health risks to the workers concerned, those handling waste or to populations in the vicinity of the enterprise
- appropriate measures to be taken to prevent pollution of the general environment



# *Surveillance of work environment and workers' health*

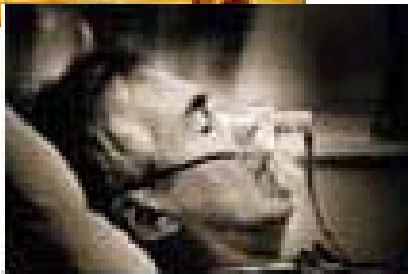
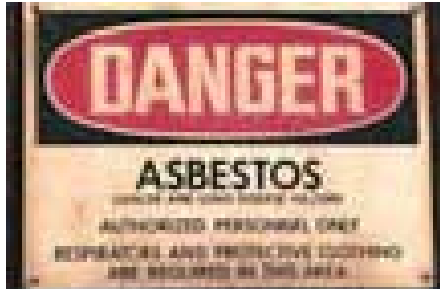
## Dust Concentration Evaluation and Exposure Monitoring (Art.20)

## Workers' Health Monitoring (Art. 21)

- periodic medical examinations
- development of system of notification of asbestos-related diseases



# Information and education



## Governments, employers' and workers' organizations

- disseminate information and promote education on health hazards and methods of prevention

## Employers

- establish written policies and procedures for education, training and re-training

## Workers

- be informed, instructed in preventive measures, receive continuing training

## *95<sup>th</sup> International Labour Conference, Resolution concerning asbestos, 2006*

- the elimination of the future use of asbestos and the identification and proper management of asbestos currently in place are the most effective means to protect workers from asbestos exposure and to prevent future asbestos-related diseases and deaths
- **the Asbestos Convention, 1986 (No. 162), should not be used to provide a justification for, or endorsement of, the continued use of asbestos.**



International Labour Conference



International Labour Office - Geneva

**PROGRAMME ON SAFETY AND  
HEALTH AT WORK AND THE  
ENVIRONMENT**



**World Health  
Organization**

**DEPARTMENT FOR PUBLIC HEALTH  
AND ENVIRONMENT**

## **Outline for the Development of National Programmes for Elimination of Asbestos-Related Diseases**

### **Introduction**

The term "asbestos" designates a group of naturally-occurring minerals with current or historical commercial use due to their extra-conductivity and relative resistance to chemical attack. The principal components are chrysotile, a serpentine material, and crocidolite, amosite, anthophyllite, tremolite and amphiboles.

WHO/SDE/PHE/07.02



Международное бюро труда - Женева

**ПРОГРАММА ПО БЕЗОПАСНОСТИ  
И ОХРАНЕ ЗДОРОВЬЯ НА  
РАБОЧИХ МЕСТАХ И В  
ОКРУЖАЮЩЕЙ СРЕДЕ**



**Всемирная организация  
здравоохранения**

**ДЕПАРТАМЕНТ ОБЩЕСТВЕННОГО  
ЗДРАВООХРАНЕНИЯ И  
ОКРУЖАЮЩЕЙ СРЕДЫ**

## **Схема разработки национальных программ по ликвидации заболеваний, связанных с асбестом**

**Введение**

# Development of National Programme

- A national programme for elimination of asbestos-related diseases should include:
  - strategic policy;
  - national profile;
  - awareness raising;
  - capacity building;
  - an institutional framework and a national plan of action for elimination of asbestos-related diseases.

# International basis for action

- *ILO standards*
  - The Occupational Cancer Convention, 1974 (No.139)
  - The Asbestos Convention, 1986 (No.162)
  - The Chemicals Convention, 1990 (No.170)
- *Multilateral environmental agreements*
  - The Rotterdam Convention on the Prior Informed Consent Procedure for Certain Hazardous Chemicals and Pesticides in International Trade
  - the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal
- *WHO recommendations*
  - The 58th World Health Assembly
  - Global plan of action on workers' health 2008-2017
  - The Parma Declaration, 2010

# *National programmes for elimination of asbestos-related diseases - WHO/ILO outline*

- Introduction and purpose
  - Health aspects
  - Magnitude of the problem
  - Economic and social aspects
- Political and legal background
  - National legislation
  - International commitments
- Strategy for elimination of asbestos-related diseases
  - Preventive strategies
  - Strategic actions – national, provincial and enterprise levels

## *National programmes for elimination of asbestos-related diseases cont'd*

- Knowledge management
  - Information about substitutes
  - Registry of exposed workers
  - Capacities and resources
- Implementation
  - Preparatory phase – building up political commitment
  - First phase – reduce exposure to chrysotile
  - Second phase – stop use of chrysotile
- Monitoring and evaluation
  - Outcome
  - Process
  - Administration



## *National asbestos profile*

- Current regulations and exposure limits on the different forms of asbestos
- Import, production and consumption of asbestos and asbestos-containing materials
- Estimated total number of workers exposed to asbestos in the country
- Full list of industries where exposure to asbestos is present in the country
- Estimate of the burden of diseases related to asbestos
- Statistics on asbestos related diseases
- Estimates on the percentage of house stock and vehicle fleet containing asbestos
- System for inspection and enforcement of the exposure limits
- Estimated economic losses due to asbestos-related diseases

## Further information

WHO 2006. Elimination of asbestos-related diseases

[http://www.who.int/occupational\\_health/publications/asbestosrelateddisease/en/index.html](http://www.who.int/occupational_health/publications/asbestosrelateddisease/en/index.html)

ILO & WHO, 2007 Outline for the development of national programmes for elimination of asbestos-related diseases

[http://www.who.int/occupational\\_health/publications/elimasbestos/en/index.html](http://www.who.int/occupational_health/publications/elimasbestos/en/index.html)

WHO 2007, Cancer Control: WHO Guide for Effective Programmes, Module Cancer Prevention

<http://www.who.int/cancer/modules/Prevention%20Module.pdf>

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*Thank you for your attention!*