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PLAIN TALK ABOUT ASBESTOS

WESTERN INSTITUTE FOR OCCUPATIONAL/ENVIRONMENTAL SCIENCES, INC.

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(This booklet was prepared for the purpose of aiding workers and their families in understanding some of the basic health problems related to asbestos exposure.)

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PLAIN TALK ABOUT ASBESTOS

1. WHAT IS ASBESTOS?

Asbestos is a mineral that appears in a fibrous and fluffy form when separated from rock in the asbestos mining process.

2. WHAT ARE THE MOST COMMON USES OF ASBESTOS?

Because of its resistance to both acid and heat, asbestos is used in a wide variety of products, processes and procedures such as tiles for kitchen floors, heat shields for welders, fireproof suits for firefighters, insulation for buildings and ships, and brake linings in automobiles.

3. WHO IS EXPOSED TO ASBESTOS?

Virtually every worker faces possible exposure to asbestos as a result of the wide use of the material in the construction and shipbuilding industry. However, the most serious exposures are to those working directly with the raw fiber.

Shipyard workers are exposed to asbestos insulated ducts, wires and turbines; Longshoremen handle bulk asbestos when loading or unloading asbestos cargoes from ships.

Office workers face asbestos exposure from forced air ventilation systems that were lined with asbestos during the installation. Automobile mechanics are exposed to harmful levels of asbestos dust when grinding brake drums. Floor covering mechanics also are exposed to asbestos dusts when sanding old asbestos tile floors in preparation for laying down new tiles.

Families of workers are exposed to asbestos fibers brought home

on the workers' clothes and in the workers' hair.
Clearly, exposure to asbestos has no definite boundaries.

4. HOW MUCH ASBESTOS IS USED IN THE UNITED STATES TODAY?

The most recent figures released by the U.S. Bureau of Mines reports that in excess of 800,000 tons of asbestos fibers are used annually in the United States. Further, asbestos is commonly used in over 3,000 products.

5. HOW LONG HAS ASBESTOS BEEN USED IN THE UNITED STATES?

A brief history of asbestos use in the U.S. and its toxic effects follows:

1880 — Asbestos introduced to U.S. Industry

1900 — First medically diagnosed death from asbestosis in England

1918 — American and Canadian insurance companies stopped insuring asbestos workers

1930 — Relationship between asbestos exposure and asbestosis was confirmed

1935 — U.S. and England research indicated a link between asbestos exposure and lung cancer

1955 — The association between asbestos exposure and cancer was confirmed

6. HOW CAN I TELL IF I'M EXPOSED TO ASBESTOS?

First of all, never assume you are not. Look at labels on all products. Examine them closely. Ask co-workers. Discuss possible exposures with your supervisor as they would also be exposed, and if properly approached should express immediate concern. Again, since the most common use of asbestos is insulating, take a close look at the insulation on hot water pipes, forced air heating, fireproofing, ceiling and wall insulation, etc.

7. JUST WHAT IS ASBESTOSIS?

Asbestosis is an incurable, untreatable scarring of the lungs caused by asbestos fibers lodging in the lungs. The fibers irritate the lung causing an inflammation. As the inflammation heals, it leaves scar tissue that eventually stops the air in your lungs from getting into your bloodstream. The result is a slow suffocation or heart failure.

8. ARE ALL TYPES OF ASBESTOS HARMFUL?

Yes. Every type of asbestos can cause asbestosis and/or cancer. There are five major types of asbestos: amosite, anthophyllite, chrysotile, crocidolite and tremolite. Each can cause asbestosis and each can cause cancer. There is no safe kind of asbestos.

9. ARE THERE ANY VALID WARNING SIGNS FOR ASBESTOSIS?

The most obvious symptom a person with asbestosis will notice is shortness of breath.

Activities that were always routine or simple to accomplish, such as climbing stairs, lifting, washing the car, etc., will cause severe shortness of breath and become extremely difficult to perform without intermittent rest. Also, many victims will develop a pain in the back or chest.

10. ARE THERE ANY SURE TESTS FOR ASBESTOSIS?

The federal government recommends the following tests to be given to determine the presence of asbestosis.

1. Personal work history listing all prior occupations, employers and duties.
2. Physical examination with emphasis on the sound of the lungs, condition of the fingers and toes, condition of the heart and lungs.
3. Chest X-ray to evaluate possible scarring of the lungs.
4. Pulmonary function test to evaluate how well your lungs are functioning.

11. HOW COMMON IS CANCER AMONG ASBESTOS WORKERS?

Asbestos workers contact cancer at three times the rate of persons not exposed to asbestos. Statistics show that over 40% of all workers exposed to asbestos will die from cancer. Cancers among asbestos workers range from stomach cancer to lung cancer to colon cancer, to one of the rarest forms of cancer called mesothelioma, which is cancer of the lining of the chest and abdominal cavity. Mesothelioma accounts for about 10% of the cancers found in asbestos workers and can almost always be traced back to some form of asbestos exposure.

12. DOES EXPOSURE TO ASBESTOS CAUSE AN IMMEDIATE ILLNESS?

No. Most workers exposed to asbestos will not suffer any immediate notable symptoms of asbestosis or cancer. Workers exposed to heavy concentrations of asbestos may develop asbestosis within 10 years or cancer within 20 years. The exposure usually must be continuous for several years to produce either asbestosis or cancer, except in the case of Mesothelioma. Mesothelioma can develop as a result of as little as two months exposure to asbestos.

13. WILL ALL PERSONS EXPOSED TO ASBESTOS EVENTUALLY GET CANCER?

No. It is still unknown why different toxic materials affect people differently. In the case of asbestos exposure, persons may be working side by side with close to identical exposures. Some will become diseased and some will not. It is known that workers exposed to asbestos have an increase in risk of getting lung cancer as the length of exposure to asbestos increases — or if they smoke.

14. WHAT ARE THE FIRST SIGNS OF ASBESTOS RELATED LUNG CANCER?

The symptoms would parallel that of lung cancer from any origin.

A persistent cough or change in the cough habit would be the most common early symptom. The second most common symptom would be chest pain in the form of an aggravating ache. The ache would commonly be felt in the area of the body nearest the tumor and would not normally be related to the cough. Further, sputum streaked with blood and coughed up from the lungs is sometimes an early symptom of lung cancer.

15. HOW DO DOCTORS DIAGNOSE LUNG CANCER?

Chest X-rays are the first diagnostic procedure used. Included in follow-up tests for confirmation of lung cancer are sputum samples looked at under the microscope and special X-rays.

16. WHAT ARE THE CURRENT TREATMENTS FOR ASBESTOS-RELATED DISEASE?

Asbestosis: Most deaths from asbestosis are due to respiratory infection, like pneumonia and bronchitis, rather than to direct effects of asbestosis itself. Infections most often can be treated if the person receives prompt medical attention.

Lung and Esophageal Cancer: Treatment of these cancers is based on the type and amount of tissue affected. Lung cancer may be treated by surgery, drugs, radiation, or a combination of these treatments. Esophageal cancer is usually treated with radiation. As with most cancers, the treatment must be tailored to the individual patient.

Cancer of the Large Intestine or Rectum: Surgery is curative in many cases, especially if an early diagnosis is made. Tests are available to improve the chances of early detection.

Mesothelioma of the Chest or Abdominal Lining: Effective treatment is not now available. Research is being carried out around the world with the hope of improving the treatment.

Cancer of the Stomach: New treatment regimens using drugs are improving the outlook for patients with this cancer.

Cancers of the Kidney, Throat and Nasal Passages: Physician awareness of the possibility of occurrence improves chances for early diagnosis. These cancers often can be treated

17. DOES LUNG CANCER FOLLOW ASBESTOSIS?

Although both asbestosis and lung cancer are common among persons exposed to asbestos, it is not thought at this time that one follows the other.

As explained in question 7, asbestosis is commonly followed by suffocation or heart failure due to the inability of oxygen to transfer into the bloodstream.

18. ARE SHORT TERM EXPOSURES TO ASBESTOS RISKY?

Yes. Until adequate studies are performed to establish safe exposure levels, any exposure to asbestos should be considered risky. As little as two month exposure to asbestos has been shown to cause mesothelioma.

19. ARE ASBESTOS CAUSED CANCERS CURABLE?

The earlier the cancer is detected, the more successful the treatment. This emphasizes the need for close surveillance of persons exposed to asbestos. In particular, workers exposed to asbestos on a daily or periodic basis should actively participate in a sound medical screening program.

20. ARE SMOKERS AT A GREATER RISK OF GETTING ASBESTOS RELATED CANCERS?

Definitely. Studies have proven that asbestos workers who also smoke increase their risk of getting lung cancer by eightfold. Persons that smoke and are exposed to asbestos should take advantage of available smoking cessation programs immediately. Many unions are aiding their memberships in this important step by providing them with proven smoking cessation programs.

21. DOES MY EXPOSURE TO ASBESTOS ENDANGER MY FAMILY?

Honestly, yes. The dangers to the families of asbestos workers are often overlooked but well documented. Workers seldom realize that toxic materials used in the workplace can be carried home on work clothes, in tool boxes, lunch boxes, or even cling to hair

on the arms, legs, head or nose. These toxic materials, in this case, asbestos fibers, are then released into the home environment, thereby presenting the same types of potential health hazards to the families of workers.

22. WHAT EFFECT DOES ASBESTOS HAVE UPON COMMUNITY HEALTH?

Clearly, asbestos could have a significant effect on community health due to its widespread use and toxicity. However, to date there have been no comprehensive health studies of the effects of asbestos pollution on a community.

23. IS THERE A METHOD FOR MEASURING THE CONCENTRATION OF ASBESTOS IN MY WORKPLACE?

Yes. The method involves using a membrane filter to trap asbestos fibers. A sampling apparatus is attached to the worker so as to assure that the air samples are taken near the worker's breathing zone.

This method provides representative air samples to evaluate. All fibers captured in the filter are counted and averaged with the amount of air measured. The net result is the average number of fibers for a given amount of air.

The Occupational Safety and Health Administration (OSHA) standard for asbestos limits the concentration of fibers longer than 5 micrometers to 2 fibers per cubic centimeter. It is supposed to be a safe exposure level. However, the only exposure the medical community is willing to call safe is no exposure. A strict enforcement of the OSHA standard would reduce the hazard in workplaces considerably.

24. HOW CAN I PROTECT MYSELF FROM EXPOSURE TO ASBESTOS?

Immediate protection measures would include the following:

1. Wear an approved respirator during all exposures to asbestos.
2. Wear protective work clothing and hat.

3. Thoroughly vacuum clothing before removing.
 4. Change from work clothing to street clothing at work.
 5. Keep work clothing in a clean, well vacuumed locker.
 6. Shower before leaving work.
 7. Have separate lockers for work and street clothing.
- In addition to the above, it is important that your employer be aware of the OSHA asbestos standard which sets forth measures that must be implemented in the workplace.

25. WHAT ARE MY LEGAL RIGHTS AS A WORKER?

Your legal rights as a worker are set forth in the OSHA law of 1970 and an official government poster should be displayed in your workplace informing you of your rights, and how to assure that they are being protected.

Among the many standards promulgated under the OSHA law is a standard for asbestos. The standard sets forth the rules and regulations that must be followed whenever fibrous asbestos is present. Every person working where asbestos is present should be thoroughly acquainted with the asbestos standard. Important provisions of the standard as follows:

Engineering: Engineering methods such as isolation, enclosure, exhaust ventilation, and dust collection shall be the prime means of control.

NOTE: Such engineering controls should be adequate to create a *worksafe environment* thereby eliminating the need for burdensome personal protective equipment.

Tools: Hand-operated and power-operated tools must have built-in controls.

Handling: As far as practicable, asbestos shall be handled wet.

Shipping: No asbestos products can be removed from shipping containers without being wetted, enclosed or ventilated.

Housekeeping: All external surfaces must be kept free of accumulations of asbestos fibers.

Respirators: Restrictions are imposed on the use of respirators.

No employee may be assigned to a task requiring a respirator if the physician determines that the employee will be unable to function normally when wearing a respirator or that the safety or health of the employee or his fellow employee will be impaired by his use of a respirator. Where respirators are used, the standard recommends "rotation of personnel".

Clothing: The employer must provide special clothing, change rooms, clothes lockers and laundering.

Monitoring: Monitoring means measuring the amount of asbestos fibers in the air. This is done with a dust sampler. Every employer using asbestos shall have initially monitored the exposure of his employees by December 7, 1972. Therefore, your workplace should have been monitored at least once.

Access to monitoring data: Affected employees, or their representatives, shall be given a reasonable opportunity to observe any monitoring required ... and shall have access to the records thereof.

NOTE: This is a very important provision. Mainly because if you are exposed to excessive concentrations of asbestos in your workplace, your employer must tell you what corrective actions are being taken. The records will reveal the exposure levels.

Signs: Caution signs must be posted in plants and labels attached to asbestos materials.

Medical Examinations: Physical examinations including a 14" x 17" chest X-ray, pulmonary function tests, and a history shall be given at preplacement, then each year, and at termination. These examinations shall be provided by the employer, and the physician who conducts the examination must report the results to the employer. Employees have access to this medical data only through their personal physician.

If your employer is not abiding by these provisions of the OSHA Law, you can file a formal complaint with the Occupational Safety and Health Administration. You can find your closest OSHA office by looking under the United States Government

listing in the white pages of your telephone book.

26. WOULDNT FIBERGLASS BE A SAFE SUBSTITUTE FOR ASBESTOS?

It is questionable. Presently, there is not enough hard evidence on health problems surfacing from worker exposure to fiberglass; however, it is known that fiberglass causes both eye and skin irritations, some of which are quite severe.

27. DO ANY COMMONLY USED SUBSTANCES CONTAIN ASBESTOS?

Yes. The most common would probably be drinking water. However, talc may pose the most immediate threat to health as it not only contains asbestos in most cases, but additionally is known to cause pneumoconiosis, a lung disease closely resembling Asbestosis.

28. IF I HAVE ASBESTOSIS OR ASBESTOS RELATED CANCER, AM I COVERED UNDER EXISTING WORKER'S LAWS?

Since worker's compensation benefits vary from state to state, and some workers are covered under special laws such as the Federal Employees Compensation Act, and the Longshore and Harbor Workers Compensation Act, you should check with your union representative to assure you receive all of the benefits due you. In the case of workers not belonging to a union, consult a recommended Compensation Attorney.

29. WHERE CAN I GET MORE INFORMATION ABOUT ASBESTOS RELATED DISEASE?

Following is a partial list of organizations having information on asbestos related diseases. The list was designed to provide a cross-section of organizations representing a variety of jurisdictions and disciplines. Therefore, the list may not include all available sources of information.

Western Institute for Occupational/Environmental Sciences, Inc.

2001 Dwight Way

Berkeley, California 94704

Labor Occupational Health Program

2515 Channing Way

Berkeley, California 94720

Oil, Chemical & Atomic Workers International Union

P.O. Box 2812

Denver, Colorado 80201

Asbestos Workers International Union

1300 Connecticut Avenue, N.W.

Washington, D.C. 20036

Health Research Group

2000 P Street, N.W. No. 708

Washington, D.C. 20036

Occupational Safety & Health Administration

200 Constitution Avenue, N.W.

Washington, D.C. 20201

National Institute for Occupational Safety and Health

P.O. Building

5th and Main Street

Cincinnati, Ohio 45202

National Cancer Institute

Office of Cancer Communications

Bethesda, Maryland 20014

Environmental Protection Agency

401 M Street, S.W.

Washington, D.C. 20460

National Institute of Environmental Health Sciences

Public Information Officer

P.O. Box 12233

Research Triangle Park, North Carolina 27709

Food and Drug Administration

Parklawn Building

Rockville, Maryland 20850

Mt. Sinai School of Medicine
Environmental Sciences Laboratory
5th Avenue & 100th Street
New York, New York 10027
Scientist's Institute for Public Information, New York, N.Y.
355 Lexington Avenue
New York, New York 10022
Cal/OSHA
Division of Industrial Safety
455 Golden Gate Avenue, Room 7232
San Francisco, California 94101

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