

Module 4

Hazard identification and risk assessment

In Module 4 we will look at:

- Hazard identification and risk assessment
- Work planning
- Asbestos working procedures
- Threshold values for asbestos exposure
- Medical examination requirements
- Accidents and incidents management plan
- Notification to the H&S authorities

Hazard identification and risk assessment

After the decision has been made to start the work, it is necessary to record where the asbestos containing materials can be found, if they are damaged or not, and also which type of asbestos it is.

This is done in the hazard risk assessment for each specific work area. It should also take into account the risk of exposure to workers and everyone else in the vicinity (for instance, considering expected time of exposure, type of activity to be done, etc.)

The assessment may be based on similar or previous works and measures.

The risk assessment must be done by a competent Health & Safety technician (a responsible person in the site designated by the employer). The Asbestos Awareness Officer will assist this technician in the hazard identification and risk assessment process.



Hazard identification and risk assessment

During preparation of a risk assessment, it is best to always keep a written record of information used to assess the risks in a company or organisation.

In order to gather information about the location of asbestos a competent inspection may be required.

Once that information is gained it is important to evaluate any lack of data.

Once the risk assessment is done, measures and controls should be planned and asbestos removal policies should be carried out.

Asbestos management requires constant care and checking whether the asbestos containing material is still in good condition and if the management and maintenance of the system is efficient.

If the condition of asbestos or its storage place is not suitable, it is necessary to organise its removal.



Work planning

Before the work starts, it is necessary to clarify the areas of the building where asbestos or asbestos containing materials could be.

Working with asbestos and its products is organised in accordance with “The rules of working with asbestos” as well as other health and safety legislations.

In order to protect workers from asbestos exposure, depending on the nature of the work, personal protective equipment (PPE) must be used.



Work planning

Personal protective equipment, depending on the nature of the work

Nature of the work	Personal protective equipment
<p>Works directly related with fragile products containing asbestos. Works in an enclosed environment with high speed rotary tools treatment of bound asbestos-containing products.</p>	<p>Work wear. Filtering respiratory protective equipment with an air blower P2 filter. Insulating respiratory protective equipment - breathing machine (device) for supplying compressed air.</p>
<p>Isolated (limited) friable asbestos containing materials surfaces drilling and dismantling. Work with asbestos textile using hand tools. Fragile asbestos containing materials breaking work.</p>	<p>Work wear. Full face masks with P2 filter.</p>
<p>Asbestos containing materials sampling. Ceiling panels sheets changing. Asbestos containing materials bound with hand-processing tools. Work alongside fragile asbestos containing products. Work with non-friable, bonded asbestos containing materials.</p>	<p>Work wear. Filtering half masks with P2 filter.</p>

Work planning

In order to ensure proper workflow and for dismantlement without risk to the workers health and safety, it is necessary to establish a work plan.

The work plan will describe each part of the operations required, from the beginning to the elimination, in a restricted area.

A work plan should contain information on:

- The nature and duration of the work.
- The place where the work is done.
- The methods applied when working with asbestos or asbestos containing materials.
- Equipment characteristics used for protection and decontamination of employees or others near the worksite.

The AAO will help the employer to prepare the Work Plan.

Work planning

Notification about start of the work

Before beginning dismantling works in areas with asbestos containing materials, the employer must to inform the State Labour Inspectorate Inspection Division.

In the written notification, there must be indication of the date and the place of work, the methods of work and protective equipment, waste disposal methods and location.



Asbestos working procedures

A written risk assessment and work plan of instructions should be readily available in the work place. It should describe emergency situations and procedures to be followed, as well as the people who are responsible for actions in such cases.

Instructions should be prepared by the Asbestos Awareness Officer (AAO) separately for each plan of work to describe work methodologies to be taken into account in each stage of asbestos works.



Asbestos working procedures

Work technologies and tools

It should be ensured that work technologies and tools will cause minimal dust

If using a mechanical tool that raises dust, an efficient vacuum suction device must also be used.

Asbestos working procedures

Covering of work place

When there is a threat of asbestos fibres during demolition work, the work area should be isolated from the environment and covered with a tent or other cover.

It must be positioned so that any asbestos fibres do not spread.



Asbestos working procedures

Changing, shower and eating facilities

If demolition works are inside the building, two dressing rooms must be arranged near where the work is taking place, one for personal clothes, another for work clothes; and a room with a shower and/or sinks.

Any dining area must be separate from the work area.



Asbestos working procedures

Work place management

A well organised work place leads to safe working conditions.

If works are inside the building, access must only be possible through the gateway.

Every day after work, the gateway must be cleaned up with vacuum cleaner with asbestos fibre filter, and washed with water.



Threshold values for asbestos exposure

Employers shall ensure that no worker is exposed to an airborne concentration of asbestos in excess of 0,1 fibers per cm³ during an 8-hour period (a workday)

Medical examination requirements

Workers who have been exposed to asbestos in their current or former employment, are entitled to a free, periodic medical examinations.

Providing prophylactic health care for workers is the responsibility of the occupational health services.



Medical surveillance programs for employees and registers

The main purpose of the medical surveillance program is to confirm the ability of an employee to perform work in their position and to identify medical conditions that could lead to an occupational disease.

For former asbestos workers the objective of this examination is early diagnosis and treatment of asbestos related diseases. This approach follows a long latency period of asbestos related diseases (it can manifest 40 years after exposure to asbestos) and an increased risk depending on the level and duration of asbestos exposure .

Medical surveillance programs for employees and registers

A site medical surveillance should provide the following components:

- pre-employment screening;
- periodic medical examinations;
- termination examination.



Medical surveillance programs for employees and registers

Each worker's state of health must be assessed before exposure to asbestos. This assessment must include personal interview and general clinical examination, with particular reference to the chest (chest radiograph, spirometry with checkup of CO diffusion).

Both radiographic and functional pulmonary worsening may occur long after asbestos exposure. Medical surveillance should continue after the end of the work.

A general follow-up scheme of asbestos exposed workers should be stratified according to the intensity, latency (between the start of exposure and disease) and duration of exposure (e.g. every 1 to 3 years).

Medical surveillance programs for employees and registers

Follow-up of asbestos workers is necessary, especially from the compensation point of view.

Employers must keep a register indicating the nature and duration of the activity and the exposure. Worker and physician shall have access to information concerned.

Data shall be kept for 40 years and transferred to the authority concerned if the firm ceased to exist.

Accidents and incidents management plan

An emergency/incidents plan must be done by a competent H&S technician, with the collaboration of the AAO, in accordance with results of previous risk assessment. This plan should include possible emergency situations that may occur, actions to be taken after the incident, responsibilities, an incident report and investigation, etc.

If the concentration of asbestos fibres threshold is exceeded at the work place, it is necessary to immediately take the following steps:

- It must be determined why the threshold was exceeded.
- As soon as possible, undertake the appropriate actions to reduce the concentration of asbestos fibres in the work place.
- Work can only continue in the affected area after appropriate procedures are taken to protect workers.

In order to verify the effectiveness of the actions and procedures, immediate re-evaluation of the asbestos fibre concentration must be obtained.



Accidents and incidents management plan

If asbestos exposure can not be reduced by any actions or procedures to achieve a lower concentration of asbestos fibres, it is necessary to wear personal respiratory protection. This may not be permanent, but there must be a minimum time set for this to be worn.

In the case of certain activities such as demolition, removal, repair and maintenance, where the concentration threshold is likely to be exceeded, and the use of technical prevention equipment would not effectively prevent the concentration of asbestos fibres in the air, the employer shall implement the following actions;

- Inform employees and their representatives.
- Train and instruct the employees.
- Provide suitable respiratory protection and other personal protective equipment.
- Arrange warning signs indicating that the concentration of fibres is likely to exceed the threshold.
- Take actions to prevent asbestos dust from spreading into the work area.



Notification to the H&S authorities

If you plan to carry out asbestos exposure work outdoors, it must be done as follows:

- Before starting the work, the employer must submit a report to the State Labor Inspectorate territorial division.
- Employees and/or their representatives should be provided access to the company's report.

Each time work conditions are changed in a way that could increase asbestos dust concentrations in the work place, a new company report must be prepared.



Activity-Who is most at risk?

The people most at risk to the health effects of asbestos are:

Demolition workers-2

May be exposed if materials disturbed

Production workers-1

Historically at risk: Insulation workers, industrial users, weavers, ship yard workers

Removal Operatives-4

At risk if proper procedures aren't followed

Maintenance Workers-3

Joiners, plumbers, electricians etc. may be exposed if unaware of risks

Out of these people, who do you think is most at risk?

Drag and drop into the correct order.

Incorrect! Try again

Submit

Lowest risk

Highest risk

Questions

1. What does PPE stand for?

Personal Protective Equipment

Protect Personal Equipment

Protective Personal Equipment

Personal Production Equipment

2. What is the latency period of asbestos related diseases?

10 years

20 years

40 years

60 years

3. Before the removal of asbestos-containing material a risk assessment should be conducted?

True

False

4. It is prohibited to wash surfaces made of asbestos with a jet wash?

True

False

5. A work plan should **not** contain information on the nature and duration of the work?

True

False