



## Mesothelioma and Asbestos

The information in this factsheet will help you to understand more about mesothelioma. It is an agreed view on this cancer by medical experts. We hope that it answers some of your questions about this cancer, what causes it, its symptoms and how it is diagnosed and treated. If you have any other questions or concerns, please ask your GP or call the **National Cancer Helpline 1800 200 700**.

### What is Mesothelioma?

Mesothelioma is cancer of the mesothelium. The mesothelium is a thin layer that lines the wall of the chest and abdomen and the organs found there.

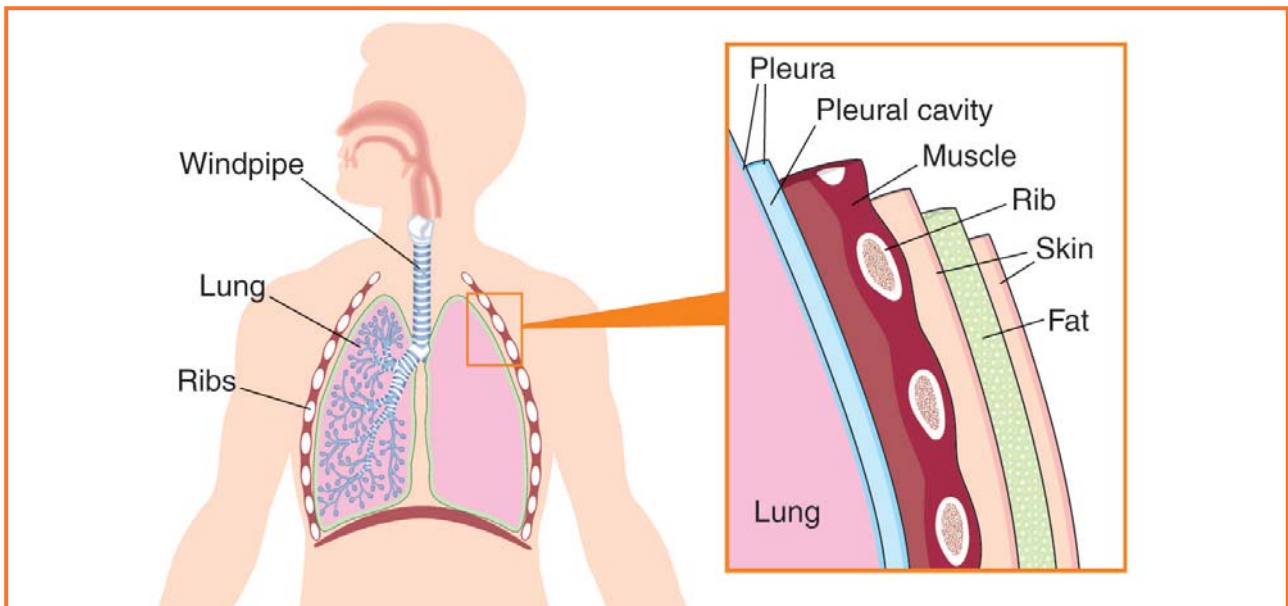
The information in this factsheet is about pleural mesothelioma, which affects the lining of the lungs. This is the most common type. Mesothelioma can also occur in the lining of the abdomen, the testicles and the heart. But these are rare.

### What is pleural mesothelioma?

Your lungs are covered by two layers called the pleura. These layers are separated by a small amount of fluid, which helps to keep them moist. The pleura are very thin and the fluid helps them to slide over each other easily. This allows your lungs to expand and contract as you breathe in and out.

The inner layer that surrounds the lung is called the visceral layer, while the outer layer attached to the chest wall is called the parietal layer.

Mesothelioma causes the pleura to become hard or thicken. This makes it more difficult for your lungs to expand and contract as normal, making it harder to breathe.



Sometimes fluid builds up between the two layers. This also makes it harder for your lungs to breathe in and out. As a result, you will feel more breathless.

### What causes mesothelioma?

The main cause of mesothelioma is believed to be asbestos. But research into other causes is also taking place.

Mesothelioma develops very slowly after asbestos exposure. It can take anything from 10 to 60 years for symptoms to appear. Asbestos exposure means if you come in contact with asbestos dust or fibres. Asbestos dust or fibres in the air cause harm, whereas undisturbed asbestos material is believed not harmful.

### What is asbestos?

Asbestos is a natural mineral found in rock. There are many types, which are all harmful. In the past, it was widely used in construction, industry and shipbuilding because it was resistant to heat and chemicals.

### Is asbestos still used?

Asbestos is banned in some countries but not in others. By law you now cannot use, reuse, sell or supply materials containing asbestos in Ireland. Even so, there are many materials that still contain asbestos in Ireland. These are found in many products, buildings and structures – mostly to do with insulation, fire proofing, roofing and flooring.

Under Irish law, if an employer suspects that asbestos is present, he or she must get a risk assessment done by a licensed company to find out the health risk for the employees.

If the material containing asbestos is in a safe condition, it can be left alone. But if the material is a health risk to employees, a licensed company must remove the material safely.

### How is asbestos harmful?

When asbestos is broken or damaged, it releases fibres or dust into the air. These are then breathed into your lungs. The fibres are tiny and can reach the smallest areas of your lungs. They remain there, as they are too tiny to cough or breathe out.

The body tries to break the fibres down and remove them, but with no success. Instead, it causes swelling in the nearby lung tissue. The tiny fibres can also move into the lungs and into the pleura, where they can remain and slowly develop into pleural mesothelioma.

Asbestos fibres can also be swallowed and remain in the stomach or gullet. This causes swelling in the nearby tissues like in the lungs. This is how peritoneal mesothelioma develops.

### Who gets mesothelioma?

The people usually affected by asbestos exposure include builders, plumbers, electricians and shipbuilders. There have also been cases of mesothelioma in those who lived near an asbestos factory. Family members of those who have worked with asbestos have been known to get mesothelioma because of exposure to work clothes covered in asbestos dust.

It is not known how much asbestos exposure is needed to get mesothelioma, but it is believed to be very little.

### What should I do if I was exposed to asbestos?

If you have been exposed to asbestos fibres in the past, you are at risk of getting mesothelioma. Do talk to your GP for advice. But it is important to remember that not everyone who has been exposed to asbestos gets mesothelioma. It is not known why some people do and others do not. It is believed that it depends on the type of asbestos and the length of exposure.

Mesothelioma is not infectious and cannot be inherited. Family members do not have a higher risk of getting the disease, unless they themselves have been exposed to asbestos.

### What are the symptoms of mesothelioma?

Symptoms of mesothelioma can take anything from 10 to 60 years to appear. In the early stages of the disease small lumps appear, but these are unlikely to cause symptoms. Most patients will go to the GP complaining of:

- Breathing problems – usually they come on gradually
- Chest pain – at the side of the tumour

Other symptoms include:

- Cough
- Loss of appetite
- Difficulty swallowing
- Weight loss
- Tiredness
- Hoarseness
- Sweating

### How is mesothelioma diagnosed?

It is not easy to diagnose mesothelioma. If your doctor suspects that you have it, he or she will ask you to go for tests to make sure of the diagnosis.

You may need some of the following tests:

- Chest X-ray
- CT scan
- Plural aspiration
- Thoroscopy
- Biopsy
- Bronchoscopy
- Mediastinoscopy

#### Chest X-ray

Mesothelioma does not always show up on a chest X-ray, especially in the early stages. But a chest X-ray may be able to show a pleural effusion. This is a build-up of fluid in between the pleura. Your doctor may arrange further tests to find out what is causing the fluid build-up.

#### CT scan

A CT scan gives a more accurate picture of what's going on inside your chest. It does this by taking many X-rays of inside your body. This allows your doctor to see where your disease is and if it has spread. For a CT scan, you must not eat for some time beforehand and lie still while being scanned. But the test is not painful. It normally lasts 10–30 minutes. Your doctor or nurse will explain it to you in more detail.

Sometimes your doctor will inject a dye into your vein or ask you to drink some. This makes it easier to see the inside of your body. You may feel heat rising from your chest into your head after the dye has entered your body. This is a strange sensation but does not last long. If you have asthma or any drug allergy, it is important to tell your doctor beforehand.

### **Pleural aspiration**

A sample of the fluid from inside your chest may be needed to prove the build-up is due to mesothelioma. This is called a pleural aspiration. Your doctor will put a small needle into your chest and inject some local anaesthetic. This numbs the area and makes sure the test is not too painful. Your doctor will then put another needle in and remove some fluid using a syringe. This fluid is sent to a laboratory to be checked. Based on this, mesothelioma can be diagnosed.

### **Thoracoscopy**

Sometimes your doctor may need to do further tests before making a diagnosis. It is often very useful for your doctor to look inside your chest using a telescope. This is called a thoracoscopy. For the test, you will be put to sleep beforehand. Your doctor will make a cut between two ribs and put the thorascope in. This allows him or her to see if the pleura appear normal. During a thoracoscopy, your doctor can take biopsies of the tissue and an aspiration of any fluid present.

### **Biopsy**

During a thoracoscopy, your doctor can take small amounts of tissue samples from the pleura. These are called biopsies. Biopsies are then sent to a laboratory and looked at under a microscope.

### **Bronchoscopy**

During a bronchoscopy, a small tube with a camera is passed down your airway either through your nose or your mouth. Your doctor will give you an injection into your vein to sedate you beforehand. He or she then passes the tube right down into your lungs and can take biopsies from the lung tissue.

### **Mediastinoscopy**

A mediastinoscopy is like a thoracoscopy, except your doctor can look at your lymph glands in your chest as well. This is to check if the disease has spread or not. The lymph glands in the chest are

the most likely place that mesothelioma will spread to. Again you will be put to sleep beforehand. Your doctor will make a small cut at the base of your neck and put the telescope in. Biopsies of this tissue can also be taken.

## **How is mesothelioma treated?**

Sadly, there is no cure for mesothelioma at present. But treatment is aimed at slowing down the disease and easing symptoms. Treatment depends on the staging and grading of your disease. Staging refers to the size of the tumour and if it has spread beyond where it first grew or not. Grading refers to how quickly the disease might grow.

Your doctor can advise you of the best treatment for you. The types of treatment include:

- Surgery
- Pleurodesis
- Radiotherapy
- Chemotherapy

### **Surgery**

Sometimes mesothelioma can be removed by surgery. This is normally done under general anaesthetic. Sadly, surgery is often not an option because mesothelioma may have spread by the time it is diagnosed.

### **Pleurodesis**

The build-up of fluid between the pleura can be removed during a thoracoscopy (pleural aspiration). During this treatment, your doctor can put medication into the pleura, causing scarring and preventing further build-up of fluid. This is known as pleurodesis. This will help you to feel less breathless.

### **Radiotherapy**

Radiotherapy is the use of powerful X-rays to cure or control cancer. With mesothelioma, it can be used to control symptoms and also to shrink the tumour. Normally the chest is marked with a pen beforehand, so that the X-rays are sent to the same area of the lungs each time. You will be asked to sit very still in front of a machine that gives off the X-rays. This treatment is quick and painless. Your doctor and nurses will discuss with you how much radiotherapy you need.

More information on radiotherapy is available from the Irish Cancer Society in a booklet called Understanding Radiotherapy.

### Chemotherapy

Chemotherapy is the use of drugs to control the symptoms of the disease or slow down the growth of the tumour. Chemotherapy can be given through a plastic tube (cannula) put into your vein or in tablet form. The side-effects of the drugs can vary a lot and depend on the individual. Sometimes mesothelioma is treated with a combination of drugs. Your doctor or nurses can discuss your chemotherapy drugs with you in more detail.

More information on chemotherapy is also available from the Irish Cancer Society in a booklet called Understanding Chemotherapy.

### Coping with mesothelioma

#### Emotional support

You may find it very hard to deal with a diagnosis of mesothelioma. But there are a lot of people available to support you and your family at this time. Your hospital will have nurses and doctors who can discuss your disease and treatment with you.

If you are finding it hard to deal with your diagnosis, your doctor can refer you to special doctors, nurses and counsellors, who are experts in helping cancer patients' deal with the anxiety of a diagnosis.

There are also medical social workers who can help you deal with any problems and give you advice on benefits and services that you are entitled to.

#### Compensation

You may be entitled to compensation if it is proved that you got mesothelioma because of asbestos exposure in the past. Discuss this with your doctor or solicitor.

#### Support centres and groups

There are many cancer support centres and counsellors for cancer patients around the country. To make contact with them or for any other advice, support and information, ring our confidential helpline on **freephone 1800 200 700** and speak to a specialist cancer nurse.

National Cancer Helpline: **1800 200 700**

## Further information

For more information about mesothelioma or about cancer in general, call the **National Cancer Helpline on Freephone**

**1800 200 700**

(Monday–Thursday, 9am–7pm,  
Friday 9am–5pm)

or email [helpline@irishcancer.ie](mailto:helpline@irishcancer.ie)  
for confidential advice from our  
cancer nurse specialist.

**Irish Cancer Society**  
**43/45 Northumberland Road**  
**Dublin 4**

Tel: **01 231 0500**  
Fax: **01 231 0555**  
Email: [helpline@irishcancer.ie](mailto:helpline@irishcancer.ie)  
Website: [www.cancer.ie](http://www.cancer.ie)

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### Some useful organisations:

#### **Citizens Information Board (formerly Comhairle)**

7th Floor, Hume House  
Ballsbridge, Dublin 4

Citizen Information Service:  
1890 777 121

Tel: 01 605 9000  
Email: [information@ciboard.ie](mailto:information@ciboard.ie)  
Website: [www.citizensinformationboard.ie](http://www.citizensinformationboard.ie)

#### **Health and Safety Authority**

The Metropolitan Building  
James Joyce Street, Dublin 1

Tel: 1850 289 389  
Email: [wcu@hsa.ie](mailto:wcu@hsa.ie)  
Website: [www.hsa.ie](http://www.hsa.ie)

#### **Mesothelioma UK**

National Macmillan Mesothelioma Resource Centre  
Hospital Management Offices  
Glenfield Hospital, Groby Road  
Leicester LE3 9QP, UK

Tel: +44 (0)800 169 2409  
Email: [mesothelioma.uk@uhl-tr.nhs.uk](mailto:mesothelioma.uk@uhl-tr.nhs.uk)  
Website: [www.mesothelioma.uk.com](http://www.mesothelioma.uk.com)



National Cancer Helpline: **1800 200 700**