What is mesothelioma?

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

The information in this factsheet is about pleural mesothelioma, which affects the lining of your lungs. This is the most common type. Mesothelioma can also develop in the lining of your abdomen, testicles or 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 your lung is called the visceral layer. The outer layer attached to your 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 for you 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 breathless.

**What causes mesothelioma?**

It is believed that asbestos is the main cause of mesothelioma. However, 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 coming into contact with asbestos dust or fibres. Asbestos dust or fibres in the air can cause harm but undisturbed asbestos material is believed not to be 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. Despite this, there are many materials that still contain asbestos in Ireland. These materials are found in many products, buildings and structures – most of these are associated with insulation, fire proofing, roofing and flooring.

Under Irish law, if an employer suspects that there is asbestos anywhere where employees might be exposed to it, the employer must have a risk assessment completed by a licensed company to find out if there is a health risk for the employees. If material containing asbestos is found, but is in a safe condition, it can be left alone. But if material is found to be 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. You then breathe these into your lungs. The fibres are tiny and can reach the smallest areas of your lungs. They stay there, as they are too tiny to cough or breathe out.

Your body tries to break the fibres down and remove them, but without success. Instead, it causes swelling in the nearby lung tissue. The tiny fibres can also move into your pleura, where they can remain and slowly develop into pleural mesothelioma.

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

**Who gets mesothelioma?**

People who are typically affected by asbestos exposure include those who work or have worked as builders, plumbers, electricians and shipbuilders. Some people who lived near an asbestos factory have also developed mesothelioma. Family members of those who have worked with asbestos have been known to

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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 who have mesothelioma will first go to their GP complaining of:

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

Other symptoms include:

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

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 developing mesothelioma. Speak to your GP for advice. However, it is important to remember that not everyone who has been exposed to asbestos will develop mesothelioma. It is not known why some people do and others do not get mesothelioma. It is believed that a person’s degree of risk of developing mesothelioma depends on the type of asbestos that they were exposed to 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.

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 confirm the diagnosis. You might be advised to get 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 might be able to show a pleural effusion. A pleural effusion is a build-up of fluid between your pleura. Your doctor might arrange more tests to find out what is causing the fluid to build up.

• **CT scan**

A CT scan gives a more accurate picture of what is going on inside your chest. It does this by taking many X-rays inside your body. This allows your doctor to see where your disease is and if it has spread. For the CT scan to be effective, you must not eat for some time beforehand and you will have to lie very still while you are scanned. The test is not painful and normally takes 10–30 minutes to complete. 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 something that contains a dye. This makes it easier to see the tissues inside your body. You might 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 that you tell your doctor before you have this test.
• **Plural aspiration**  
A sample of the fluid from inside your chest might be needed to prove that the build-up is due to mesothelioma. This is called a pleural aspiration. To complete this test, your doctor will put a small needle into your chest and inject some local anaesthetic. This numbs the area and makes sure that the test is not too painful. Your doctor will then put another needle into your chest to 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 might need to do more tests before making a diagnosis. It is often very useful for your doctor to look inside your chest using a type of telescope. This is called a thoracoscopy. You will be put to sleep before having this test. During the test, your doctor will make a cut between two ribs and put the thoroscope 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 your pleura. These are called biopsies. Biopsies are then sent to a laboratory to be looked at under a microscope.

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

• **Mediastinoscopy**  
A mediastinoscopy is like a thoracoscopy, except your doctor can look at the lymph glands in your chest as well. This is done this to check if the disease has spread. The lymph glands in your chest are the most likely place where mesothelioma will spread.

You will be put to sleep before having a mediastinoscopy. Your doctor will make a small cut at the base of your neck and put the telescope in. Your doctor might also take a biopsy of this tissue.

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**How is mesothelioma treated?**

Currently, treatment is not aimed at cure but at slowing down the disease and easing the 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. Grading refers to how quickly the disease might grow. Your doctor can advise you of the best treatment for you.

The types of treatments 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 might 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 called pleurodesis and it will help you to feel less breathless afterwards.

• **Radiotherapy**  
Radiotherapy uses powerful X-rays to cure or control cancer. With mesothelioma, it can be used to control symptoms and also to shrink the tumour. Normally, your chest is marked with a pen beforehand, so that the X-rays are aimed at the same area of your 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*.  

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• 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.

• Clinical Trials
If a treatment looks like it might be helpful, it is given to patients in research studies called clinical trials. Trials may be taking place at the hospital you are attending. If you are interested in taking part, talk to your doctor. He or she can tell you if the trial would suit you or not. More information on clinical trials is available from the Irish Cancer Society in a factsheet called Cancer and Clinical Trials.

Coping with mesothelioma

• Symptoms
Sometimes mesothelioma can cause symptoms that are difficult to manage. These symptoms can include breathlessness and pain. Your doctor and nurse can help you with these. If you would like further information or support, call our National Cancer Helpline on 1800 200 700 to speak to a specialist nurse and ask for a free copy of our factsheets on cancer pain and breathlessness.

• Emotional support
You might find it hard to deal with a diagnosis of mesothelioma. However, there are a lot of people available to support you and your family at this time. There will be nurses and doctors at your hospital who can discuss your disease and treatment with you. Your GP is also available to you as an extra source of support during this time.

There are many cancer support centres and counsellors for cancer patients around the country. You might also find it helpful to read a booklet or watch a DVD about how to cope with your disease.

Compensation and social welfare support
You might be entitled to compensation if it can be proved that you got mesothelioma because of exposure to asbestos in the past. Discuss this with your doctor or solicitor.

There are also medical social workers in your hospital who can give you advice about benefits and services that you are entitled to.

If you would like a free copy of our booklet, Social Welfare Support: A Guide for Cancer Patients, call the National Cancer Helpline on 1800 200 700.
Other Organisations

Health and Safety Authority (HAS)
Advice about health and safety in the workplace
The Metropolitan Building,
James Joyce Street, Dublin 1
Tel: 1890 289 389 Monday–Friday 9am–5pm
Email: wcu@hsa.ie
Web: www.hsa.ie

Citizens Information Board
(formerly Comhairle)
Ground Floor, George’s Quay House,
43 Townsend Street, Dublin 2
Citizens Information Service:
1890 777 121 (Mon-Fri, 9am-9pm)
Web: www.citizensinformationboard.ie

Mesothelioma UK
Specialist information and support
c/o Hospital Management Offices,
Glenfield Hospital, Leicester, LE3 9QP, UK
Tel: 0044 (0)800 169 2409
Web: www.mesothelioma.uk.com

Other Useful Websites

Healthtalkonline
www.healthtalkonline.org

FURTHER INFORMATION
For more information on mesothelioma, call the National Cancer Helpline Freefone
1800 200 700
(Monday-Thursday, 9am-7pm; Friday, 9am-5pm)
or email helpline@irishcancer.ie for confidential advice from our cancer nurse specialists.

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