ASBESTOS AWARENESS

Presented by:
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ASBESTOS TALK.

Talk contents:

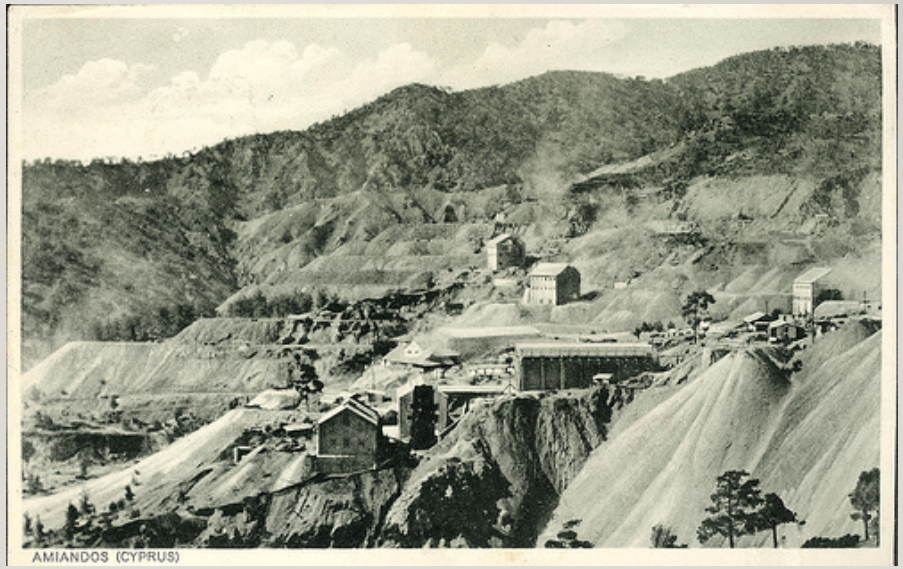
- ✓ Properties of asbestos
- ✓ Health risks from asbestos
- ✓ Types, uses & locations of asbestos containing materials within buildings & plant
- ✓ How to avoid the risks from asbestos

PROPERTIES OF ASBESTOS

What is asbestos?

Asbestos is the name given to a group of naturally occurring fibrous minerals (rocks). There are two groups of asbestos minerals:

- ✓serpentines
- ✓amphibole



PROPERTIES OF ASBESTOS

Six types of asbestos are commercially exploited:

Crocidolite
Blue asbestos

Grunerite (Amosite)
Brown asbestos

Chrysotile
White asbestos accounts for approximately 95% of the world production of asbestos

Also: ***Anthophyllite, Tremolite, Actinolite***

PROPERTIES OF ASBESTOS

The minerals are mined and then broken down into loose fibres

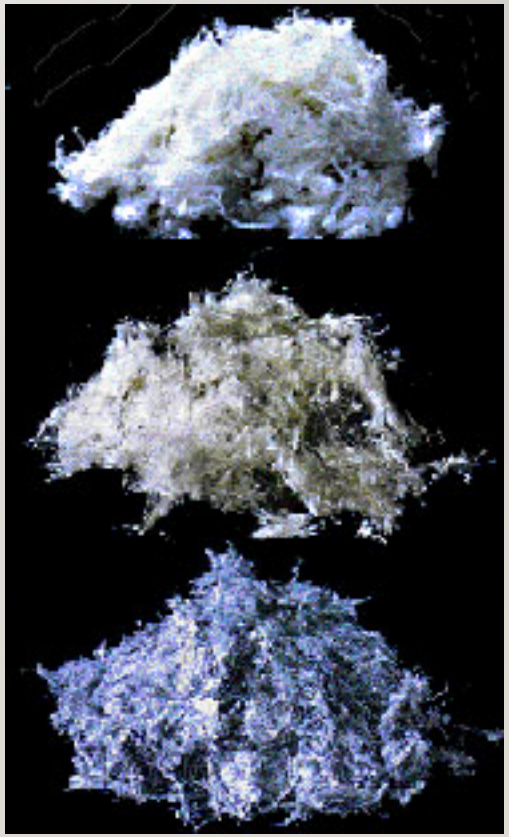
These fibres have:-

- ✓ High fire resistance
- ✓ High chemical resistance
- ✓ High tensile strength
- ✓ High abrasion resistance
- ✓ Low thermal conductivity
- ✓ Low electrical conductivity
- ✓ Low biodegradability
- ✓ Good sound proofing properties

Chrysotile (White)

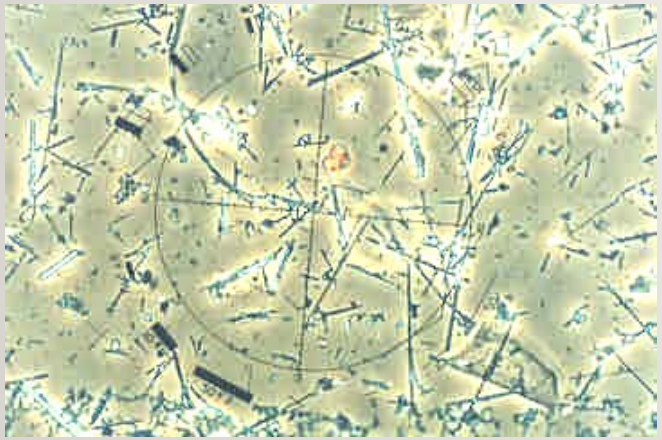
Amosite (Brown)

Crocidolite (Blue)

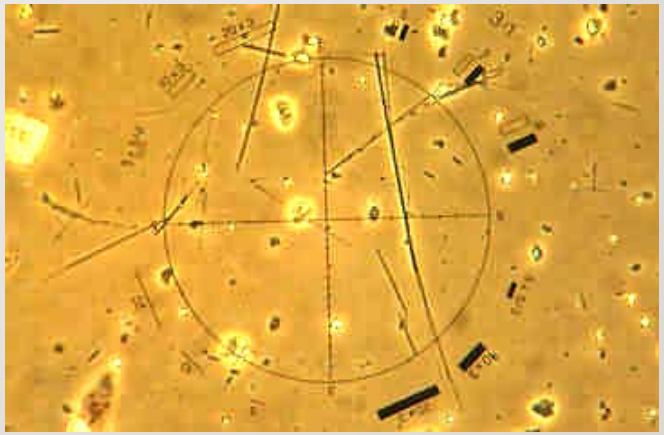


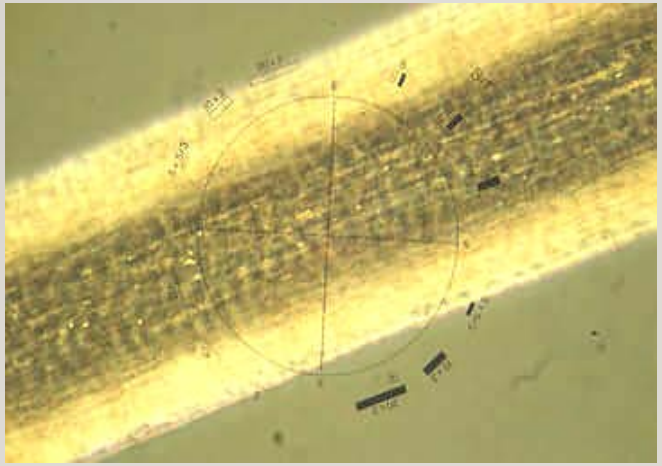
PROPERTIES OF ASBESTOS

Asbestos fibres



Asbestos fibres





Human hair

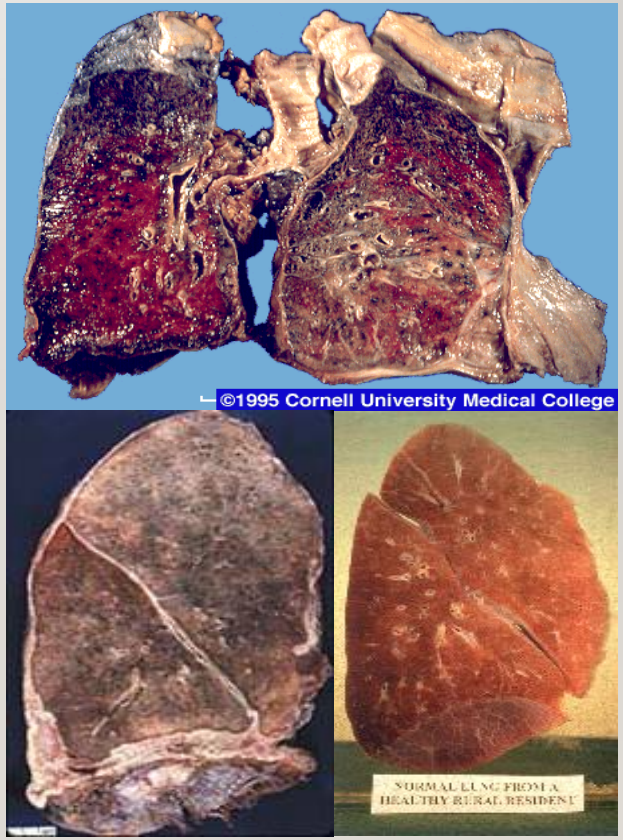
Synthetic fibres

HEALTH RISKS FROM ASBESTOS

Breathing in asbestos fibres can lead to asbestos-related diseases which kill more people than any other single work-related illness

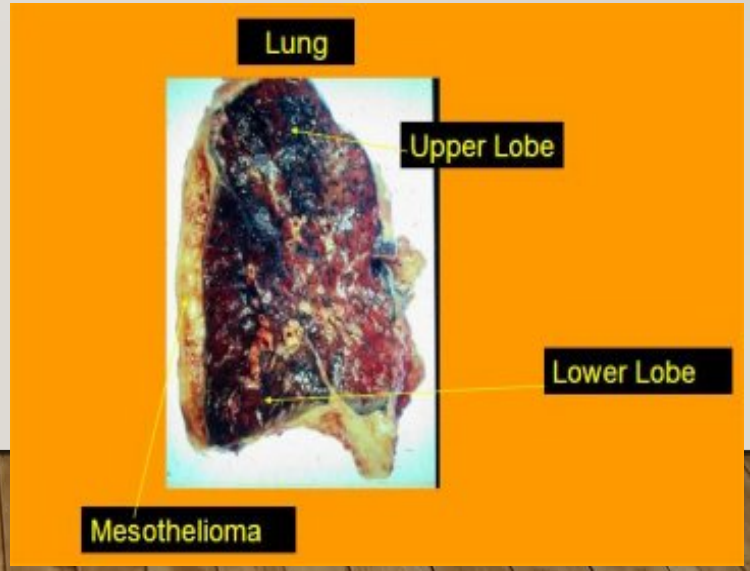
Asbestos causes 2 main types of damage in humans:

✓Asbestosis
✓Cancer



THE HEALTH RISKS

Asbestos can also cause asbestos related cancer and pleural mesothelioma – tumours produced in the lining of the lung that cause it to harden. This results in the lung being unable to function properly and the patient eventually 'drowning from the inside'.



HEALTH RISKS FROM ASBESTOS

Other asbestos-related diseases:

Other cancers:

- Larynx
- Digestive tract
- Kidney

Pleural plaques – scaring of lung pleura

Pleural effusion – fluid around the lungs (benign)

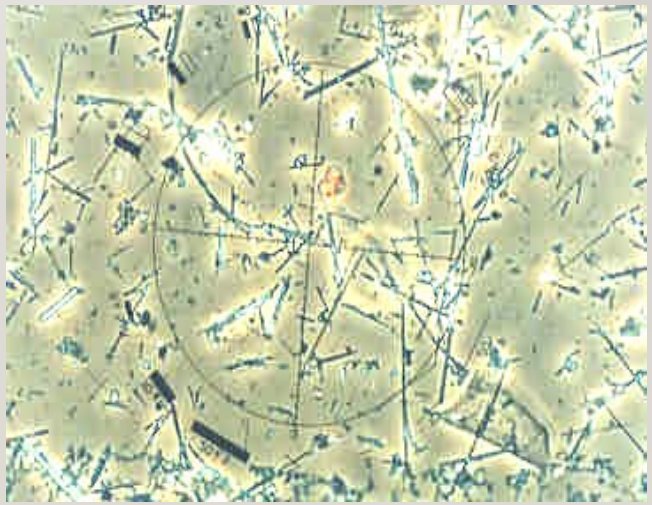
Skin complaints – asbestos warts

HEALTH RISKS FROM ASBESTOS

All asbestos related diseases are contracted by inhaling airborne asbestos fibres

The fibres that enter the deep lung are too small to see with the naked eye – as evidenced previously

- ✓ A typical fibre would be 1µm in width and 10µm in length
- ✓ (There are 1000µm in 1mm)



HEALTH RISKS FROM ASBESTOS

Principle factors in developing an asbestos related disease are:

- ✓ The concentration of fibres
- ✓ The duration of exposure
- ✓ Individual susceptibility

There is always a latency period from exposure to development of the disease (15 to 40 years). Asbestosis the shortest, mesothelioma the longest.

HEALTH RISKS FROM ASBESTOS

Asbestos and lung cancer

(Lung cancer death rates
Per 100 000 person years)

Asbestos worker	Smoker	Death rate	Mortality rate
No	**No**	**11.3**	**1**
Yes	**No**	**58.4**	**X 5**
No	**Yes**	**122.8**	**X 11**
Yes	**Yes**	**601.6**	**X 53**

HEALTH RISKS FROM ASBESTOS

Who is at risk?

- ✓ Asbestos workers – generally no longer
- ✓ Construction workers – yes
- ✓ Carpenters – yes
- ✓ Electricians – yes
- ✓ Plumbers – yes
- ✓ Anyone who may disturb the fabric of a building - yes

USES & LOCATIONS OF ASBESTOS CONTAINING MATERIALS WITHIN BUILDINGS & PLANT

6 million tonnes of asbestos imported into UK since 1880

4.4 million tonnes of asbestos used in building products in the UK

Extensively used in building industry, particularly in **1950's**, **1960's & 1970's. Unfortunately in Guernsey in the 80's**

Still widely found in buildings constructed **before 1986 and later here**

The complete abolition of asbestos use was not until **1999**

USES & LOCATIONS OF ASBESTOS CONTAINING MATERIALS WITHIN BUILDINGS & PLANT

Sprayed coatings

Fire protection, acoustic insulation, anti-condensation

Very high asbestos content (55 – 90%) with Portland cement binder

Mostly blue asbestos until 1962

All types including blue asbestos up to mid-1971

Brown & white asbestos up to 1974 - spraying asbestos ceased

USES & LOCATIONS OF ASBESTOS CONTAINING MATERIALS WITHIN BUILDINGS & PLANT

Lagging / insulation

Thermal insulation to pipes, boilers, vessels etc

Often hand-applied wet

Also pre-formed sections used

Blankets & ropes also used (100% asbestos content)

Variable asbestos content:

- ✓ 6 – 85%
- ✓ Blue phased out in 1970

USES & LOCATIONS OF ASBESTOS CONTAINING MATERIALS WITHIN BUILDINGS & PLANT

Lagging to plant

The underside of a vessel where a leak has occurred

The resultant slurry spread throughout site giving elevated readings

USES & LOCATIONS OF ASBESTOS CONTAINING MATERIALS WITHIN BUILDINGS & PLANT

Duct Lagging

Flat panel asbestos lagging encapsulated in a painted cloth

To the untrained this is similar to glass fibre insulation

USES & LOCATIONS OF ASBESTOS CONTAINING MATERIALS WITHIN BUILDINGS & PLANT

Asbestos insulating board

Used as building boards, ceiling tiles, partition walls etc

Acoustic & thermal insulation

Fire protection

Trade names include *Asbestolux, Turnasbestos, LDR, Asbestos Wallboard, Insulation Board*

Marine boards known as *Marinite* or *Shipboard*

15 – 25% asbestos

Usually brown asbestos

Manufacture ceased 1980 - Use prohibited 1986

USES & LOCATIONS OF ASBESTOS CONTAINING MATERIALS WITHIN BUILDINGS & PLANT

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Beam cladding

Riser cupboard doors

USES & LOCATIONS OF ASBESTOS CONTAINING MATERIALS WITHIN BUILDINGS & PLANT

AIB repair to L and P ceiling

Board to fire door

USES & LOCATIONS OF ASBESTOS CONTAINING MATERIALS WITHIN BUILDINGS & PLANT

Asbestos Cement

Roof sheets & tiles, guttering, water tanks etc

Trade names include: *Trafford tile, Bigsix, Doublesix, Supersix, Twin twelve, Combined sheet', Glen six, Fort, Monad, Troughsec, Major tile and Canada tile, Panel sheet, Cavity decking* etc

10 – 15% asbestos – all types

USES & LOCATIONS OF ASBESTOS CONTAINING MATERIALS WITHIN BUILDINGS & PLANT

Rope & cloth

90% asbestos mostly white asbestos but blue asbestos used prior to 1970

Gaskets

Usually white asbestos.

Up to 90% asbestos

Trade names include:

Klingerit, Lion jointing, Permanite, CAF (compressed asbestos fibre) 'It' in German gaskets

USES & LOCATIONS OF ASBESTOS CONTAINING MATERIALS WITHIN BUILDINGS & PLANT

Roofing felt & DPMs

Bitumen felt

Asbestos content up to 1992

Floor tiles & floor covering

Thermoplastic

Vinyl

Bitumen adhesive can contain asbestos

Paper backing can contain asbestos

USES & LOCATIONS OF ASBESTOS CONTAINING MATERIALS WITHIN BUILDINGS & PLANT

Textured coatings

Asbestos content until 1984

Trade names included:

Artex

Wondertex

Suretex

Newtex

Pebblecoat

Marblecoat

Reinforced plastics

Shires toilet cisterns etc

USES & LOCATIONS OF ASBESTOS CONTAINING MATERIALS WITHIN BUILDINGS & PLANT

Other asbestos containing materials include:

- ✓ Mastics, sealants & putties
- ✓ Friction products (brake linings & clutch plates etc)
- ✓ Woven electrical cable insulation
- ✓ Flash guards & fuse linings
- ✓ Specialist paints & finishes
- ✓ Air filters
- ✓ Wall plugging compound
- ✓ Asbestos paper & asbestos felt - *Pax felt, Viceroy (foil-coated paper), Serval*
- ✓ Drive belts & conveyor belts

USES & LOCATIONS OF ASBESTOS CONTAINING MATERIALS WITHIN BUILDINGS & PLANT

AVOIDING THE RISKS AND LEGAL DUTIES

Employers have a duty under health and safety at work law to ensure, so far as is reasonably practicable, the health, safety and welfare of their employees and others who may be affected by their undertakings. This would include towards householders who are have works done on their property.

Householders are not required to comply with this legislation but those that supply services to them are.

AVOIDING THE RISKS AND LEGAL DUTIES

Prior to commencing any work, you must:

- ✓ Find out whether asbestos materials are present (by reading the asbestos register) or arranging a survey if domestic work. All Commercial Properties must have an Asbestos Survey/Register and AMP which are required under Guernsey Law and must have been undertaken by a competent person.
- ✓ Where possible plan the work to avoid disturbance to the asbestos material
- ✓ If the work entails major refurbishment or demolition, the responsible party must commission a Refurbishment and Demolition asbestos survey
- ✓ **No employee should carry out work that would disturb the fabric of a building unless the employer has confirmed that ACMs are not present**
- ✓ If disturbance to the asbestos is unavoidable, decide whether or not the work needs to be carried out by a specialist contractor licensed by the HSE to work with asbestos

HOW TO AVOID THE RISKS FROM ASBESTOS

Types of Survey

Management Surveys are for building maintenance

Not necessarily all asbestos materials have been identified

Refurbishment/Demolition may be necessary before you start work. Check well in advance of works starting and ensure all areas being disturbed are accessed

Before commencing any work you must find out whether asbestos materials are present

Read the asbestos registers

Understand any caveats e.g. un-accessed items or areas

Presume all un-accessed items / materials as containing asbestos unless proved otherwise

If you have any doubt about whether a material or item contains asbestos, request further information / investigation

AVOIDING THE RISKS AND LEGAL DUTIES

Health and Safety at Work Act 1974

The Asbestos Licensing Regulations 1983

The Control of Asbestos at Work Regulations 2016 (Particularly Reg. 4)

The Management of Health and Safety Regulations 1999

The Construction, Design and Management Regulations 2015

The Workplaces (Health, Safety and Welfare) Regulations 1992

FURTHER INFORMATION

HSE

Health and Safety Executive

Asbestos: The hidden killer

You are more at risk than you think

You may be aware that asbestos dust is a killer, but do you know to what extent you are personally at risk?

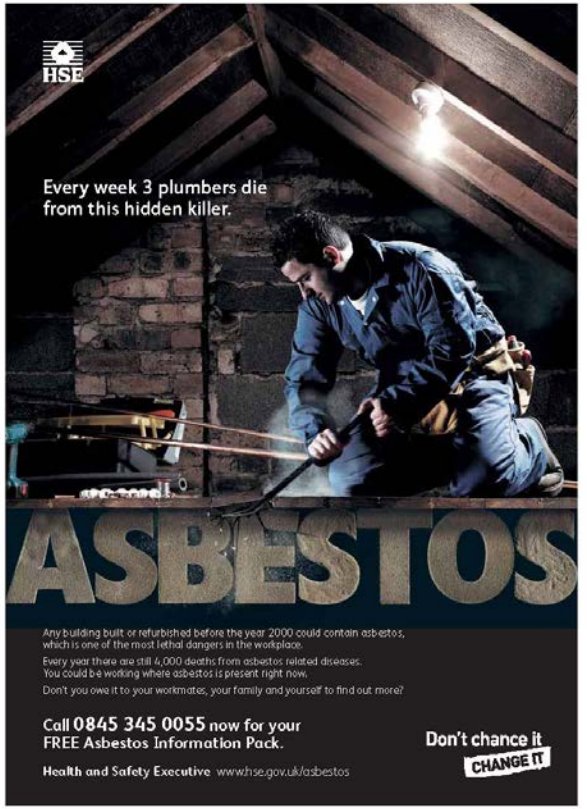
Every year 4000 people die of work-related asbestos diseases, more than are killed on the roads, and this number is still rising. If you work on buildings that were built or refurbished before the year 2000 you are likely to come across asbestos. Can you identify where asbestos may be present in a building, what it might look like and what to do to protect yourself?

Please read this information pack, so that you know how to take precautions to protect your health, those who work with you and even your family, as you may be bringing asbestos fibres home on your work clothes.

Don't let asbestos remain a hidden killer.

Regards

Steve Coldrick
Asbestos Programme Director



FURTHER INFORMATION

HSE Asbestos Page. http://www.hse.gov.uk/asbestos/
HSE Asbestos Essentials for non licensed works, http://www.hse.gov.uk/asbestos/essentials/index.htm
Guernsey HSE Asbestos page, https://www.gov.gg/asbestos
Guernsey Asbestos ACoP, https://www.gov.gg/CHttpHandler.ashx?id=104274&p=0
GOSHA, http://www.gosha.org.gg/