ASBESTOS DISEASES

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Asbestos

- Insulates
- Fire resistant
- Chemically resistant
Asbestos

**Serpentine group**

Chrysotile (white asbestos)

**Amphibole group**

amosite (brown asbestos), crocidolite (blue asbestos), anthophyllite, actinolite, tremolite

Others erionite
Asbestos use worldwide (2006)

- Top five producers (tons)
  - Russia: 925,000
  - Kazakhstan: 355,000
  - China: 350,000
  - Canada: 243,000
  - Brazil: 236,100

- Top five consumers (tons)
  - China: 530,190
  - Russia: 292,541
  - India: 272,856
  - Kazakhstan: 151,231
  - Brazil: 143,123
Asbestos Uses

Friction materials and gaskets

Insulation
Asbestos uses - Textiles
Asbestos usage - construction
Asbestos – domestic exposure

Gloucester Railway Carriage and Wagon Works
Asbestos exposure - environmental
Asbestos related diseases
pleural plaques

- Common
- Not pre-malignant
- Usually no symptoms
- No Industrial Injuries Benefit
- No civil claim
Asbestos related diseases

Diffuse pleural thickening

- About 20% show progression
- Decline in lung function and symptoms.
- Industrial Injuries Compensation
- Can pursue a civil claim
Asbestos related diseases
Benign pleura effusion

- May occur “early”
- Usually resolves
- May leave thickening
- Something else?
  - Mesothelioma
  - Other cancer

Benign pleura effusion
Disablement Benefit for diffuse pleural disease

Unilateral or bilateral diffuse pleural thickening with blunting of the costo-phrenic angle
Asbestos related diseases

Mesothelioma

- Usually chest
- May be abdominal
- Locally invasive
- Usually fatal <18 months
Mesothelioma

**Symptoms**

- Chest pain
- Weight loss
- Cough
- Breathlessness
Mesothelioma

**Treatment**
- Pain relief

**Compensation**
- Industrial Injuries Scheme – Prescribed Disease
- Workmen's compensation
- War Disablement Benefit
Mesothelioma from gas masks
Boots of Nottingham

Number of mesotheliomas by calendar year in the full group of 1154 former workers.

Military Gas
Mask Production
Started

McDonald, J C et al. Occup Environ Med 2006;63:852-855
UK asbestos imports, and observed (1970-91) and predicted (1992-2040) mesothelioma deaths in men

100 years of use and health consequences of asbestos use: asbestos imports and annual mesothelioma deaths in Great Britain

Source: HSE Mesothelioma Register
## Risk of Male Mesothelioma by Occupation 2002 - 2010

<table>
<thead>
<tr>
<th>Occupation</th>
<th>PMR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carpenters &amp; joiners</td>
<td>407</td>
</tr>
<tr>
<td>Pipe fitters</td>
<td>360</td>
</tr>
<tr>
<td>Metal plate workers, shipwrights, riveter</td>
<td>338</td>
</tr>
<tr>
<td>Plumbers, heating &amp; ventilating engineers</td>
<td>329</td>
</tr>
<tr>
<td>Electricians, electrical fitters</td>
<td>308</td>
</tr>
<tr>
<td>Labourers in other construction trades n.e.c.</td>
<td>297</td>
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<tr>
<td>Sheet metal workers</td>
<td>272</td>
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<tr>
<td>Energy plant operatives</td>
<td>263</td>
</tr>
<tr>
<td>Construction operatives</td>
<td>243</td>
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</tbody>
</table>

Source: HSE Mesothelioma Register

Male Standardised Mortality Ratios (SMRs) for Mesothelioma by Local and Unitary Authority 1981 – 2005
Sources of exposure: British mesothelioma case-control study

Mesotheliomas in GB by cause - men

Source: HSE Mesothelioma Register
Sources of exposure

Mesotheliomas in GB by cause - women

Year

Number of deaths

Occupational
Domestic
Other non-occupational
Other causes or 'spontaneous'

Source: HSE Mesothelioma Register
Industrial Injuries Scheme

- The Diffuse Mesothelioma Lump Sum Payment Scheme
- The Mesothelioma Lump Sum Payment Scheme 2008
- 1st October 2008 – sufferers of Diffuse Mesothelioma who have been exposed to asbestos in the UK but are unable to claim compensation from other sources, for example, women who had washed their husband’s clothes, or the self-employed.
- Liability Claim
Asbestos related diseases

- Progressive scarring
- Increasing breathlessness
- Decline in lung function
Asbestosis

The graph shows the number of deaths and cases of asbestosis over time. The data is represented by two lines:

- Red squares: Disablement benefit cases
- Blue diamonds: Asbestosis without mention of mesothelioma

The number of deaths and cases has consistently increased over the years from 1978 to 2010.
Asbestos related diseases

Lung cancer
## Smoking and asbestos exposure in insulation workers

**Relative risk of lung cancer**

<table>
<thead>
<tr>
<th>Smoking</th>
<th>Asbestos exposure</th>
<th>Relative Risk</th>
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</thead>
<tbody>
<tr>
<td>No</td>
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<td></td>
<td>Yes</td>
<td>53.2</td>
</tr>
</tbody>
</table>

Selikoff 1979
Asbestos related diseases

- Visceral Pleura
  - Diffuse pleural thickening

- Parietal Pleura
  - Mesothelioma
  - Pleural plaques

- Lung cancer
- Asbestosis
- Other cancers: Laryngeal, Stomach, Ovarian

- Benign pleura effusion
Industrial Injuries Benefit
Prescribed Asbestos Related Diseases

• Lung cancer - PDD8- there must be accompanying asbestosis.

• 6th April 2006. PDD8a- exposure to asbestos must be in the course of:
  • the manufacture of asbestos textiles
  • spraying asbestos
  • asbestos insulation or
  • applying or removing materials containing asbestos in the course of shipbuilding;

and:
• Where all or any part of the exposure occurs before 1st January 1975 for a period of, or periods which amount in aggregate to 5 years or more, or
• Post 1975 for a period of, or periods which amount in aggregate to, 10 years or more.
Industrial Injuries Benefit
Prescribed Asbestos Related Diseases

- PDD9 Diffuse Pleural Thickening
- PDD1 Asbestosis
- PDD8 Lung Cancer with PDD1 (asbestosis)
- PDD8a Lung Cancer in the absence of asbestosis
- PDD3 Mesothelioma
At Asbestos Support WM we offer help and advice to people, and their families, who are suffering from asbestos related diseases such as:

- mesothelioma
- asbestos related lung cancer
- asbestosis
- diffuse pleural thickening

We help with welfare benefits and compensation schemes and we can recommend expert legal help. We provide information about asbestos and...