

# Pneumoconiosis and Silicosis

## Pneumoconiosis (other than asbestosis) and Silicosis in Great Britain

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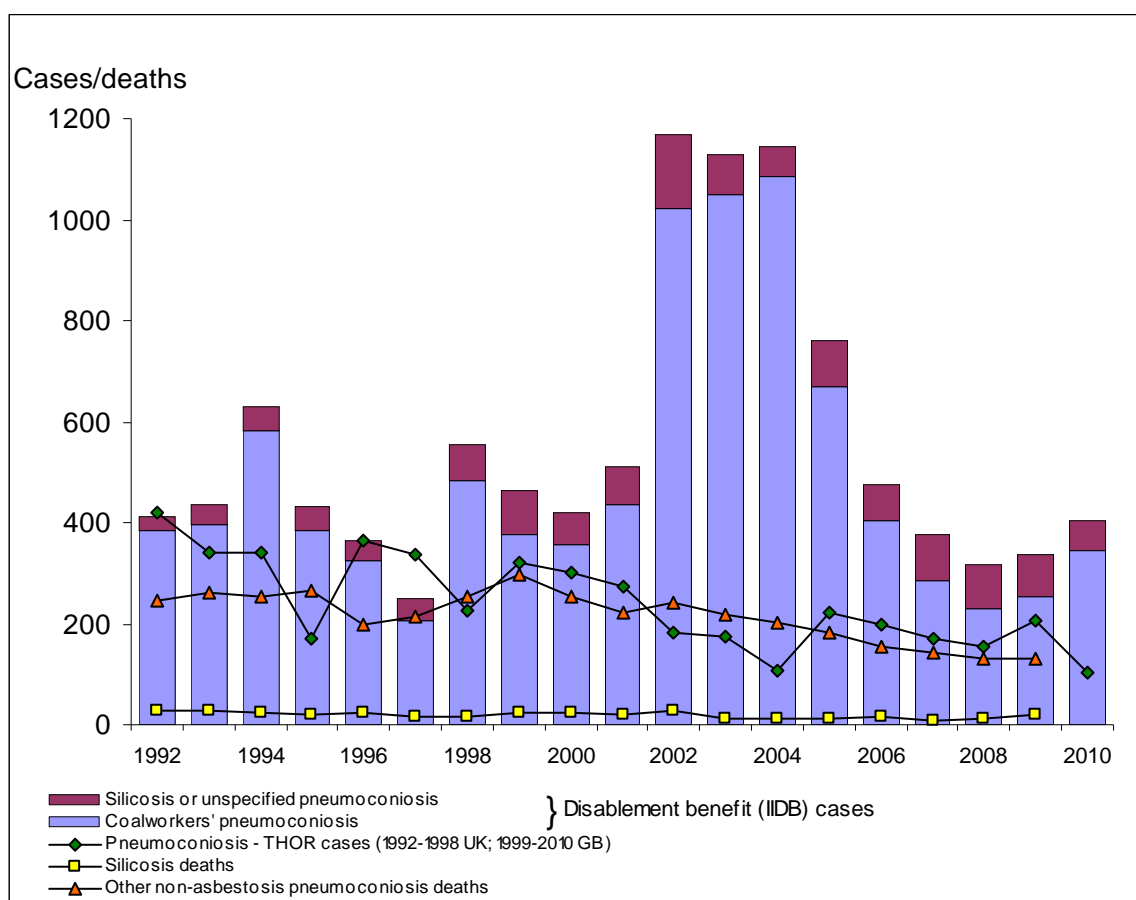
## Summary

The information in this document relates to Health and Safety statistics for 2010/11. The document can be found at: [www.hse.gov.uk/statistics/causdis/pneumoconiosis/index.htm](http://www.hse.gov.uk/statistics/causdis/pneumoconiosis/index.htm)

Currently occurring cases and deaths from pneumoconiosis are mainly a result of past exposures to coal dust (coal workers' pneumoconiosis) and silica (silicosis).

- There were 345 new cases of coal workers' pneumoconiosis and 60 new cases of silicosis assessed for Industrial Injuries and Disablement Benefit in 2010.
- This is likely to be an underestimate of the annual number of new cases of pneumoconiosis and silicosis.
- Deaths from coal workers' pneumoconiosis have reduced over the last 10 years with 131 in 2009.
- There were 18 deaths due to silicosis in 2009, slightly more than in the previous 5 years.
- Pneumoconiosis usually takes many years to develop so most current cases of pneumoconiosis occur in retired workers and reflect industrial conditions of the past, particular in the coal mining industry.

**Figure 1: Pneumoconiosis (other than asbestosis) in Great Britain, 1992-2010**



## Introduction

The term "pneumoconiosis" refers to a group of lung diseases caused by the inhalation, and retention in the lungs, of dusts. The disease is characterised by scarring and inflammation of the lung tissue. It is an irreversible condition with no cure. Symptoms include, shortness of breath, persistent cough, fatigue, laboured and rapid breathing, chest pain. These can seriously affect normal daily activity and lead to various complications which can be fatal.

The main types of pneumoconiosis are coal workers' pneumoconiosis (caused by coal dust), asbestosis (caused by asbestos) and silicosis (caused by respirable crystalline silica (RCS)). These pages describe the latest available statistics for pneumoconiosis other than asbestosis which is described separately along with other asbestos related diseases – see [www.hse.gov.uk/statistics/causdis/asbestosis/index.htm](http://www.hse.gov.uk/statistics/causdis/asbestosis/index.htm).

There is a long delay - almost invariably 10 years or more - between exposure and onset of disease; therefore most new cases or deaths from pneumoconiosis reflect the working conditions of the past and a majority of cases occur in individuals who have retired.

Two main data sources provide information about annual numbers of newly diagnosed cases of pneumoconiosis (disease incidence) in Great Britain: the Department for Work and Pensions (DWP) Industrial Injuries and Disablement Benefit (IIDB) scheme and The Health and Occupation Reporting (THOR) network. The IIDB figures may underestimate incidence of pneumoconiosis since some individuals may not be aware of their entitlement to claim compensation or may not wish to do so. The figures are also subject to large fluctuations from time to time in response to changes to the administration of the compensation system. Incidence may be more substantially underestimated by THOR since the scheme will only include those cases that are serious enough to be seen by a chest consultant, or that occur in individuals with access to occupational physicians.

## Overall scale

IIDB pneumoconiosis cases can be readily classified into 3 groups: 1) coal workers' pneumoconiosis, 2) asbestosis, and 3) silicosis or other unspecified pneumoconiosis (see Table IIDB01 [www.hse.gov.uk/statistics/tables/iidb01.xls](http://www.hse.gov.uk/statistics/tables/iidb01.xls)). Causal agents other than coal or asbestos are not recorded, but details of the industrial setting in which cases occurred suggest that the majority of the cases in the third group are in fact silicosis. For the THOR statistics, the category "pneumoconiosis" includes all kinds of pneumoconiosis.

In 2010, there were 345 assessed cases of coal workers' pneumoconiosis for IIDB, a rise in comparison to 2009; this follows a reduction in the annual numbers over the last few years since a peak over 1000 cases per year during 2002-2004. There were 60 assessed cases of silicosis or other pneumoconiosis, slightly fewer than numbers in the previous five years (see Table IIDB01 [www.hse.gov.uk/statistics/tables/iidb01.xls](http://www.hse.gov.uk/statistics/tables/iidb01.xls) and Figure 1). For silicosis and other pneumoconiosis cases, the industries to which the disease was attributed are quarrying, foundries and potteries, suggesting that silica is the predominant cause (IIDB06 [www.hse.gov.uk/statistics/tables/iidb06.xls](http://www.hse.gov.uk/statistics/tables/iidb06.xls)).

Over the last 10 years the annual average estimated number of new cases of pneumoconiosis (including asbestosis) within the THOR scheme was around 180 per year, with 102 cases reported in 2010 (Table THORR01 [www.hse.gov.uk/statistics/tables/thorr01.xls](http://www.hse.gov.uk/statistics/tables/thorr01.xls) and Figure 1).

Both the IIDB and THOR schemes indicate that most cases of pneumoconiosis occur in men over retirement age (see table IIDB07 [www.hse.gov.uk/statistics/tables/iidb07.xls](http://www.hse.gov.uk/statistics/tables/iidb07.xls) and THORR02 [www.hse.gov.uk/statistics/tables/thorr02.xls](http://www.hse.gov.uk/statistics/tables/thorr02.xls)). For example, around 70% of non-asbestos pneumoconiosis IIDB cases assessed in 2010 were aged 65 years or more.

Both the IIDB and THOR data sources are likely to substantially underestimate the incidence of silicosis. Silicosis may be necessary to cause silica-related lung cancer and the current burden of lung cancer in GB due to past exposures to silica has recently been estimated to be nearly 800 deaths per year<sup>1</sup> (see RR800 [www.hse.gov.uk/research/rrpdf/rr800.pdf](http://www.hse.gov.uk/research/rrpdf/rr800.pdf), Table 2, page 15). This figure suggests that the extent of the underestimation of silicosis could be very considerable. The risk estimate for silicosis for those with 15 years exposure to silica at various exposure levels reported in the Regulatory Risk Assessment<sup>2</sup> (see CD203 [www.hse.gov.uk/consult/condocs/cd203.pdf](http://www.hse.gov.uk/consult/condocs/cd203.pdf), page 12, Table 1) also implies a much higher figure than recorded in the available statistics.

This document is available from [www.hse.gov.uk/statistics/](http://www.hse.gov.uk/statistics/)

## Trends in incidence

Trends in the number of IIDB pneumoconiosis cases are difficult to interpret. Awards are known to have been affected by the introduction of benefit for coal miners with chronic bronchitis and emphysema in September 1993, and the changes to the eligibility criteria for these diseases in 1997. Claimants who fail to meet the criteria for these diseases often receive awards in respect of pneumoconiosis: in both 1994 and 1998 there was a sharp rise in pneumoconiosis claims which tailed off in subsequent years, which can be seen in Figure 1. The substantially higher numbers of cases from 2002 is likely to be due to a publicity campaign by the Department for Work and Pensions inviting people whose claims had been wrongly disallowed between 1994 and 1999 to re-claim, and also a more accurate method of data collection introduced in April 2002. Year on year changes in the estimated annual cases based on the THOR scheme are also difficult to interpret because the figures are affected by changes in the numbers and reporting habits of participating physicians.

Table DC01 ([www.hse.gov.uk/statistics/tables/dc01.xls](http://www.hse.gov.uk/statistics/tables/dc01.xls)) and Figure 1 show deaths due to silicosis and other work-related pneumoconiosis (excluding asbestosis). The number of pneumoconiosis deaths is largely determined by changes in the size and employment conditions of the mining industry many years ago. A downward trend in the number of pneumoconiosis deaths other than silicosis or asbestosis is evident over the last few years (with 131 such deaths recorded in 2009). In previous years, there have typically been between 10 and 30 deaths recorded as silicosis in the underlying cause; in 2009, this figure was 18.