

RR1083 – Risks to respiratory health in the grain industry

A detailed literature search was carried out to summarise evidence about respiratory disease caused by exposure to grain dust. Long term epidemiological studies examining the risk for respiratory disease in grain workers were undertaken in Canada and the USA from the 1970s to the late 1990s. Smaller studies were undertaken in the UK and Europe but mostly focussed on respiratory disease in arable and livestock farmers.

The conclusion of this review is that the damaging effects of grain dust on the respiratory tract are accumulative and occur at high concentrations of exposure. Acute responses also occur and include declines in lung function as well as irritation and inflammation of the airways. There is less evidence that grain dust exposure causes occupational asthma despite the dusts containing allergens. This may be due to a 'healthy worker' effect with those already having, or developing, asthma leaving employment earlier than others. There is stronger evidence that the long term effects of exposure include emphysema, chronic obstructive pulmonary disease and interstitial fibrosis of the lung. The risk of developing extrinsic allergic alveolitis has reduced through preventing damp conditions in stored grain.

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