Occupational Asthma

A Guide for General Practitioners and Practice Nurses

March 2010

British Occupational Health Research Foundation
This leaflet summarises the key evidence based advice for policy and practice on the risk management of occupational asthma.

The full guidelines, report, and analysis of relevant research is available from the British Occupational Health Research Foundation. It can also be accessed on the BOHRF website at [www.bohrf.org.uk](http://www.bohrf.org.uk).

BOHRF is an award-winning, innovative niche charity specialising in the provision of evidence based solutions to practical questions asked by employers and their advisers in both private and public sectors.

Our mission is:

‘Bringing employers and researchers together to produce research that will contribute to good employee health and performance at work’.
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- Occupational factors account for about 1 in 6 cases of asthma in people of working age.
- It is the most commonly reported occupational respiratory disorder in westernized industrial countries.
- Generally occupational asthma has a poor prognosis and is likely to persist and deteriorate unless identified and managed early and effectively.

This guide helps you to:

- outline the key recommendations of the systematic evidence review of the prevention, identification and management of occupational asthma. The full guidelines are available from the British Occupational Health Research Foundation (BOHRF).
- increase primary health care professionals’ knowledge of occupational asthma and its management.
- encourage early referral because this affords patients the best chance of improvement or cure

About this guide

Occupational asthma is a significant problem within the United Kingdom. This guide will help you in your clinical practice to manage occupational asthma. It will increase your knowledge of the differential diagnosis of occupational asthma and its subsequent management. It gives a brief summary of the 2010 occupational asthma guidelines, which are evidence based.

What is occupational asthma?

Occupational asthma is asthma induced by exposure in the working environment to airborne dusts, vapours or fumes, in workers with or without pre-existing asthma. Occupational asthma is subdivided into two groups:
  - sensitiser-induced occupational asthma characterised by a latency period between first exposure to a respiratory sensitiser at work and the development of immunologically-mediated symptoms
  - irritant-induced occupational asthma that occurs typically within a few hours of a high concentration exposure to an irritant gas, fume or vapour at work.

Most cases of occupational asthma are sensitiser-induced.

Occupational asthma is preventable. Symptoms may resolve completely with early diagnosis and early removal from exposure. Prevention and cure depend upon the effective control of exposure to respiratory sensitisers in the workplace and early diagnosis.

The development of occupational asthma has long term adverse health and economic consequences. In some cases occupational asthma has proven to be fatal.
Who is at risk of developing occupational asthma?

The most commonly reported professions to suffer from occupational asthma are:

- Animal Handlers
- Nurses
- Bakers and Pastry Makers
- Paint Sprayers
- Chemical Workers
- Timber Workers
- Food Processing Workers
- Welders

What can health professionals do?

Early diagnosis:
Consider the possibility of an occupational asthma diagnosis in all new cases of adult asthma.

Ask each new adult presenting with asthma symptoms or rhinitis about their job and the substances with which they work; referral to a physician with expertise in occupational asthma may be appropriate if they fall into one of the high risk professions listed. It is important to remember that rhinitis occurring in patients in high risk professions might signal an increased risk of developing occupational asthma within 12 months of the onset of rhinitis.

An improvement in symptoms when away from work has been shown to be a good indicator that occupational asthma may exist. Therefore, ask the following questions:

- When did the symptoms start?
- Do their symptoms vary when not at work?
- Do their symptoms improve when away from work?

Does a long holiday improve their asthma symptoms? (This is more reliable than asking if symptoms increase upon return to work.)

Lung function tests help with diagnosis. Measure peak expiratory flow at least four times a day, for at least three weeks including consecutive days at and away from work and analysed by a validated method.

The diagnosis of occupational asthma should be confirmed by a specialist in this field. However; there are a limited number of centres that can provide such expertise in the UK.

Skin prick tests or blood tests for specific IgE to suspected allergens help to identify sensitization, and together with other symptom related evidence will help identify the causative agent.

Prognosis:
Prognosis will improve for many provided they are withdrawn from exposure to the substance provoking their asthma at an early stage. Those workers who remain in the workplace which has induced their asthma are unlikely to improve and symptoms may worsen. Therefore specialist input is essential as early as possible.

Those who have relatively normal lung function at time of diagnosis and shorter duration of symptoms prior to diagnosis will have the greatest improvement.
Management of occupational asthma

Ideally, management involves redeployment to an environment with complete and permanent avoidance of exposure of allergen provoking asthma. However, in practice this may not be possible due to social, economic and personal factors of the individual. If complete avoidance of allergen is not possible, the individual should relocate to an area with less or occasional exposure to the allergen and remain under increased medical surveillance.

Routine management of asthma should follow the already established guidelines for example the British Thoracic Society “Asthma management guidelines”

Employers may have an occupational health service with whom the primary care team may liaise, with the patients’ consent.

Further information

British Occupational Health Research Foundation http://www.bohrf.org.uk
Health & Safety Executive http://www.hse.gov.uk/asthma
General Practice Airways Group http://www.gpiag.org
OASYS and Occupational Asthma http://www.occupationalasthma.com
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