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Bakers' asthma

Interest in occupational asthma has been rekindled in recent years by the description of important new causes such as isocyanates, solder fluxes, and biological washing powders.[1] Moreover, investigative techniques have been refined, and simpler methods of assessing the efficacy of treatment have been developed, leading to the possibilities that occupational asthma might become a scheduled occupational disease in Britain and that sufferers might receive industrial disablement benefit.

Of the multitude of known causes of occupational asthma, exposure to grains and flour is the one with the longest history and may also be the most common. Roman bakers are known to have worn masks to protect them from the flour, and Ramazzini, the father of occupational medicine, described shortness of breath and urticaria in grain workers.[2] In the 1930s the allergic basis of such symptoms in millers was shown,[3] while in the 1940s grain and flour dust were recognised to contain many potential allergens from the flour itself to wheat hairs, fungi, and even mites.[4] Curiously, more recent work has rediscovered the importance of mites in provoking asthma in farmers handling grains.[5]

There are no reliable estimates of the prevalence of asthma among bakers in Britain. Nevertheless, studies in the Federal Republic of Germany have given us some idea of the pattern of sensitisation and of the numbers of people who might claim industrial disablement benefit for bakers' asthma. Herxheimer[6 7] skin tested all bakers' apprentices in West Berlin and found a progressive increase in the number who showed sensitivity to flour up to over 20% by the fifth year of apprenticeship. Seven per cent developed skin, nasal, or bronchial symptoms, though very few regarded these as more than a nuisance. A more recent study[8] found symptoms in almost 5% of apprentices and about 20% of established bakers —though some of these had taken as long as 32 years to develop symptoms. All these men had rhinitis and most had asthma as well. This study also showed an increasing frequency of positive bronchial provocation tests with acetylcholine with greater length of exposure to flour, suggesting that increased bronchial reactivity may just as well be the result of sensitisation to flour as its cause.

Extrapolation from these figures suggests that there are large numbers of bakers presenting to their doctors with work-related allergic symptoms. Each year in West Germany about 300 bakers claim industrial injury compensation and about a quarter of these receive it.[8] In Britain clinical impressions suggest that bakers' asthma is not as common as the German figures imply. Possibly young men leave the trade if they develop troublesome symptoms early, leaving a relatively resistant population. Furthermore, much British baking is carried out by large companies, where control of dust levels is generally good, perhaps reducing sensitisation to a minimum. The addition of occupational asthma to the list of scheduled diseases will allow better estimates to be made of the size of the problem.

Even when bakers become eligible for industrial benefit, however, most will prefer to remain in their trade if their symptoms can be controlled. Prevention of exposure—primarily by reduction of dust levels but also by suitable respirators—remains the cornerstone of management. Occupational asthma also usually responds satisfactorily to standard treatment. Regular inhalation of cromoglycate or beclomethasone, supplemented by a beta-adrenergic aerosol, is usually sufficient to maintain the patient in reasonable health.[8 9] Rhinitis, too, often responds to regular prophylaxis with cromoglycate solution. An appropriate combination of environmental and pharmacological measures should be adequate to keep most victims of bakers' asthma well and at work; and disablement benefit should soon be available to those unfortunate enough not to respond to these measures.

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Correction

Management of alcohol withdrawal symptoms

We regret that in the fourth paragraph of our leading article on the management of alcohol withdrawal symptoms (14 February, p 502) the dosage of chlormethiazole was wrongly given as 500-1500 g every six hours. This should have read 500-1500 mg every six hours.