airwaves

Wisia Wedzicha, *Editor in Chief*

RESEARCH OUTPUTS, DISEASE BURDEN AND FUNDING

In this issue of *Thorax* Rippon and colleagues describe a study evaluating how research activity in respiratory medicine relates to disease burden in particular countries. The study was based on 81 419 papers identified between 1996 and 2001. Overall Finland, Canada, Spain, and the UK had the greatest relative commitment to respiratory medicine research (figure). The largest subject areas were asthma, lung cancer, and paediatric lung disease. Sweden and Finland led in asthma research, the Netherlands in COPD, Australia and the UK produced more publications on cystic fibrosis, and Finland and Australia had strong outputs in paediatrics. Generally, the research output of a country correlated poorly with its disease burden. In the UK lung cancer research output was low in relation to mortality from lung cancer. The authors identified some areas such as pulmonary circulatory disorders and sleep disordered breathing where there was poor support by funding agencies and industry. They conclude that greater research effort is required in disease areas with a high relative burden, while underfunded areas identified need to be given more recognition.

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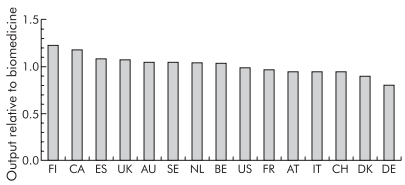

Relative commitment to research in respiratory medicine of 15 OECD countries (relative presence in respiratory medicine divided by relative presence in all biomedicine).

SARCOIDOSIS AND RESPIRATORY MUSCLE WEAKNESS

Sarcoidosis is a complex heterogeneous multisystem disorder that may present with reduction in exercise tolerance and fatigue, symptoms that may relate to respiratory muscle weakness. In this month's *Thorax* Spruit and colleagues describe a study evaluating muscle function, pulmonary function, and systemic inflammatory markers in sarcoidosis. They found that patients with sarcoidosis had reduced respiratory and skeletal muscle strength, reduced exercise capacity, and increased TNFα levels, although correlations between systemic inflammatory markers and muscle weakness were not generally found. In the accompanying editorial Costabel discusses some of the reasons for fatigue in sarcoidosis and emphasises the importance of paying attention to non-specific symptoms. Here is another patient group that should be considered for exercise training.

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ALLERGEN EXPOSURE AND ASTHMATICS

Most previous research on allergen exposure has involved studies on exposure to specific allergens to which the individual is sensitised. In this month's *Thorax* Langley and colleagues report a study on the relationship between natural exposure to domestic allergens and physiological parameters in asthmatics not sensitised to those allergens. The results show that, following exposure, there is increased airway reactivity in atopic asthmatic subjects not sensitised to dust mite or dog. The authors discuss the reasons for this observation and point out that the effect of the exposure is not consequent on the allergenicity of an allergen.

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VIAGRA FOR CF?

Cystic fibrosis (CF) is associated with mutations in the CF gene protein, the cystic fibrosis transmembrane conductance regulator (CFTR), with ΔF508 being the most common mutation causing protein retention in cells. In this issue Dormer and colleagues show that exposure to the PDE5 inhibitor sildenafil (Viagra) produced recruitment of the gene protein to the apical membrane, reappearance of chloride transport activity, and increased trafficking of the protein in cells. The changes reported in this paper were dramatic and rapid and associated with a drug that is already in clinical use. The findings suggest that further controlled studies are now required of Viagra in patients with CF.

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TRENDS IN ASTHMA AND OBESITY

In this issue of *Thorax* Wickens and colleagues describe an epidemiological study of the association of asthma and obesity in 11–12 year old New Zealand children in 1989 and 2000. There have been large increases in the prevalence of both asthma and obesity in recent years, but the authors concluded that increases in the BMI over time were unlikely to explain the increase in asthma symptoms. These findings are further discussed in an editorial by Chinn, who points out that there are few data on trends in BMI and asthma in adults. She also concludes that, on current evidence, controlling the weight of an overweight population would have little effect on the prevalence of asthma.

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