16. **Hole DJ,** Watt GC, Davey-Smith G, *et al*. Impaired lung function and mortality risk in men and women: findings from the Renfrew and Paisley prospective population study. *BMJ* 1996;**313**:711–15.
17. **Markowe HL,** Bulpitt CJ, Shipley MJ, *et al*. Prognosis in adult asthma: a national study. *Br Med J (Clin Res Ed)* 1987;**295**:949–52.
18. **Friedman GD,** Klatsky AL, Siegelaub AB. Lung function and risk of myocardial infarction and sudden cardiac death. *N Engl J Med* 1976;**294**:1071–5.
19. **Sidney S,** Sorel M, Quesenberry CP Jr, *et al*. COPD and incident cardiovascular disease hospitalizations and mortality: Kaiser Permanente Medical Care Program. *Chest* 2005;**128**:2068–75.
20. **Truelsen T,** Prescott E, Lange P, *et al*. Lung function and risk of fatal and non-fatal stroke. The Copenhagen City Heart Study. *Int J Epidemiol* 2001;**30**:145–51.
21. **Hozawa A,** Billings JL, Shahar E, *et al*. Lung function and ischemic stroke incidence: the Atherosclerosis Risk in Communities study. *Chest* 2006;**130**:1642–9.
22. **Batty GD,** Gunnell D, Langenberg C, *et al*. Adult height and lung function as markers of life course exposures: associations with risk factors and cause-specific mortality. *Eur J Epidemiol* 2006;**21**:795–801.
23. **Schanen JG,** Iribarren C, Shahar E, *et al*. Asthma and incident cardiovascular disease: the Atherosclerosis Risk in Communities Study. *Thorax* 2005;**60**:633–8.
24. **Nieto FJ.** Infective agents and cardiovascular disease. *Semin Vasc Med* 2002;**2**:401–15.
25. **Jousilahti P,** Vartiainen E, Tuomilehto J, *et al*. Symptoms of chronic bronchitis and the risk of coronary disease. *Lancet* 1996;**348**:567–72.
26. **Nieto FJ,** Folsom AR, Sorlie PD, *et al*. Chlamydia pneumoniae infection and incident coronary heart disease: the Atherosclerosis Risk in Communities Study. *Am J Epidemiol* 1999;**150**:149–56.
27. **Charakida M,** Donald AE, Terese M, *et al*. Endothelial dysfunction in childhood infection. *Circulation* 2005;**111**:1660–5.
28. **Brown DW,** Giles WH, Croft JB. Hematocrit and the risk of coronary heart disease mortality. *Am Heart J* 2001;**142**:657–63.
29. **Higenbottam TW,** Feyeraband C, Clark TJ. Cigarette smoking in asthma. *Br J Dis Chest* 1980;**74**:279–84.

Lung alert

Pharmacogenetic basis for severe asthma exacerbations

Activation of CD23, a low affinity IgE receptor, results in downregulation of IgE-mediated immune responses. CD23 is encoded for by the Fc fragment of IgE low affinity II receptor (FCER2) gene. IgE levels may increase in children with asthma treated with inhaled corticosteroids, and this may be explained by a decrease in FCER2 expression by corticosteroids. Also, elevated IgE levels are associated with an increased risk of severe exacerbations of asthma. This study investigates whether single nucleotide polymorphisms (SNPs) in FCER2 are associated with increased severe exacerbations in patients with asthma on inhaled corticosteroids.

Three hundred and eleven children randomised to inhaled budesonide and followed up over a period of 4 years as part of the Childhood Asthma Management Program were included in the study. SNPs were identified from resequencing FCER2 genomic fragments. The primary outcome was ''severe exacerbations'', which comprised either an emergency department visit or hospitalisation for asthma. Associations between FCER2 status and 4-year log IgE levels and severe exacerbations were analysed. Subsequent confirmatory analyses of the main effects of a novel common SNP, T2206C, were analysed in white and African American subgroups. Baseline IgE levels were associated with severe exacerbations. Variations in SNPs, including T2206C, were significantly associated with increased IgE levels. The SNPs associated with increased IgE were associated with an increased risk of severe exacerbations. There was a markedly increased tendency for severe exacerbations in both white and African American subjects homozygous for the mutant T2206C allele. This association was not seen in subjects not on inhaled corticosteroids.

This interesting study suggests a possible pharmacogenetic predictor of severe exacerbations in asthma. However, the specific nature of the subject group prevents generalisation.

► Tantisira KG, Silverman ES, Mariani TJ, *et al*. FCER2: a pharmacogenetic basis for severe exacerbations in children with asthma. *J Allergy Clin Immunol* 2007;**120**:1285–91

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