



The Leicester Cohorts

Coughs, Colds and Wheezes

in Leicestershire

The largest and oldest study of breathing problems in young people in Europe!

Study Participants' Newsletter 2006

June 2006

What is it all about?



Coughs, colds, wheezes and asthma are very common in children and young people, causing many visits to the doctor, hospital admissions and reducing quality of life. **In spite of this, doctors don't know enough about these breathing problems.** We are only just learning which children are likely to grow out of wheeze

and cough and which will have asthma later in life. We also don't know how to prevent breathing problems in children and young adults. The study on Coughs, Colds and Wheezes in Leicestershire is the largest study in Europe looking at breathing problems in children. **In this newsletter we'd like to update you on the progress of the study.**

How many children and young people are taking part?



- A total of 10350 families have taken part in this research
- They have filled in several questionnaires over the years

These are very large numbers and the study therefore gives us lots of vital information on all the common breathing troubles in children in the 1990's. In addition, most families have filled in follow-up questionnaires at regular intervals telling us how the children were getting on. Some children have been attending a special laboratory at the LRI for breathing tests and learning a lot about how the lungs work at the same time.



On our homepage (www.leicestercohorts.org) you can see what Sam did when he came to the lab.

How were the study participants chosen?

The addresses of the families were **chosen at random from all families living in Leicestershire.** We did not know in advance which children had breathing problems. In fact, most participants in this survey were very healthy.

Confidentiality: What happens with the questionnaires?



The questionnaires are treated in the strictest confidence. Only the answers to the questions (but no names or addresses) will be entered into a computer and then analysed anonymously. No individual results will be given to other people (not even to your doctor or to the hospital).



What we found out previously

1. **Answers to questionnaires by parents are very reliable:** Some families have filled in several questionnaires for their child. By comparing these, we have found that the information given by parents is very reliable and their memory of earlier illnesses is good.



(Kuehni CE, Brooke AM, Silverman M. Prevalence of wheeze during childhood: Retrospective and prospective assessment. *European Respiratory Journal* 2000;16:81-5)

2. **Wheezing illness in toddlers became twice as common between 1990 and 1998:** In 1990, 12% of all parents reported that their children aged 1 to 5 years were suffering from wheeze. This number increased to 26% in 1998. These very important results were published in **The Lancet**, one of the best known weekly journals for doctors in Europe! (Kuehni CE, Davis A, Brooke AM, Silverman M. Are all pre-school wheezing disorders increasing in prevalence? *Lancet* 2001; 357: 1821-25).



3. **Childhood immunisations do not increase the frequency of asthma and allergy in children.** When we compared children who got all childhood immunisations with those who didn't, we showed that there was no increase in asthma in immunised children – in fact immunised children were less likely to develop asthma. (Kuehni CE, Brooke AM, Davis A, Silverman M. Vaccinations as risk factors for wheezing disorders. *Lancet* 2001;358: 1186).

4. **Wheezing illness in pre-school children costs the NHS £53m per year!** We need to intensify research to find ways to prevent the development of wheezing in children to save tax-payers money. (Stevens CA, Turner D, Kuehni CE, Couriel JM, Silverman M. The economic impact of pre-school asthma and wheeze. *European Respiratory Journal* 2003;21:1000-1006)



What's new since the last questionnaire?

5. **Are wheezing and asthma caused by outdoor air pollution?** We found that troublesome cough



was clearly related to levels of air pollution caused by traffic near home, and that pollution might also cause new wheeze in previously healthy children. Pierson N, Rushton L, Harris RS, Kuehni CE, Silverman M, Grigg J. Locally-generated particulate pollution and respiratory symptoms in young children. *Thorax* 2006;61:216-20. We also showed that it is very important

that air pollution is measured objectively – which is done by the Leicester city council! Kuehni CE, Strippoli MPF, Zwahlen M, Silverman M. Association between reported exposure to road traffic and respiratory symptoms in children: evidence of bias. *International Journal of Epidemiology* 2006;35:779-86.

6. **Are chest problems in children different in ethnic minorities in Leicester?** Because of its very large south Asian population, Leicestershire is the ideal place to answer this question. We have found that wheezing in schoolchildren is as common in south Asian as in white children, but that South Asians are more likely to visit their doctor and attend the hospital. This might be because they are more likely to have food allergies and they have a more allergic and chronic type of asthma. Kuehni CE, Strippoli M-P F, Silverman M. Food intolerance and wheezing in young south Asian and white children: prevalence and clinical significance. *J Allergy Clin Immunol*, in press.



7. **Are some children missing out?** Even in the modern NHS, the results of the surveys which you have helped us to gather, show that diagnosis and treatment of chest problems are less satisfactory in: girls, ethnic minority children and children from poorer parts of the City. Chailliac ES, Silverman M, Zwahlen M, Strippoli MPF, Brooke AM, Kuehni CE. The therapy of preschool wheeze: appropriate and fair? *Pediatr Pulm*, in press. Michel G, Silverman M, Strippoli M-P F, Zwahlen M, Brooke AM, Grigg J, Kuehni CE. Parental understanding of wheeze and its impact on asthma prevalence estimates. In preparation.

Thank you very much again for your ongoing help in this important research!
The next newsletter will tell you all about the results of the current questionnaire round!