

## PRESS RELEASE

### Vaccinating babies might protect them from developing asthma

according to a Swiss and British team. Results of five-year study on almost 9,000 children revealed to European Respiratory Society Congress



PRESS OFFICE  
ers@cedos.int.ch

Vaccination of babies has long been suspected of triggering the development of asthma or making its outlook more severe. Indeed, increasing numbers of parents have been refusing to have their babies vaccinated or delaying vaccinations for months or years.

They are wrong, a Swiss and British team told the Annual Congress of the European Respiratory Society (ERS). The figures presented in Munich demonstrate that timely vaccination does definitely not increase their risk, and might even help to reduce the risk of the child developing asthma later on.

The results presented to the ERS Congress by Claudia Kuehni and Ben Spycher (University of Bern, Switzerland) and Mike Silverman (University of Leicester, UK) focus mainly on whooping cough vaccination, which had been the subject of the strongest criticism. However, they emphasise that they can also be applied to other infant vaccinations. "We decided to take the whooping cough vaccination as an example because that is the one that parents are most concerned about. But the same conclusions can be drawn for all of the other vaccinations traditionally offered to infants, such as tetanus, diphtheria, measles, rubella and mumps."

The study presented to the congress involved 8,700 subjects drawn randomly from a population of children aged one to four living in the British county of Leicestershire. The cohort was monitored prospectively for five years, at which point the children were aged between six and nine.

#### Vaccine data and four questionnaires

In order to compare the children's vaccination status (type and dose of vaccination, age of subject at the time of administration) with possible respiratory problems, the researchers drew both on the local database of the National Health Service (NHS) and on information provided by parents. The parents were approached four times, at intervals of between 12 and 24 months, to ask whether, during the past year, the child had exhibited the wheezing that characterises asthma. The results were then collated, for the different age groups, with data on vaccinations.

In the UK, the primary vaccination against whooping cough is administered via three injections, at two, three and four months of age, with a booster at the age of four years. However, some parents decline to have their child vaccinated, while others fail to complete the full course, or delay the vaccination for several months. These are the various scenarios that the researchers sought to cross-compare with subsequent respiratory symptoms.

#### Delay is harmful

The results presented in Munich by Kuehni and her colleagues caught the interest of the 16,000 participants attending the ERS congress.

Firstly, they show that, while 14% of children aged from six to nine have wheezing symptoms even though they were fully vaccinated according to schedule, the proportion increases by half as much again to 21% among children who were incompletely vaccinated or not vaccinated at all.

What is worse, they show that there are twice as many children with chronic allergic wheezing in the incompletely vaccinated/unvaccinated group (15% compared to 8%).

These figures, naturally, were adjusted using multivariate analysis for the various factors that could impact on wheezing and on compliance with the vaccination schedule, including socio-economic class, number of siblings, family history of allergy and atopy, respiratory infections, parental smoking, duration of breastfeeding, age of the mother when the child was born, and number of medical consultations.

### **Message to parents**

“Our results also show that, compared to children vaccinated on schedule, children who received their vaccinations late had more wheezing, especially where the delay was longer than three months”, added Kuehni.

“For the one to four age group, delaying vaccination beyond the seventh month increased the risk of wheezing by 56%, rising to 84% for the six to nine age group. And, as before, the increases for chronic wheezing were larger.”

In concluding their presentation in Munich, the researchers emphasised that vaccinations had led to a spectacular drop in infant mortality over the past fifty years and that this undeniable benefit should not be jeopardised by fears based on unscientific grounds.

“The overall message that should be drawn from our results is that vaccinations are indeed very unlikely to represent a cause of asthma. On the contrary, when administered according to the schedule, they might even provide protection against asthma in the future”, Kuehni stresses. “This is an important message for all parents worried about vaccinating their children.”

### **Original abstract title and authors**

#### **Is routine immunisation associated with a reduced incidence of childhood asthma?**

Ben D Spycher, MSc<sup>1</sup>, Michael Silverman, MD, FRCPCH<sup>2</sup>, Adrian M Brooke, MD, FRCPCH<sup>2</sup>, Marcel Zwahlen, PH<sup>1</sup> and Claudia E Kuehni, MD, MSc<sup>1</sup>.

<sup>1</sup>Dept. of Social and Preventive Medicine, University of Berne, Berne, Switzerland and <sup>2</sup>Department of Infection, Immunity & Inflammation, University of Leicester, Leicester, United Kingdom.

### **Contact**

Claudia E. Kuehni

University of Berne - Institute of Social and Preventive Medicine

Finkenhubelweg 11 - 3012 Berne, Switzerland

Phone: +41 (0)31 631 35 07, Fax +41 (0)31 631 35 20

kuehni@ispm.unibe.ch

www.ispm.ch