

PRESS RELEASE

SUNDAY 6 JUNE, 12.00 BST/13.00 CET

Overweight and wheezy: asthma link to obesity

London/Zurich, 6 June 2010 - The association between obesity and heart disease, diabetes and cancer is well known, but more recently it has emerged that obese children and adults are more prone to developing asthma. The more overweight a person is, the more difficult it is to treat the asthma, according to a Canadian expert speaking at the congress of the European Academy of Allergy and Clinical Immunology today. But when a person loses weight, asthma usually improves significantly.

An obese person is less able to control the asthma and is more likely to need emergency care. As a person's weight increases, so too does their need for asthma drugs such as corticosteroids. High doses of corticosteroids can lead to adverse side effects and - ironically - when given orally, weight gain. "Losing weight is very important," said **Professor Louis-Philippe Boulet** from the Quebec Heart and Lung Institute at Laval University. "Even losing 10 - 15% of weight can help reduce asthma symptoms and, therefore, the need for rescue medication."

Professor Boulet has also observed a dramatic improvement in asthma in morbidly obese patients, following bariatric surgery (an intestinal by-pass, enabling the person to lose up to 100kg). Commenting on a number of studies on the effects of surgery he said, "Within a year or two, asthma can improve to the point where the patient's need for medication can be markedly reduced."

If someone with asthma gains weight, asthma may, however, get worse, but it is reversible if they subsequently lose weight, restoring the asthma to the more manageable level it was originally.

Besides the mechanical impact of excess weight on the lungs, overweight and obese children are likely to undergo complex changes in their metabolism and inflammatory responses, a research team from Germany has found. Fat tissue secretes hormones such as leptin and adiponectin. Leptin regulates appetite and adiponectin regulates the metabolism of fats and glucose.

Dr Gabriel Nagel from the University of Ulm carried out a study of 462 ten-year old children in Germany. "We found high blood leptin levels to be associated with increased lifetime prevalence of asthma, but we did not observe any links between blood leptin levels and hay fever or stuffy nose and red eyes - rhinoconjunctivitis," she said. Low

blood adiponectin concentrations were associated with asthma without an allergic component. "It could be that obesity provokes low grade inflammation which in turn might lead to asthma," she added.

Doctors still do not fully understand the mechanisms underlying obesity and asthma. Professor Boulet suggested that a different type of asthma could develop in obese people who then benefit less from conventional treatment. Hormones, the immune system and genetic factors are being investigated by Dr Nagel, Professor Boulet and other international research teams.

It is likely is that maintaining normal weight not only reduces the risk of heart disease, cancer and diabetes, but asthma as well, both Professor Boulet and Dr Nagel concluded.

END

Symposium 1

NOTES TO EDITORS

- Professor Louis-Philippe Boulet, Quebec Heart and Lung Institute, Laval University, Québec, Canada lpboulet@med.ulaval.ca

Gabriele Nagel, Institut für Epidemiologie, University of Ulm, Germany
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- **Publications:** Obesity and asthma: a specific phenotype? Lessard A, Turcotte H, Lornier Y, Boulet L-P *Chest* <http://www.ncbi.nlm.nih.gov/pubmed/18641097>

Associations of adipokines with asthma, rhinoconjunctivitis, and eczema in German schoolchildren. Gabriele Nagel, Wolfgang Koenig, Kilian Rapp, Martin Wabitsch, Iris Zoellner and Stephan K. Weiland *Paediatric Allergy and Immunology*
<http://www3.interscience.wiley.com/journal/120122840/abstract>

- 150 million people around the world suffer from asthma.

About EAACI:

EAACI - The European Academy of Allergy and Clinical Immunology is a non-profit organisation active in the field of allergic and immunologic diseases such as asthma, rhinitis, eczema, occupational allergy, food and drug allergy and anaphylaxis. EAACI was founded in 1956 in Florence and has become the largest medical association in Europe in the field of allergy and clinical immunology. It includes 5'500 individual members from 107 countries, as well as 40 National Allergy Societies.

Throughout 2011, EAACI will develop different activities to celebrate the 100th anniversary of immunotherapy in Allergy, which will aim at increasing the knowledge in this field among healthcare professionals, increase awareness in the general population, and finally, promote the availability of immunotherapy for allergic patients.



EAACI 2010 Press Center

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