

Study: Cigarette smoking does not affect everyone in same way

June 4 2009

Cigarette smoking induced COPD, or chronic obstructive pulmonary disease, is a disease that results in severe breathing difficulty. According to World Health Organization (WHO) it is the fourth leading killer worldwide. However the mechanisms responsible for some smokers developing COPD and others evading the disease have not been well understood.

Dr. Manuel Cosio from the McGill University Health Centre, in collaboration with Italian and Spanish scientists, reports in the [New England Journal of Medicine](#) that an autoimmune mechanism, compounded by genetic predisposition in COPD, would explain the progression of the disease in some [smokers](#) and the evasion in others. COPD has a family connection and next of kin of patients with COPD have a much higher chance of developing the disease, a characteristic of [autoimmune diseases](#).

Although smoking is the primary risk factor for COPD in the western world, open fire pollutant cooking and heating fuels in the home is an important risk factor for the development of COPD in women in developing nations. "Smoke can play an important role in autoimmune diseases such as COPD, and other diseases like [rheumatoid arthritis](#), because it accentuates genetic predispositions to the disease," warns Dr. Cosio.

Yet contrary to previous scientific beliefs, COPD does not progress in the same way in all smokers. The authors describe three steps in the

potential progression to COPD in smokers: "COPD does not go from stage one, two and three in all people," Dr. Cosio says. "Depending on their personal balance between immune response and immune control some people would stop at stage one, others at stage two, and some will progress to stage three, full autoimmunity and lung destruction."

"Hopefully investigators will now see the disease in a totally different way," Dr Cosio stresses. "Our hope is that our research will open the door for a different investigation on COPD, where scientists learn more about the immunological processes and how these processes could be controlled and modulated to eventually provide the right treatment."

Source: McGill University Health Centre ([news](#) : [web](#))

Citation: Study: Cigarette smoking does not affect everyone in same way (2009, June 4) retrieved 24 April 2024 from <https://medicalxpress.com/news/2009-06-cigarette-affect.html>

<p>This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.</p>
--