

Genes influence smoking addiction: study

April 25 2010

Starting smoking and addiction to it could be driven to a large degree by your genes, a trio of studies published on Sunday suggested.

Researchers reported that single yet widely prevalent changes in the [DNA code](#) on several [chromosomes](#) were associated with a range of smoking habits.

The papers, published online in the journal *Nature Genetics*, are based on a trawl through the [genome](#) of more than 140,000 people, gathering smokers and non-smokers.

A flag was raised over a variant on a gene on Chromosome 11 that was strongly linked to smoking initiation, and another on Chromosome 9 that was associated with quitting smoking.

People with variants of genes on Chromosomes 8 and 19 were likelier to smoke more cigarettes -- about half a cigarette extra per day -- and run a 10-percent higher risk of [lung cancer](#) compared to non-carriers, another of the studies added.

The findings add to a basket of known gene variants linked to smoking vulnerability.

Together, they contribute towards diagnostic tools to identify people who may have a high inherited risk from tobacco.

"Smoking is bad for anyone's health," said Kari Stefansson, head of

deCODE, an Icelandic company which specialises in genomic data-mining and which led one of the papers.

"It is even worse for some, and today's discoveries continue to strengthen our ability to identify those people and giving them a compelling reason to quit."

Still unclear is the metabolic pathway by which these [genes](#) confer the risk, said Stefansson.

The link between lung cancer and smoking has been established for more than half a century.

But scientists are still trying to answer why there remain big variations in how much people smoke, their ease in kicking the habit and susceptibility to disease.

Premature deaths attributable to [tobacco smoking](#) are expected to rise to 6.4 million in 2015 and 8.3 million in 2030, according to research published in 2007 in the journal Public Library of Science (PLOS) Medicine.

(c) 2010 AFP

Citation: Genes influence smoking addiction: study (2010, April 25) retrieved 5 May 2024 from <https://medicalxpress.com/news/2010-04-genes-addiction.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>
--