Asthma Suffering Can Be Blamed On a Higher Genetic Risk

by JESSICA

Genetic Roulette

The genetic risk for asthma can be higher in some children than in others. This genetic factor increases the risk that they may develop this condition at a much younger age than their counterparts. Children with this genetic factor are more likely to have asthma continue into adulthood, as well. These are the results from new research findings that came from New Zealanders based at Duke University after a longitudinal study that lasted almost 40 years.

Daniel Belsky, who is a post-doctoral fellow, had the chance to further study how these newly discovered genetic risks can affect an asthmatic. Belsky works at the Duke Institute for Genome Sciences and Policy and the Center for the Study of Aging and Human Development. This study involved 1,037 participants whose history was tracked over 12 months, from 1972 to 1973.

What We Know from Earlier Studies

Health, behavior, and lung function were examined by Belsky and associated researchers. Earlier studies have shown that several genes are linked to cause an increase in the risk of asthma. This study was named the Dunedin Multidisciplinary Health and Development Study, and it involved tracking down all the participants since their birthdays in Dunedin New Zealand. The risk score genetically on each of these individuals was calculated by adding up the scores of all the risk variants carried by each one of the participants. The relation of those scores to the development and further progression of their asthma were then recorded and followed. This started from the participants' childhood and into mid-life.

The study showed that those who had a greater risk of genetically developing asthma developed it earlier in their lives than those who did not have the gene. This Dunedin study also concluded that the participants who had asthma in their childhood were still suffering from it persistently into adulthood. These people also had lung function problems as well as allergic reactions, which were connected in some way or another to severe asthma that was deemed to be persistent.

The participants with higher genetic risk were missing school and work more often because they had to be hospitalized during the asthma attacks. There is still a lot to be done in this field of research before the results of these types of scores can be routinely employed in medical practices. However, the study can improve the advanced research into the biology of asthma to create strategies that will foster the treatment and prevention of this chronic condition.

There are 26 million asthma patients in the US alone, including more than 7 million children. The Center for Disease Control and Prevention (CDC) has released these statistics and they are growing every year. Belsky feels that these genetic risks should be studied together with related air pollution and other factors, which may be modifiable.