Smoking has long lasting ‘footprint’ on human genome

A team of scientists headed Stephanie London…conducted a meta-analysis of DNA methylation sites across the human genome using blood samples taken from nearly 16,000 participants….

…

[The researchers found that] smoking-associated DNA methylation sites were associated with more than 7,000 genes, or one-third of known human genes [and] the most statistically significant methylation sites were linked to genes enriched for association with numerous diseases caused by cigarette smoking, such as cardiovascular diseases and certain cancers.
…

Dr. London and co-authors suggest that some of these long-lasting methylation sites may be marking genes potentially important for former smokers who are still at increased risk of developing certain diseases.

…

“Our study has found compelling evidence that smoking has a long-lasting impact on our molecular machinery, an impact that can last more than 30 years,” said…Dr. Roby Joehanes….

“The encouraging news is that once you stop smoking, the majority of DNA methylation signals return to never smoker levels after five years, which means your body is trying to heal itself of the harmful impacts of tobacco smoking.”

The GLP aggregated and excerpted this blog/article to reflect the diversity of news, opinion and analysis. Read full, original post: Study: Smoking Has Long-Lasting Impact on Human Genome