Medical Xpress

23andMe conducts the first genetic study of non-syndromic striae distensae (stretch marks)

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23andMe, the leading personal genetics company, has conducted the first genetic study of striae distensae (stretch marks). Researchers at the company identified four genetic markers significantly associated with the development of stretch marks that inform why some individuals are more susceptible to the skin condition.

Estimates of the prevalence of stretch marks range from 50-80 percent, however the exact causes of stretch marks are still widely unknown. Many factors, including excessive skin distension (during pregnancy, growth spurts, rapid weight gain), prolonged exposure to cortisol and genetics are thought to play a role.

Popular treatments, including topical creams and laser removal often focus on stimulating collagen production to decrease the appearance of stretch marks. The strong association between elastin and stretch marks discovered through this research offers an opportunity to improve methods to prevent and treat stretch marks.

"To date, no genetic variants were known to be associated with isolated stretch marks that affect the general public," said Joyce Tung, Ph.D., author and 23andMe Director of Research. "Through this first of its kind study, we've identified new genetic associations that can provide deeper insights into the root causes of stretch marks, and look forward to continuing research in this space. One intriguing area for further study is

the potential effect of genes associated with obesity on the development of stretch marks, both independent of and via changes in BMI. Replicating this work in a more precisely phenotyped population would also be a logical next step."

23andMe conducted a genome-wide association analysis across 33,930 unrelated 23andMe customers of European descent; within the sample there were a total of 13,930 cases and 20,862 controls. Because loose skin is a symptom of syndromes caused by deletion or loss-of-function mutations in elastin, it is likely that variations in the elastic fiber component of the skin extracellular matrix contribute to the development of stretch marks. The expression of collagens, elastin and fibronectin is also decreased in striae, which could be linked to the reorganization and overall loss of elastic fibers in skin affected by stretch marks.

More information: www.nature.com/jid/journal/vao … ull/jid2013196a.html

Provided by 23andMe Inc.

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