

Studying hair of ancient Peruvians answers questions about stress

December 9 2009

(PhysOrg.com) -- Recent studies show that one in three Canadians suffer from stress and the number is on the rise. But stress isn't a new problem.

While the physiological state wasn't properly named until the 1930s, new research from The University of Western Ontario proves [stress](#) has plagued humans for hundreds, and perhaps thousands of years.

The first study of its kind, published in the *Journal of Archaeological Science*, detected the stress hormone cortisol in the [hair](#) of ancient Peruvians, who lived between 550 and 1532 A.D.

When an individual is stressed - due to real or perceived threats - cortisol is released into nearly every part of the body, including blood, [saliva](#), urine and hair.

Emily Webb, a PhD candidate at Western in Archaeological Science and the study's lead author, says the findings are important because it will allow us to better understand how ancient people behaved and felt during their time on Earth but more importantly, to better understand stress and how it affects us today.

"By studying the lives of people using traditional archeological methods like surveying and [excavation](#) and combining that with new research techniques like sampling ancient hair specimens, we can get a good picture of what life was like and how our ancestors may have responded to life-changing experiences like illness and disease," explains Webb.

Analysis of cortisol levels in ancient hair allows researchers to assess stress during a short, but critical, period of an individual's life. For this pilot study, the Western researchers selected hair samples from 10 individuals from five different archaeological sites in Peru, and analyzed them in segments to determine cortisol levels.

While many of the individuals studied showed high stress levels right before death, Webb noted that a majority also experienced multiple episodes of stress throughout their final years of their life, again proving that much like today, stress was very much apart of ancient Peruvian's daily lives.

Source: University of Western Ontario

Citation: Studying hair of ancient Peruvians answers questions about stress (2009, December 9) retrieved 5 May 2024 from <https://phys.org/news/2009-12-hair-ancient-peruvians-stress.html>

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