Maternal smoking linked to shorter fetal telomere length
12 February 2015

shortened fetal telomere length and smoking during pregnancy," the authors write.

More information: Abstract
Full Text (subscription or payment may be required)

Copyright © 2015 HealthDay. All rights reserved.

(HealthDay)—Prenatal exposure to tobacco is associated with shorter fetal telomere length, according to research published in the February issue of the American Journal of Obstetrics & Gynecology.

Hamisu M. Salihu, M.D., Ph.D., of the University of South Florida in Tampa, and colleagues administered a self-report questionnaire and salivary cotinine test to confirm tobacco exposure in pregnant women admitted to the hospital for delivery. Genomic DNA from neonatal umbilical cord blood was analyzed to assess fetal telomere length. The ratio of relative telomere length was determined by the ratio of telomere repeat copy number to single copy gene copy number (T/S ratio).

The researchers found that smoking was inversely related to fetal telomere length in a dose-response pattern. T/S ratio was greater in descending order in nonsmokers, than in passive smokers, than in active smokers. For each pairwise comparison, significant differences were observed in telomere length. The greatest difference in telomere length was found between active smokers and nonsmokers.

"Our results provide the first evidence to demonstrate a positive association between

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.