

Abstract 4

Hair Nicotine and Cotinine as Biomarker of ETS.

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To accurately estimate fetal exposure to constituents of cigarette smoke, we have developed the use of neonatal and maternal hair measures of nicotine and cotinine as biomarkers of fetal exposure.

There is strong correlation between maternal and neonatal levels, and smoking history (no exposure, passive or active smoking) are well reflected in hair.

Because maternal hair grows 1-1.5 cm/ mo, these measures can document smoking history (or abstinence) over time, as well as gestational changes in nicotine metabolism when smoking is stable.