Lead and calcium concentrations were determined in scalp hair and finger nails of exposed and unexposed males by atomic absorption spectrometry (AAS). The mean levels of Pb in the finger nails ranged from 50-480 ug/g, and 50-240 ug/g for exposed and unexposed males respectively. The mean levels of Pb in the scalp hair ranged-from 30-410 ug/g, and 30-200 ug/g for exposed and unexposed males respectively. The mean levels of Ca in the finger nails ranged from 250-1650 ug/g and 315-J 860 ug/g for exposed and unexposed males respectively, while in the scalp hair the mean levels of Ca ranged from 130-1280 ug/g and 235-1275 ug/g for exposed and unexposed males respectively. The study established that there was negative correlation between Pb and essential element Ca in both scalp hair and finger nails samples from all the male respondents in that the levels of Pb increased the levels of essential elements Ca decreased and vice versa. A significant difference ($P<0.05$) was indicated when Pb and Ca mean levels were compared. Comparing the mean lead concentration in scalp hair with finger nails a significant difference was indicated in the two tissues ($P<0.05$). Human hair and finger nails are therefore recording filaments that can reflect metabolic changes over long period of time and hence furnish a print out of post nutritional event as dietary levels of some of the essential elements.