Title: Health implications of heavy metals in soil, scalp hair and selected food crops within Eldoret Municipality, Kenya

Abstract
Heavy metals were analyzed in soils, food crops and male scalp hair samples collected from two age group subjects; adults (18 - 45 years) and old age (46 - 55 years) males from polluted and relatively less polluted areas in Eldoret Municipality environs, Kenya. The samples used were collected from same sites as the individuals who had stayed in the sampled regions for more than five years. The samples were digested using acids and analyzed using Atomic Absorption Spectrometry (AAS). The results revealed that the consumption of food crops grown on contaminated soils have significantly increased the concentrations of selected metals in the human hair. Pd and Cd concentrations in soils and food crops showed elevated levels above the WHO recommended limits. Pb, Cd, Cr, Cu, and Zn concentrations were significantly higher (p < 0.05) in male scalp hair samples collected from polluted area as compared to control area. In conclusion, consumers in the study area are exposed to high health risks associated with bioaccumulation of heavy metals through ingestion of heavy metals resulting from contamination of food crops grown in the study area and should be sensitized on the dangers of heavy metals on their health.