Trace metal toxicity has became a major issue in many regions of the world. Human being and animals are directly or indirectly exposed to trace heavy metal toxicity. Trace heavy metals like Hg, Ni, Cr, Cu, Cd, Zn, Fe, Pb, As and Ra etc are highly toxic. There are total 40 heavy metals known so far. These metals are called heavy metals because their densities are more than water. These are called trace metals because their concentrations are measured in ppm or ppb. These toxic heavy metals can harm our body in various ways. These metals can interfere in the metabolic processes taking place inside our body. These metals are involved in Cell damage,enzyme inhibition. They can damage immune system, respiratory system and can cause many other problems. These toxic metals can release from many sources like coal mining, fertilizer, pesticides, waste water, manure, bio solids and air borne sources. The focus of our study was to asses the health risk and estimation of the concentration of toxic heavy metals in coal mining workers. For this project we visited the coal mining area in district Chakwal Punjab province Pakistan. We collected hair, nail and blood sample from mining workers. Total 60 samples including 20 hair, 20 nail and 20 blood samples were collected. All the samples (hair, nail) were washed before digestion. We used acid digestion technique for all the samples. All the samples were randomly analyzed using Atomic Absorption Spectrometer (AAS). We analyzed seven heavy metals (Ni, Cu, Cr, Hg, Zn, Fe, Cd). Out of these seven heavy metals, Hg, Ni and Cd were found below detection limit. The heavy metals like Cr, Cu, Zn and Fe were found significantly above the detection limit. The maximum concentration of Fe was found in all the hair, nail and blood samples. After Fe, the maximum concentration was observed for Zn in the blood sample. The minimum concentration was observed for Cr in all the blood samples. After Fe, the most distributed heavy metal in hair was Zn. The minimum concentration in hair samples was recorded for Cr. The maximum concentration in nail samples were observed for Fe. After Fe, the second most distributed metal in nail samples was Zn. The least distribution was noticed for Cr heavy metal in all the nail samples.