Mercury concentrations were determined in scalp hair of 233 school children aged 6-16 years. The study was carried out in three communities (Flix, Tarragona and Tortosa) from Tarragona Province of Spain. The influence of the variables place of residence, age, sex, fish and seafood consumption, number of dental amalgam fillings, hair color, parents' occupation, and smoking habits of the household members was also examined. The geometric mean mercury concentration in hair was 0.77 mcg/g. The place of residence, sex, and the frequency in consuming fish and seafood were the variables that significantly affected hair mercury concentrations. Girls had more mercury in their hair than boys, whereas hair mercury levels were significantly correlated with the frequency in the fish and seafood consumption, with the levels being more elevated when the fish and seafood consumption was also higher. Hair mercury concentrations were also affected by the place of residence, with school children of Flix showing lower mercury concentrations than those found from Tarragona and Tortosa. The remaining variables had no influence on hair mercury levels.