of elevated urinary porphyrin excretion among workers with chloracne who had worked with both PCP and PCBs. The contaminants present in the technical PCP produced at the study plant are listed in Table 1. Potential porphyrinogens include the chlorinated dibenzodioxins and chlorinated dibenzofurans. An alternative explanation may be contamination of technical PCP with hexachlorobenzene. While hexachlorobenzene was not measured for in the PCP produced at this plant, an industry composite of technical grade pentachlorophenol prepared from material supplied by three US manufacturers contained low concentrations of hexachlorobenze (50 ppm) which is a known porphyrinogen in man[NTP]. We were unable to test for statistical interaction between PCP and PCB exposure on urinary porphyrin excretion in our study because we did not have a separate study group exposed to PCBs alone.

Mean porphyrin levels in our unexposed group were higher than those of many, but not all, previous studies[Noweir]. Differences among these studies may be due to variations in laboratory procedures, a possibility supported by the high coefficients of variation of our porphyrin assays. An alternate explanation would be exposure to other porphorinogens, such as alcohol or other chemicals at the plant. Both of these factors would tend to bias the results towards the null hypothesis.

Workers with chloracne who were exposed to PCP in our study had higher levels of serum cholesterol, triglycerides, LDL-cholesterol, apolipoprotein B and apolipoprotein E than persons who were not exposed. These differences, however, were not significant after control for age, gender, use of antihypertensive medication, smoking, diabetes, and alcohol intake. Other studies have yielded conflicting results concerning the effects of PCP exposure on lipid levels. A previous survey at the study plant found a significantly higher percentage of workers with abnormal levels of VLDL and a lower percentage of workers with high levels of HDL, with no differences in triglycerides, cholesterol, or LDL among those with chloracne compared to those without chloracne. Baxter et al noted higher levels of triglycerides and lower levels of HDL-cholesterol, with