

DEPARTMENT OF PUBLIC HEALTH

2151 BERKELEY WAY
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November 2, 1966



Robert A. Kehoe, M.D.
Professor Emeritus of Occupational Medicine
Department of Environmental Health
University of Cincinnati
Cincinnati, Ohio

Dear Dr. Kehoe:

I have read with great interest your progress report as of July 31, 1966 on "Human Exposure to Particulate Lead Compounds in the Air Under Experimental Conditions". It is apparent that this work is bringing an improved basis for necessary public health programs and I am very grateful to you for presenting it.

You note in the Introduction that there are biochemical observations which are believed useful and that they have been examined but are not presented. Would you be kind enough to tell me if this data includes estimates of coproporphyrin in the urine or of delta amino levulinic acid. In our view, these types of data would be of very great assistance.

With respect to the data presented in Figures 9-12, we regret the absence of data for a control period; do you perhaps have this data? We also think it would be helpful if there were reasonable estimates of the background atmospheric lead exposures which would be relevant to the nonexperimental periods.

I take it all of the subjects were nonsmokers but I do not recall whether this was indicated.

I do not believe we quite agree on the existence or lack of existence of differences in blood lead among the populations studied in Los Angeles and Philadelphia. Admittedly the differences observed were small but they seem nevertheless to be real. Recently our Department has studied additional groups of individuals living near freeways and those living on the seacoast in Los Angeles and this supplemental data has been helpful in confirming these gradients. This material is being prepared for publication at the present time.

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You have also argued that the nature of the particulate lead used in the experiments is such as to be proportionately well retained but you have not indicated for this series of studies the proportional retention. I am inclined to consider it an open question as to whether the nature and particle size distribution of atmospheric lead, say in Los Angeles, is likely to be associated with a lower retention fraction than in the experiments which you are reporting. From the information available to us, it seems reasonable to feel that they might be quite similar.

Finally, we still feel it important to consider whether persons with inherited abnormality of porphyrin metabolism may not be unusually susceptible to modest body burdens of lead. I wonder if you have investigated this matter.

I realize that I have raised a number of questions, some of which may not be very easy to answer, but the matters are of substantial importance in responding constructively to the public anxiety on this matter, and we know that we can count on your helpfulness.

Sincerely,



John R. Goldsmith, M.D., Chief
Environmental Hazards Evaluation Unit

JRG:dm