

October 31, 1966

Dr. P. S. I. Barry
The Associated Octel Company Limited
Ellesmere Port, Cheshire
England

Dear Pat:

Let me say first how much I enjoyed visiting your home and seeing Anne and yourself with your attractive children. It was also good to meet the two of you, separately and together, at various times, in Vienna. The period which we spent in London was especially delightful on this trip, and I shall look forward to our return with great favor. Please do give my love to Anne with my best wishes.

With respect to certain items of experimental work which I thought it likely that Dr. Barnes might be interested in undertaking, I am glad to give you my ideas. It is possible that some of the people at the London School of Hygiene and Tropical Medicine in it, in whole or in part, would be interested also. If Barnes or the others (Thompson, Schilling, Etc.) should want details from me, I'd be happy to give them advice and information.

There are two ways of approach (at least) to the problem I have in mind. They have to do with the means of determining the range and average quantities of lead that occur in the general diet of people in your country, and their fate in the human body.

One of these is to follow the intake and output of lead in a series of satisfactory male subjects; following the intake in food and beverages, by obtaining duplicates of (as nearly identical as can be) everything eaten, and drunk, compositing the food but keeping the items of beverages (water, beer, ale, wine, etc.) separate for a time, so as to see their contribution. Individual items of food may also be separated out for analysis, so as to get some idea of their specific contribution. Also having each subject keep a record of everything he eats or drinks, for the purpose of following the sources of lead as well as inferences, based on prior observations, will permit; and following the output in the feces and urine, all of which are to be collected daily.

The concentration of lead in the blood should also be determined frequently so as to establish the pattern of the variability, whether much or little.

Relatively brief periods - such as 1 month - of observations on a number of subjects, selected for their possible or likely variability, in terms of choices and quantities of food, would cover the ground more rapidly than prolonged observations on a few. In a year's time one could gather quite a quantity of useful data.

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The other method is based on the observation, now fully documented by extensive data, that the lead content of the food and beverages (plus any other quantities taken by mouth) can be determined with approximate accuracy by collecting (as nearly as possible) 24 hour specimens of feces, from healthy young persons of regular alimentary habits. If the individual is regular in this respect, the daily output of feces, over a period of several days to a week, when averaged for 24 hours, will show just how much lead he is taking in food and beverages (so long, of course, as this is the only source of ingested lead, i.e., no exposure to lead dust and no continuing occupational or other appreciable inhalation of lead other than that in the general ambient atmosphere).

I feel sure that such data as these will be extremely useful to you at some future time, and also that they will yield some very valuable clues to the situation in England, with respect to the lead content of the food and beverages generally.

The lead content of the blood of such subjects, checked repeatedly (as frequently as may be feasible) should also be known for comparative persons.

I am quite sure that Dr. Barnes will have his own ideas to contribute to the information obtainable in the investigation of "normal" subjects, but I would certainly like to see some data that are comparable to ours in these respects.

With best regards,

Sincerely yours,

Robert A. Kehoe, M.D.

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