

December 17, 1952

Mr. Herbert J. Weber
Chief Industrial Hygienist
American Brake Shoe Company
2501 Blue Island Avenue
Chicago 8, Illinois

Dear Mr. Weber:

Your letter of December 2 concerning your paper should have had a reply at once, and the manuscript should have been returned to you, but I have been preoccupied with other matters to an extent that made it impossible for me to take care of any but the more urgent items of correspondence. This was pushed into the pile of things to be attended to when time would permit, in the feeling that your further work would take time and that I needn't hurry.

I'm glad you have decided to carry out further observations. I feel sure that you can find the necessary evidence to establish the facts to your satisfaction. If I can assist you later in the manner indicated by my previous suggestions, or in any other way, do not hesitate to call upon me. I may not be able to respond to your request with promptness, but I shall be glad to do what I can.

I return the paper to you herewith.

With kindest regards and best wishes for Christmas and the New Year, I am

Sincerely yours,

Robert A. Kehoe, M. D.

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AMERICAN BRAKE SHOE COMPANY
MEDICAL DEPARTMENT
2501 BLUE ISLAND AVENUE
CHICAGO 8, ILLINOIS

December 2, 1952

Dr. Robert A. Kehoe
University of Cincinnati
Dept. of Preventive Medicine & Ind. Health
The Kettering Laboratory
College of Medicine - Eden Avenue
Cincinnati 19, Ohio

Dear Dr. Kehoe:

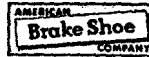
Thank you for your letter of November 25, 1952 containing your comments on my paper which I had been considering for publication. I certainly agree with you that there has been enough confusion and controversy in the literature. Recent contradictory statements in regard to porphyrins is a good example.

I regard your criticism of my paper to be so valid that it has raised doubts in my own mind as to the conclusions which I drew.

In fact, I was at a loss myself to account for comparable urinary lead content and entirely dissimilar values for blood lead. One reviewer offered the following as a possible explanation:

"the blood lead was in a different form in the two groups. The lead in the Melting Department employees may exist in the blood in two forms, such that, part can pass out through the kidney; whereas the other part cannot. Under these circumstances, the part which can be excreted by the kidney might be the same in both cases, but in addition the one group may have the lead bound with the other substances in the blood, which prevents its excretion. The lead in the blood is carried almost entirely in the red blood cells. No excretion of this blood would occur as long as it was bound firmly in the red blood cells. Differences in the storage of lead in the soft tissues and bones may also be factors. Mobilization of lead already stored in the bones may also be a factor."

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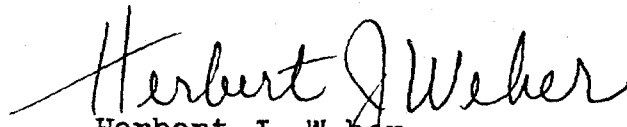
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- 2 -

In view of your criticism, I now believe that publication would be premature and I prefer to delve further into the subject in the interest of more precise evidence rather than add to the controversy now existing in the field.

Thank you again for the benefit of your comments.

Sincerely yours,


Herbert J. Weber
Chief Industrial Hygienist

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November 25, 1952

Mr. Herbert J. Weber
Chief Industrial Hygienist
American Brake Shoe Company
2501 Blue Island Avenue
Chicago 8, Illinois

Dear Mr. Weber:

Fortunately I had the opportunity of seeing you in Pittsburgh and of discussing certain aspects of your paper on lead in person. I am especially relieved to have been able to explain my failure to reply at an earlier date, since otherwise I should be most embarrassed in writing at this late date.

I shall confirm my verbal criticisms of the paper in writing, and I shall be brief and to the point. First, let me say that I regard the observations as very useful and essentially reliable. I suspect that some of the samples of urine were contaminated, since it is so difficult to avoid this factor at all times. I think it likely that statistical examination of the data will reveal the extent of this likelihood, and will fix, fairly satisfactorily, the limits of the reliability of the results.

The interpretation of the results, on the other hand, seems faulty to me, and I think the data should be examined carefully with this criticism in mind.

First, except in unusual circumstances, relating to individual variability based on limitations of excretory function, the concentration of lead in the blood of individuals and groups exposed to inorganic lead compounds is the most satisfactory criterion of the severity of exposure to lead and the extent of the absorption of lead into the body. Therefore, your conclusion that the two groups of men under study here had absorbed lead to approximately the same extent, is, I think, incorrect. On this evidence alone, I should conclude that they were very different in this respect.

My conclusion is supported further and very effectively by the presumptive evidence as to the size of the particles under the two sets of conditions. It seems most unlikely that the coarser particles, which occurred with considerable frequency and which prevailed generally (in the relative sense) in the machine shop, could have been inhaled and absorbed in the lung to anything like

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