

American Brake Shoe Company



MEDICAL DEPARTMENT

4550 West 26th Street, Chicago 23, Illinois

Telephone: LAwndale 1-3210

November 11, 1957

Robert A. Kehoe, M. D.
University of Cincinnati
Department of Preventive Medicine and Industrial Health
The Kettering Laboratory
Cincinnati 19, Ohio

Dear Bob:

Thank you very much for your letter of October 28, 1957 replying to the request I send you for information on high bloods leads and low urines. I was glad to have your information and also the references you included.

We are going to check our records further and if we are able to come up with anything I shall let you know about it.

Kindest personal regards.

Sincerely yours,

A handwritten signature in dark ink, appearing to read "L. E. Hamlin".

L. E. Hamlin, M. D.
Medical Director

LEH:vm

October 28, 1957

W. D. Hamlin
Medical Director
American Brake Shoe Company
100 West 26th Street
Chicago 23, Illinois

Dear Ham:

The question raised in your letter of October 24 is one to which, so far as I am concerned, there is no satisfactory answer. The relatively low concentration of lead in the urine of persons, especially children, who are suffering from lead intoxication, as compared with the concentration (often quite high) in the blood, has been seen by us frequently over the years. This is one of the reasons that led us years ago to advocate analysis of the blood of persons who have actually or allegedly been subjected to exposure to inorganic lead (in contrast with tetraethyl lead, which does not elevate the lead concentration in the blood to any great extent). We have often seen low findings in the urine, succeeded by significantly higher findings later, when, apparently, a child began to recover. I have believed this to be evidence of renal injury, perhaps edema, perhaps vascular changes, ischaemia or glomerular damage, but I have no real evidence of the nature of the situation. We have also seen fairly persistently low excretory levels (i. e. lead excretion), in association with high concentrations of lead in the blood of persons who have the Bright's Disease type of renal insufficiency, in a few cases. The ordinary case of vascular disease with some apparent renal involvement does not show this type of picture generally. Frankly, I don't understand the phenomenon.

There are also other vagaries of the excretory response which indicate the existence of factors which we fail to understand. In general, as you know, the urinary excretion of lead over any considerable period of time (24, 48 or 72 hours) is fairly predictable in relation to the rate and extent of the current lead absorption, but this is not always true, and therefore we are dependent upon the concentration in the blood if we are to establish the facts in this regard. My general belief over the years, as the result of the preponderance of evidence, is that poor renal excretion of lead is the result of preexisting renal pathology, but the exceptional cases referred to above in children, in which the process appears to be reversible, indicate that damage may be associated with the lead intoxication itself.

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Dr. L. E. Hamlin - (2) - October 28, 1957

As to the problem of childhood lead poisoning, we have a tremendous volume of information, much of which came originally from Queensland. There were numerous articles in the Medical Journal of Australia. A bulletin entitled Plumbism and Chronic Nephritis In Young People in Queensland - Service Publication (School of Public Health and Tropical Medicine) Number 2, by R. Elliott Murray of the school listed above in the University of Sidney, was issued in 1939. L. J. Jarvis Nye wrote a monograph on the subject in 1953 entitled "Chronic Nephritis and Lead Poisoning" (Angus and Robertson, Ltd. 89 Castlereagh Street, Sydney, Australia). I doubt that either of these publications is available at present. You might address an inquiry about the monograph to the address given above, and about the bulletin to The Australian Medical Publishing Company, Ltd., Seamer Street, Glebe, New South Wales. I have had the latter for many years, while Nye sent me a copy of his book, which, I believe, is out of print. There are, however, numerous articles in the Medical Journal of Australia running back as far as 1929 and as recent as 1947. There are also numerous articles in American publications as far back as 1922. Among the best of these are the articles of Park - American Journal Dis. Child, 41:485, 1931; also J. Ped., 3:265, 1933, and those of Vogt - American J. Roent. Radium Therap., 24:550, 1920; also J.A.M.A. 98:125, 1932; of Vogt and McKhann, Radiology, 22:37, 1934. There are so many recent articles that I would have a hard time, without considerable trouble, giving you a good list. The same thing applies to the publication on lead in relation to vascular disease and renal disease. I can dig some of these out eventually, but I am short of time at the moment. None of them will satisfy your desire for real evidence. The work of George in gathering together the significant evidence on this subject is the most impressive that I have found. As he indicates, much more work will be required to supply proof.

Sincerely yours,

Robert A. Kehoe, M. D.

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American Brake Shoe Company



MEDICAL DEPARTMENT

4550 West 26th Street, Chicago 23, Illinois

Telephone: LAwnsdale 1-3210

October 24, 1957

Robert A. Kehoe, M. D.
Kettering Laboratory
Eden and Bethesda
Cincinnati 19, Ohio

Dear Bob:

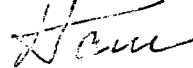
I am wondering if you are aware of any recent developments or evidence to the effect that lead is capable of producing direct damage of renal tissue. For some time now, we have been concerned with a number of cases who show high blood leads but low urinary lead excretion. We have been doing P.S.P. tests on a fair number of individuals in an attempt to find some explanation for this discrepancy.

At the moment we are of the opinion that perhaps 60% to 70% of these employees show impaired renal function as exemplified by the P.S.P. results. They are all chronic cases who have been exposed to high lead concentrations over many years. We are perplexed because we cannot determine whether the renal impairment is the result of exposure to lead or whether it is due to some other pathological condition. Not too many of these employees show other signs or symptoms that might indicate disease of the kidney from causes other than lead.

I have been interested in the recent pamphlet sent out by Manfred Bowditch and Dr. William E. George, Chief Medical Officer, of the Consolidated Zinc Proprietary, Ltd., and his review of health problems associated with lead, particularly the references to non-industrial lead poisoning in children in Australia.

If you have any good references on the subject, I would greatly appreciate receiving them along with your own views.

Sincerely yours,


L. E. Hamlin, M. D.
Medical Director

LEH:vm