January 4, 1966 372-5717

Lester H. Hergesheimer, M.D.
Plant Physician
National Lead Company
2607 East Cumberland St.
Philadelphia 25, Pennsylvania

Dear Doctor Hergesheimer:

I regret my delay in replying to your letter of November 22, and will undertake to make amends. I was out of the country (in Santiago, Chile) on a special mission for the Pan American Health Organization, for three months and returned only a short time ago. Some of my correspondence, including your letter, arrived while I was on my way home (by ship), so that it had to wait for my return and while I undertook to attend to several seemingly urgent matters, I think you should know that I am no longer the Director of this Laboratory and the Department of the Medical College of which it is a part. I retired in July of 1965, and have been succeeded by Edward P. Radford, M.D., formerly of the Harvard School of Public Health. I expect to remain here for a time, however, in order to complete some work that has been in progress for some time under my direct guidance, and to find an "understudy" to take it over. I can be addressed here, therefore, for some time to come.

The answer to your question, with respect to our publications or my opinion, depends very much upon your meaning of "lead absorption without symptoms",, There are those who speak of "lead absorption" as some kind of a physical state which is almost but not quite that of a frank intoxication, and when you speak of "evidence of lead absorption", I wonder what you mean. Just in order to be quite explicit on this matter, and yet not pedantic (for the language in this matter has become too confused to pass for communication), let me emphasize what you already know, I am sure, namely - that all of us at all times absorb lead. When you speak of this phenomenon in any relationship to disease or illness, you must, therefore, deal in the quantitative aspect. Do you mean a dangerous degree of absorption, as defined in present, precise terms, as a grossly abnormal "body burden" of lead, or as a dangerously elevated concentration of lead in blood or urine? Or do you mean a gingival "lead line", or an alteration in the histology or chemistry (porphyrin or amino acid content) of the blood, (the former is not, necessarily associated with intoxication by lead, which an excess of porphyrins in blood or urine may be a sign of such intoxication, if other factors can be excluded).

Now if I may assume that your use of the term "absorption" in its simple, physiological sense, the mere absorption of lead, within what are now accepted as safe limits, involves no risk and requires no treatment. In the case of persons who are employed in the lead-using industries, there are sound means of determining whether or not they are in danger, and when they approach the border line between safety and danger, their further exposure to lead, as an occupational hazard, should be terminated, or reduced to an appropriate level. At this point, they are not ill and they neither require nor should be subjected to treatment. (The use of chelating agents for the removal of lead from the body of a well man is a medical measure fraught with grave ethical questions that need thorough exploration before being undertaken. There may be situations that justify such therapy but these are indeed rare, and are generally dubious.) Given time and freedom from potentially dangerous exposure to lead, the excess burden will be excreted, and the man can return to his former work (which, by this time, should have been made safe). This means, of course, that the man can work during the entire period of his restoration, for he is not ill, nor is he any more likely than any other workman to become ill. What is required, therefore, in a plant in which there are operations with lead that are difficult to control, is a regimen of supervision that will detect risk among the men, and transfer them to other operations that are free of lead hazards. By such means the danger can be dealt with in time, and any and all cases of intoxication can be prevented. This can and should be done in all of the lead trades. (If jobs are not available for such transfers, the only alternative is to reduce the hazard to entirely negligible proportions in all operations.)

It is possible, of course, to surround modern technical operations in the lead trades, with appropriate safeguards, so that the conditions under which men work are and continue to be safe. The role of the industrial physician is to make sure that these safeguards are adequate, and that they are maintained adequately, through his supervision of the workmen. If these are not, it is his duty to make the facts known and to insist on executive action until the appropriate measures of safety are taken. There is no organized activity (except war) in this country, that can justify its existence at the cost of human health and life, and it is the function of physicians in industry to make sure that this principle is fully understood by industrial management and acted upon.

Perhaps you will understand and accept my words concerning the role of the industrial physician in the spirit in which they are given, if you reflect on the fact that the means of eliminating lead poisoning from industry have been available for many years; that this is the richest country in the world and in many respects, the most advanced; and yet the incidence the preventable disease - lead poisoning - in this country is still high and probably the highest of any occupational disease. This is, indeed a shameful fact, which exists because our people in industry, including, unfortunately, many of our industrial physicians, are not familiar with what is known, and that the policies of many groups in industrial management, in this respect, are not realistic. I've been

at this a long time, in practically all segments of large and small American industry, and I know whereof I speak. I feel called upon, therefore, particularly within our own (medical) circles, to speak of it again and again. We, as physicians, should engage actively in influencing the policies of industry in matters of industrial health and hygiene. As these matters have stood for a long time, many, if not most, of the physicians in the lead-using industries have been concerning themselves with the treatment of lead poisoning, and not with its prevention by means of the removal of the threat. The proper design of plant and operating equipment and the control of the dissemination of lead through the work areas are, of course, matters of satisfactory engineering. The physician, as a rule, cannot attend to these matters. He can, however, demonstrate the extent of the adequacy or inadequacy of these measures of control and he can provide the impetus that will bring them and keep them up to standard, (for the maintenance of operating and hygienic equipment and the good qualify of the housekeeping are stern necessities if success is to be achieved).

I am sending you, under separate cover some publications that will be of interest to you. If these (or other matters) raise questions in your mind that you would like to put to me, do not hesitate to do so.

It may turn out that you would like to pay a visit to this Laboratory and find out for yourself what has been and is being done here in this field of industrial health. If so, I would be pleased to arrange with you a mutually convenient time during which we could discuss the various aspects of the matter at sufficient length.

Sincerely yours,

Robert A. Kehoe, M.D.

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Philadelphia Branch

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November 22, 1965

Dr. R. A. Kehoe
Kettering Laboratory
University of Cincinnati
Cincinnati, Ohio

Dear Dr. Kehoe:

It was recently my privilege to be employed as director of the Medical Department of the Philadelphia Branch of the National Lead Company.

In refreshing myself concerning the medical aspects of lead toxicology, I am impressed by the extensive literature on safe standards and lead intoxication, but find very little on the handling of patients who give evidence of lead absorption without symptoms.

Does your laboratory have any available reprints on this subject? If so, I would appreciate any help or suggestions you might give.

Sincerely yours,

Lester H. Hergesheimer, M.D.

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LHH/MG