

April 29, 1943

Dr. Mary M. Maher,
Remington Arms Company,
Bridgeport, Connecticut.

Dear Dr. Maher:

By this time you will have received the needles and containers sent you on the 26th. We shall try to keep you supplied, but the demand for our services is great and we have to spread our supplies out to some degree.

Let me thank you for the data you are sending on the cases. It is very helpful and will enable us to give you better information. I think I should warn you not to depend too much upon the stippling as an indication of the extent of the lead absorption of individuals. The level of stippling at which the individual goes along depends very much upon his own physiologic make up with respect to hematopoietic irritability, if I may use such a vague term. Abrupt or progressive changes in the level are more significant than the absolute values. Therefore a figure of 10 to 15 per fifty fields may be more significant in one individual than twice or three times that number in another.

I enclose the report of results given over the telephone. I suspect that the results on the urine of [redacted] and [redacted] may be in part due to slight contamination with dust or foreign material. Any trace of dust on skin or clothing or in the air may cause such results. It is difficult to be certain, especially in the case of small samples collected at a plant. In any case the blood levels are all high. (Of course, the same possibility for contamination from the air or surroundings exists in the case of the blood.) The urines with one exception are also high, and the two referred to above are excessively high in relation to blood values. (The tendency is toward a steadily increasing divergence in the lead concentration in blood and urine as absorption increases, and therefore, one must be cautious in interpreting high results. There is also the factor of variation in rate of water output, and this may be quite significant in the case of small samples.

Admitting all of these possibilities, I interpret these results as meaning that the lead exposure to which these individuals have been subjected has been significant and capable of causing

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plumbism.

In the case of [REDACTED], we may be dealing with a highly dilute sample of urine (of small volume), or with a slight contamination of the blood samples. We have seen one instance in an adult and several in children, in which a patient with a high blood lead concentration was unable to secrete a high concentration of lead in the urine. This might be the case here. It would be wise, I believe, in this case, or in any other in which the results are ambiguous, to repeat the observations. It is unfortunate that the collection of a large sample of urine is difficult in the case of the female employee. Otherwise, I should suggest the advisability of collecting a sample of a liter or more, by supplying a container and having a considerable volume collected while the employee is at home, where, after bathing and changing clothes, the likelihood of contamination is much less.

I am sending you one of the working copies of one section of the report of my committee (the A.P.H.A. Committee on Lead Poisoning), as yet unpublished, for such use as it may be to you in its present form. I apologize for its state, but there is not time to copy it, and there will be slight changes before it is published. It is not officially approved by all the members, but you can keep it until the final report is out. It would be better, I think, if you were to return it to me later, since it cannot be used except privately, in its present form.

Cordially yours,

Robert A. Kehoe, M. D.

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