

March 25, 1947

Dr. Charles Chesner, Pathologist,
St. Joseph Hospital,
Broadway and 20th Street,
Lorain, Ohio.

Dear Dr. Chesner:

In reply to your letter of March 22 concerning certain suspected cases of lead poisoning, let me first point out that this is not a diagnostic laboratory, but rather an investigative one. Although we have undertaken to give our colleagues all the assistance we can, in recognition of the fact that services of the type you refer to are very difficult to obtain, still we cannot extend our facilities indefinitely for this purpose. Moreover, we are much more concerned with the general investigation of the community problem of industrial lead poisoning than we are with individual diagnostic problems, while the conduct of such work for fees is outside of our field. For these reasons we do not feel that we can do this work, unless we can obtain rather complete records on the cases with which we deal. Such records involve a carefully recorded occupational history, the clinical findings, and all the other pertinent data in a very careful work-up of the case. It is especially important, in the interpretation of analytical data that we have the complete history of exposure to lead so far as it is available, and especially that we know when the person worked last, so as to establish the last day on which exposure took place.

We do make a charge to cover the actual cost of the analytical work, in those instances in which the patient or his employer can accept the responsibility for payment. Obviously we make no charge, when in the judgment of the physician, the patient cannot afford to pay. The charge is \$5.00 per analysis, which barely covers the cost of the work.

Your first question must be answered with some care. The effect of any known treatment of lead poisoning on the analytical results that can be obtained on blood and urine is completely negligible. Despite the published information to the contrary, there is no significant means of altering the lead concentration in the blood or the rate of lead elimination from the body by any therapeutic means. If the individual discontinues his exposure, he loses lead from the body at a rate which is substantially uninfluenced by any therapy. The rate at which lead is eliminated decreases as the quantity available in the body for excretion diminishes. The rate of this decrease depends upon the quantity of lead which has been absorbed and the length of time over which absorption occurs. Therefore, if the lead exposure of the individual has been very brief, the lead concentrations in blood and urine return to substantially normal limits rather promptly. If the exposure has

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been prolonged, this process takes a long time. One may find significantly elevated lead concentrations in blood and urine for as long as 6 to 18 months, dependent upon the duration and severity of the lead exposure. Generally speaking, if your patient was exposed to lead up to a few weeks ago, regardless of the length of his exposure, you shall be able to find evidence of a significant elevation of the lead concentration.

Your second question can best be answered by saying that if you want us to examine samples from a man or men, we shall send you containers and full instructions for the collection of the samples. Such instructions should be followed with meticulous care, for otherwise the examination of the samples would be useless.

The cost of the work, as I have indicated, will be \$5.00 for the examination of blood, and \$5.00 for the examination of the urine, or there will be no charge at all if the patient cannot afford to pay.

Cordially yours,

Robert A. Kehoe, M. D.

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