

February 24, 1943

Dr. F. William Sunderman,
701 Maloney Clinic, University Hospital,
36th and Spruce Streets,
Philadelphia, Pennsylvania.

Dear Dr. Sunderman:

The analysis of blood and urine for lead content is certainly a difficult problem for clinical-microscopic and diagnostic laboratories. I quite agree with you that such work should not be done intermittently. Correct analytical results can really only be obtained where good facilities are available and where such facilities are in more or less continual use. This is the only situation in which the charges made for such work could be reasonable. We have recognized this situation for some time, and therefore, have done our best to assist our colleagues and their patients whenever we could do so. However, this is not a diagnostic laboratory, and we are not justified in converting a university laboratory into a service laboratory, unless we find it possible to collect sound clinical information on the cases that come to our attention. As you doubtless know, we have studied the problem of lead poisoning for a good many years. We have been interested in lead poisoning as it occurs in the general population and in industry, and we have been ambitious enough to try to collect information of all types and from all sources on all phases of the subject. This has been a rather heroic task, but it has had very interesting results, and I wish at all costs to carry it on further. Accordingly, we have agreed to make analyses on blood and urine and also on tissues in fatal cases whenever it is possible to obtain adequate clinical information. We require a complete occupational history with the details, type, and duration of the exposure, insofar as these are obtainable, and as complete a clinical record as it is possible to obtain. All sorts of things are of interest here as you may well understand, such as, the nature of the onset and course of illness, the sequelae, if any, the complicating illnesses, with particular reference to vascular and renal disease, the blood changes, and the analytical data. The latter are much better when they concern more than one material, and they are still better when they are repeated. For example, we have followed a number of cases from the origin of illness through clinical cure and on into the period required for the elimination of lead from the body. This, of course, is not possible in many cases, but I refer to it merely to show you that we are interested quite beyond the mere problem of diagnosis, and in

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suitable cases we have been quite willing to follow the case to the final outcome.

All of the above work involves expenditures which cannot be borne by patients and which will not be paid by compensation funds. We have made no effort to collect fees beyond the actual cost of the work involved, and we have been quite willing to underwrite all of the work when there was no one in the position to pay for it without burden. The actual cost to us approximates \$5.00 per analysis, and therefore, we make this kind of charge for diagnostic work whenever the circumstances justify it. We do not analyze any samples, unless they are collected in our containers in accordance with our instructions. To do otherwise, would be to waste our time and to obtain misleading results. Accordingly, I am sending you a copy of the instructions we issue for the collection of samples. We provide the containers in every instance, we provide needles and tubes for the collection of blood, and whenever it is necessary we supply chemically clean pyrex syringe, which is sterilized and ready for use.

I am also sending you a copy of the analytical methods which are in current use in the Laboratory. We use two of these regularly, and the other only occasionally, since it is somewhat more troublesome. (I refer here to the Polarographic method which is described in detail in one of the reprints. In our opinion, this is not the method of choice, although it is achieving considerable popularity at the present time.)

We are unalterably opposed to the rule-of-thumb and short cut methods that have been attempted by many people. We have investigated a number of these and we have found that they are neither sufficiently specific nor precise to obtain satisfactory results.

Cordially yours,

Robert A. Kehoe, M. D.

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