

June 10, 1965

Dr. Tabor J. Greenwalt
763 North Eighteenth Street
Milwaukee, Wisconsin 53233

Dear Doctor Greenwalt:

Elston Belknap has put a question to me concerning the acceptance of blood from donors who have worked in plants engaged in the manufacture of storage batteries (presumably the lead-acid batteries used in motor vehicles).

The answer to this question is not as easy as it might appear to be, for the reason that factories of this type vary considerably in the conditions under which men work, with respect to the absorption of lead. I should have no hesitation in accepting blood from the employees of a well-managed factory - well managed in the sense of adequate control of the exposure of the men to lead. On the other hand, some of the men in the poorer plants - poor in the terms indicated above - have high concentrations of lead in their blood - up to 0.20, 0.30, or even 0.40 mg. per 100 grams of whole blood. Virtually all of this lead, in fresh blood, is in (or perhaps on the surface of) the erythrocytes. (It is to be remembered that this industry is the source of a fair proportion of our cases of lead poisoning.)

There is, of course, no possibility of injecting a lethal or even dangerous dose of lead, per se, but the question lies in the degree of stability of the compound formed by lead in the blood, and the behavior of the shed blood. I think I am being over-cautious, for the possibility of any real difficulty seems remote, but the problem is that I am not sure how the erythrocytes will be affected on standing.

I would consult the plant physician, confidentially, not concerning the potential danger of which I have spoken, but on the question of the occurrence of lead poisoning among the employees. I would not accept blood from the workmen in a plant in which cases of poisoning occur. If the physician

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is evasive, or does not know the facts, the chances are highly in favor of the existence of significant hazard, in which case, I would avoid the collection of blood on principle.

Sincerely yours,

Robert A. Kehoe, M.D.

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