

July 17, 1941.

Dr. H. B. Haag,
Department of Physiology and Pharmacology,
Medical College of Virginia,
Richmond, Va.

Dear Dr. Haag:

I think you quite justified in your doubt as to the existence of any danger associated with the using of intravenous medication containing lead to the extent of one part in a million. It should be possible, of course, to eliminate the greater portion of this lead from preparations used intravenously. On the other hand, this is sometimes a very serious technical difficulty, and under certain circumstances, I think such quantities could be permitted to be present. Obviously, where it can be prevented easily, it should be done.

Obviously, some consideration must be given to the quantity of material actually injected. The quantities of lead present from this source in small ampule would be wholly insignificant. A 10 ml. ampule would contain only 10 micrograms, which, of course, on any basis, is utterly unimportant. Moreover, at this concentration of lead in solution, no direct action on the blood of any kind is to be expected.

Incidentally, I should be surprised if medications for intravenous use could be found containing considerably larger concentration of lead than you have mentioned. Considering the dosage used by Blair Bell and his associates, and by a number of workers in this country in the treatment of cancer without untoward effects, I think no one should be unduly worried about these minute quantities.

I am certainly very glad to have heard from you again, and I trust that matters will arise to necessitate our correspondence. I am notoriously bad about maintaining my correspondence, unless there is something which has to be attended. I am a little ashamed of this, but I never seem to be able to do anything about it. However, I do answer letters that are written to me.

Please accept my kindest regards for yourself and Dr. Main.

Cordially yours,