April 27, 1939

Dr. Robert Hurtin Halsey
121 East 60th Street
New York City
New York

Dear Doctor Halsey:-

We have never found any evidence either clinically or experimentally of injuries to the heart and blood vessels of a specific type which are in any way suggestive of atherosclerosis. It is well known that if large doses of lead, sufficient to kill, are administered to experimental animals, there are often vascular hemorrhages, mostly of the petechial type, but sometimes somewhar more extensive. We have never seen anything of this type in what might be called chronic lead poisoning in experimental animals. In the case of groups of men under conditions of rather severe lead exposure over periods of years, we have not found any evidence of any chronic vascular disease. My own experience leads me to believe that the association of arteriosclerosis with lead poisoning has resulted from the fact that persons with vascular disease are more prone to develop lead intoxication than are normal persons. That is to say, I suspect that when a case of lead poisoning develops in a man with arteriosclerosis, it is generally believed by physicians that the lead has produced the arteriosclerosis, whereas, in my opinion, it seems much more probable that the general vascular impairment has contributed materially to the development of the intoxication.

So far as I know, the best evidence of associated lead poisoning with any of the chronic degenerative diseases has been obtained by studies in Queensland, in which children who have been the victims of lead poisoning, have appeared to develop an unusual incidence of so-called chronic interstitial nephritis. The significance of this evidence has been seriously brought into question by other observers in the same field, so that it can not be regarded as a definitely demonstrated fact. However such as it is, it is suggestive. It has not been established, however, that the injury here primarily involves the blood vessels. If you are interested in this controversy, I may refer you tothe papers of L. J. Jarvis Nye of Queensland. There are some other references to this subject but I do not have them at hand at the

moment. A few years ago, however, a Russian investigator published a series of results based on observations of blood pressure changes among the lead workers. I did not regard these observations as entirely conclusive myself. Belknap has also published some more recent observations of his clinical studies on men who are exposed under rather severe conditions to lead absorption. He failed to find any evidence of progressive vascular changes as shown by progressive changes in the blood pressure. I do not believe there is any definite answer to this problem, but I may say thatin fifteen years I have not seen a case of vascular disease which I had reason to feel was related to lead absorption.

I am contemplating some rather extensive study of the literature during the next several months, and if I run into any pertinent information on this subject, I shall be glad to call your attention to it. If I do not send you any information within a reasonable period of time, you might prompt me by reminding me of this promise.

Cordially yours,

RAK:is

Robert A. Kehoe, M.D.