October 26, 1931

Dr. F. R. Walters,
Kellogg Company,
Battle Creek, Michigan.

Dear Dr. Walters:

I have your letter of October 12 in which you thank me for the information which I sent you some time earlier. I must confess that my curiosity is somewhat piqued at your statement that the information which I have given you has helped you in arriving at a diagnosis of lead poisoning in the case of a filling station attendant whose only exposure to lead resided apparently in his handling of gasoline. Perhaps I may be forgiven for wondering how you have arrived at this diagnosis since no analytical work was done to determine the quantity of lead this subject was excreting. I raise the question because the diagnosis in this type of case is particularly questionable. So far as my knowledge goes there has never been a bona fide case of lead poisoning among the handlers of gasoline containing lead. Furthermore, all of the experimental evidence at present points to the fact that lead is not absorbed through the skin out of such gasoline in the commercial concentrations. In fact, the experimental evidence indicates that except as the lead occurs in gasoline in a concentration in excess of one part per thousand, there is no measurable absorption through the skin. There is, therefore, no history of significant exposure in these cases, and one must therefore be particularly cautious in making sure that the signs and symptoms of poisoning are typical. I speak of this because I have had a considerable experience in trying to run down and interpreting cases of illness in connection with gasoline handlers.

With no history of significant exposure, it becomes necessary in arriving at a diagnosis that the symptoms be typical and that the physical signs be of such a sort as to be almost conclusive. In addition, I should require for a diagnosis, some sign specifically related to lead poisoning. As for example, lead line, significant stippling, or significant excretion of lead in the urine or faeces. In this connection I think it well to repeat a statement which I believe I made in my former letter, to the effect that I have never seen a lead intoxication as a consequence of slow lead absorption without a significant degree of stippling. My personal opinion at present is that lead intoxication, except as a consequence of immediate overwhelming absorption