

January 14, 1957

Dr. W. P. Pelz
1504 East Clark Street
Charles City, Iowa

Dear Doctor Pelz:

I apologize humbly for the long delays that have characterized my correspondence with you. I can only ask for your indulgence. Perhaps some return for your patience may be found in the advice which is contained in this response to your last letter of January fifth.

I believe that you will find your efforts to investigate the relationship of tetraethyl lead to lung cancer to be wholly unproductive, and I suggest that you turn your interest in this highly significant problem of public health in some more potentially productive direction.

My reason for this opinion may be expressed briefly, and I hope, beneficially.

First, is the fact that no significant proportion of our population is exposed to tetraethyl lead. Only persons engaged in the manufacture and the handling of the concentrated material are subjected to such exposure in more than theoretical traces. (Of the effects of such exposure, more will be said later.) Tetraethyl lead in automobile and aeronautical fuels is burned to inorganic lead compounds, and it is not possible to find tetraethyl lead as such in the atmosphere of urban centers in which traffic is dense. It is there, theoretically, only at times and under circumstances in which the combustion of the fuel is poor - in starting up a cold motor, for example, a little tetraethyl lead in the unburned gasoline.

Second, in Mexico, as in the U.S.A., a fairly large proportion of the gasoline contains tetraethyl lead, and the environmental conditions there are, in this respect, comparable to those in the U.S.A.

Third, is the fact that many thousands of persons have been subjected to the inhalation of inorganic compounds of lead for many generations. Instead of an association of this exposure with a relatively high incidence of lung cancer, the statistics, which, admittedly, are inadequate, suggest that exposure to, and absorption of, lead, tends to inhibit rather than to induce or accelerate, cancer. On this basis, unsatisfactory as it may be,

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investigators, and, most recently, Blair Bell and his associates in Liverpool used lead compounds, over some considerable period, in the therapy of malignant disease. They accomplished no very useful purpose, but they were encouraged to continue their work even after there seemed to be scanty hope of success, by a few instances in which tumors regressed.

Fourth, several thousand persons have been engaged in the manufacture of tetraethyl lead since 1923, the numbers having grown more or less steadily since 1926. The medical supervision of these men has been more comprehensive than that provided for any other group of industrial employees over any such period of time, so far as my experience goes. Within this group, whose respiratory exposure to tetraethyl lead has been the greatest and most continuous in all human experience, has been utterly insignificant from the aspect of malignant disease, including pulmonary cancer.

This represents my criticism of your experimental hypothesis. Because of it, I suggest that you may consider the advisability of working with some other material. My criticism has nothing to do with my willingness to see that you are provided with a modest quantity of tetraethyl lead. I am merely trying to head off what seems to me to be unprofitable uses of a dangerous material, so as to aid in the limitation of its use to productive purposes.

Sincerely yours,

Robert A. Kehoe, M. D.

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