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STATE OF OHIO
DEPARTMENT OF HEALTH
COLUMBUS

OFFICES:
THE HARTMAN-OHIO BUILDING

LABORATORIES:
OHIO STATE UNIVERSITY CAMPUS

SUBJECT:

February 24, 1925.

Dr. R. R. Sayers,
Chief Surgeon, U.S.B. of M.,
U.S. Public Health Service,
Washington, D.C.

My dear Dr. Sayers:

I find that your letter of Feb. 13th needs some reply. I also wish to acknowledge yours of the 17th.

I have been out of the city some of the time. I question whether a review or editorial for the American Medical Association would be accepted by any other than from their regular reviewers and editorial writers. I am quite sure that my old Professor, Dr. H. Gideon Wells, Head of the Dept. of Pathology, Univ. of Chicago, writes the material along this line for the editorials in the American Medical Journal. Would it not be well to send him a copy of the Bureau's report with that suggestion.

As you know I prepared an editorial for the American Journal of Public Health. Also Dr. J. H. Shrader of Baltimore has prepared a very good paper upon the subject. Some of the material in my proposed editorial was, on agreement, transferred directly to his paper. Both will be out in the next issue of the American Journal of Public Health.

I have just received intelligence from the Workers' Health Bureau stating that Dr. Yandell Henderson considered their analysis "very good". I have a copy of his comments in which he states that the main point in which the report is defective is that the experiments which the report describes do not apply to real conditions. The animals under test were kept in an atmosphere containing exhaust gas and dust only up to 4 parts of carbon monoxide in 10,000, whereas the atmosphere of public garages at least is often contaminated to a far greater extent. Therefore garage workers will be exposed to several times as much lead dust as were the animals reported in the experiments. Dr. Henderson also states

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that he learns on good authority some additional substance may be added to ethyl gas so as to enable all of the lead to be blown out of the exhaust instead "ofcaking in the muffler as happens at present". "It is not necessary to question the accuracy of the chemical analyses carried out by the experimenters at the Bureau of Mines Station. Even if these analyses are absolutely correct, the experiments are so poorly planned that they do not apply to the actual problem. In a garage dust accumulates from week to week and month to month. In the experimental chamber at Pittsburgh, on the contrary, the volume of air blown through was so much that no accumulation of dust could occur. In the experiments as carried out the animals were placed in a room through which exhaust gas diluted with a large volume of air was passed. It would have been a nearer approach to real conditions if the exhaust gas had been blown through the chamber for several weeks without putting animals into the chamber. Then when an amount of dust had collected corresponding to that which occurs in a garage the exhaust could have been shut off. The animals could then have been made to live in this dusty room for a few weeks. An experiment of that sort would have approximated real conditions in a garage."

Dr. Henderson also takes exception to a hazard from lead to workers in repair shops and garages which is as great as that now existing for painters in their profession. He states that "you are free to use these statements either publicly or for transmission to the New York Health Council, if you think they will be of use."

A letter which the Workers' Health Bureau received from Dr. Alice Hamilton states that she wonders whether the Bureau had not better wait until they have something more to go on than they have just now. She advises them to see Dr. Emerson and to hear from Dr. Henderson before making any further steps.

It appears to me that the main issues have been overlooked by most of these critics. If we will look back into the history of the question we will find, I think, that the problems to be taken up fell about in the following order:

1. What became of the lead which was put into the motor?

2. Was the <u>public</u> health endangered?

3. If so, methods of regulating and controlling the danger would have to be worked out.

4. So far as animal experiments went, it was first necessary to determine whether any of them were poisoned by lead and thereafter perhaps to determine the various pecularities of the poison which the various animals showed. Obviously our experiments have shown this is all a negative question, thus far at least.

5. The danger to the semi-public, that is, garage workers, etc., was the next problem to be determined and has not yet been worked out.

Apparently our critics have dropped the matter of danger to public health.

Please do not call a meeting for Thursday, March 5th. I can make the following week (Thursday), or any subsequent time very conveniently. Tuesday or Saturday is also convenient for me but I understand not so much so for some of the others.

Yours very sincerely,

E. R. Hayhurst

E. R. Hayhurst, M. D.

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May 14, 1925.

SUBJECT:

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CHIEF SURGEON

Dr. R. R. Sayers,
U.S. Bureau of Mines,
Washington, D.C.

Dear Dr. Sayers:

Yours of the 12th just to hand. Glad to have your comments concerning the diagnosis of lead poisoning. Your views coincide exactly with my own. I have felt that Dr. Flinn and Dr. Thompson were laying too much stress on the finding of lead in the feces as a diagnostic point at the Pittsburgh Meeting last month. I also felt that whatever significance there is to basophilia was not associated enough with manifestations of acute lead poisoning, or exacerbations of chronic lead poisoning, as it would appear to me they should be. For instance Dr. Flinn was of the opinion, if I understood him correctly, that basophilia did not occur in acute lead poisoning but was a manifestation of chronic lead poisoning, that is, when it was present and was due to lead.

I have just received a letter from Dr. Thompson stating in effect that his position is that lead has no business in the human body. It is not a question of whether the human organism can tolerate it, but ought not, with foreknowledge, be permitted to get into the human body. That everyone agrees lead is an undesirable hazard and the only way to control it is to stop its use by the general public. He feels that the views of chemists when it comes to the functions of the human body should not be allowed too much emphasis. As concerns tetra ethyl lead the whole question comes to this: (1) Lead is an undisputed poison. (2) How much does each one of us care to have in his own body? Dr. Thompson states that his remarks, of course, are confidential, that is, not for publication in the newspaper forum.

Personally I can quite agree with Dr. Thompson's wholesome point of view, but still I am afraid human progress cannot go on under such restrictions and that where things can be handled safely by proper supervision and regulation they must be allowed to proceed if we are to survive among the nations. Dr. Thompson's arguments might also be applied to gasoline and to the thousand and one other poisons and hazards which characterize our modern civilization.

R.R.S.