

September 10, 1940

Robert A. Kehoe, M. D.
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Dear Dr. Kehoe:

I am returning the tentative draft of the report which I received September 3rd. The outline is excellent. We should be able to deal with all the material you have indicated in a direct and forthright manner, without any great controversy, with the exception of the part indicated as "latent lead poisoning and sequellae lead poisoning." Inasmuch as you have also indicated sequellae under "treatment of lead poisoning," I wonder if it would not be as well to consider under this last item the neurological sequellae of lead poisoning and to discuss the "Problem of degenerative disease" under an Appendix, indicating that this was still distinctly controversial.

The body of the report is also clear and well written and covers points with which I have really no quarrel. You will note, however, that I have indicated in a few places certain suggestions for your and the rest of the committee's consideration.

On page 9 I believe that we could gain clarity if in the discussion of fumes from molten lead we noted in a phrase or sentence that no appreciable fume occurred under 900 to 950 degrees contrasting, of course, the marked amount of fumes emitted when lead is melted with copper to make brass at temperatures at well over 2000. From my own experience with a group of workers working over pots 24" in diameter at temperatures of 850 to 950, day in and day out for the past ten years without any suction or even overhead natural draft ventilation, I can say that such exposure is practically harmless.

Again on page 18 I would personally object to the word "dubious" as used in the tenth line of that page referring to basophilic granulation. Would you not express approximately the same idea if you substituted the word "vague" or "inexact" for dubious, and also indicated that this was the case if this procedure was the "sole" means of appraising industrial lead exposure.

On page 22 you state that occurrence of finding of "stippling" above 80 to 100 per million is the signal for the transfer for the individual to a less exposed job and yet on page 20 you state that the average of "mean normal" numbers

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of stippled red cells is approximately 300 to 350 per million. I wonder if the statement on page 22 therefor is not an unintentional error and you do not mean 800 to 1000 stippled cells per million instead of 80 to 100. This would be roughly equivalent to 8 or 10 stippled cells per 50 fields contrasted to .8 or 1 stippled cells per 50 fields which latter figure is, of course, within normal limits, according to my experience and that of others.

This same correction would apply to the eighth line on page 38, which I believe should read as 800 to 1000 per million, the approximate equivalent of 10 to 12 stippled red cells per 50 fields. Calculating approximately 10,000 red cells per 50 fields, multiplying or dividing the appropriate figure by 100, has seemed a satisfactory conversion factor, in comparing number of stippled cells per 50 fields and per million.

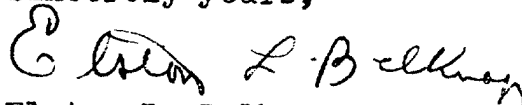
Finally, on page 43, the last page which I have received, it is my opinion that the final sentence would be more accurate, if it read "there is no known substitute for the combination of adequate medical and engineering control of lead exposure, if lead poisoning among industrial workers is to be prevented."

I assume that my discussion on the clinical diagnosis of lead poisoning, together with differential diagnosis, reached you some time ago in accordance with the time limit you suggested and that some or all of it may be included as indicated in the outline under "Diagnosis of Lead Poisoning." My material should have reached you just about the time you were sending out the material you did send on August 29th.

I am very glad that you emphasized on page 2 that all lead compounds are toxic if dispersed in finely divided form but that the mere presence or use of lead bearing materials does not necessarily result in exposure, as indicated on page 8. It is also of prime importance that you make clear our position on page 30 that "within certain limits of lead absorption clinical evidence of toxic effects are not to be expected."

While it is clear as one reads through the entire report that you make a definite distinction between lead absorption and lead intoxication, I wonder if there will be a place somewhere where this can be specifically and succinctly set forth.

Sincerely yours,


Elston L. Belknap, M. D.

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