

September 5, 1945

Dr. F. L. Gorrell,
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Trinidad, Colo.

Dear Dr. Gorrell:

In response to your letter of August 17, to which my reply has been delayed by reason of my absence from my office, I am sending you a copy of a publication of the American Public Health Association, which I trust will answer most of the questions you have in mind and which at the same time will give you a fair statement, I believe, of the public health problem of lead poisoning.

There is perhaps one exception, in that the report deals with industrial lead poisoning and says very little about the sources of lead poisoning in the general population. I shall attempt briefly to outline certain aspects of the problem of lead poisoning in children.

In general children's toys, play pens, high chairs and other furniture, as manufactured in this country are not painted with paints of high lead content. The manufacturers in general have recognized the hygienic problem and have avoided it for a number of years systematically by this means. It happens, however, that small shops do not always recognize this situation, and therefore there may be a small distribution of articles of this type painted with lead paint. Industry in general has attempted to inform all of its representatives so as to reduce this danger so far as possible to the vanishing point. However, there are other sources of lead absorption in the case of children. For example, baby's cribs and play pens may be repainted by the owner, and here there is nothing but the owner's knowledge, combined with the chance of what is available in the local paint market, to prevent the use of paints of high lead content. Certain imported toys, particularly those painted with bright yellow colors have been found to be sources of danger. Moreover certain toys provided for children, especially molding sets in which metal is melted and poured into molds to make small objects, are sources of danger. We have seen one or two cases of lead poisoning in children from the use of lead nipple shields by nursing mothers. Another source of poisoning in children, and also in adults, has been the use in poor households of battery boxes for fuel. This wood, heavily impregnated with lead salts when burned in a stove or fireplace under suitable conditions gives rise to lead fumes in the atmosphere, exposure to which has produced a rather large proportion of cases in this country. We have seen a number of cases in Cincinnati, one or two

KE 00344

Dr. F. L. Gorrell - (2) - September 5, 1945

of which have been fatal. Quite a series of cases of lead poisoning in children have been seen in Queensland, where they are believed to have resulted from the common practice of a number of years ago of painting the verandas of houses with lead paints. Small children kept enclosed on these verandas are believed to have ingested considerable quantities of lead following the contamination of their hands, toys and food by lead compounds which "dusted out" on the painted surface as the result of the weathering of this paint under unfavorable prevailing climatic conditions. I cannot vouch for the correctness of this interpretation of lead poisoning among Queensland children some time ago. However, the suspicion of this situation ought to lead individuals in general to be careful to avoid the use of lead compounds in any large extent on surfaces within the environment of small children. Small children crawl about on the floor and contaminate themselves pretty generally with any kind of dust or dirt that is within their environment. Eventually everything they get on their hands goes into their mouths, and therefore considerably greater opportunities exist for the dangerous exposure of small children of a variety of materials that have no important influence on the adult with more circumspect personal habits. Perhaps some point should be made of one other potential hazard. Water supplies in some parts of the earth, not so much so in the United States, are likely to be contaminated appreciably with lead compounds. It is well known that children are more susceptible to the effects of lead absorption than are adults and also that clinical lead poisoning as seen in the child is a more serious disease than it is in the adult, generally speaking. Therefore, contamination of household water supplies with lead compounds is more likely to affect children than the adults. I repeat that this is not an important matter in the United States, for our water supplies are generally handled in such a way as to avoid significant lead contamination. However, improvised and homemade arrangements for the storage and distribution of water in the household may result in the significant contamination of the water with lead compounds, and therefore this point needs to be taken into account.

I regret very much to have to tell you that the therapy of lead poisoning, especially in the case of children, is not in a very good way. There is no specific treatment that offers any hope for very dramatic results. The avoidance of lead poisoning is still the only satisfactory treatment in the case of children. Treatment consists in the main of the complete elimination of exposure. Otherwise the treatment consists in taking care of presenting symptoms as adequately as possible during the period required to eliminate the large portion of the absorbed lead compounds.

I trust this information will satisfy your purposes.

Very truly yours,

LE 00345

Robert A. Kehoe, M. D.