

Lead Company  
phila 25, Pennsylvania

Source: Employees of National Lead Company, 2607 East Cumberland St., Philadelphia 25, Penn.

Material: Urine and Blood

Submitted: 5-26-52 by Dr. L. H. Hergeshelmer, Plant Physician

Required: Lead Analyses

| Name       | URINE           |            |              | BLOOD           |                |               |              |               |
|------------|-----------------|------------|--------------|-----------------|----------------|---------------|--------------|---------------|
|            | Analysis Number | Volume ml. | Mg. Pb/Liter | Analysis Number | Spectrographic |               | Dithizone    |               |
|            |                 |            |              |                 | Weight Grams   | Mg. Pb/100 g. | Weight Grams | Mg. Pb/100 g. |
| [REDACTED] | 52A-3848        | 82         | 0.17         | 52A-3849        | 20.6           | 0.05          | 21.5         | 0.06          |
| [REDACTED] | 52A-3850        | 100        | 0.23         | 52A-3851        | 18.4           | 0.05          | 18.8         | 0.07          |
| [REDACTED] | 52A-3852        | 108        | 0.23         | 52A-3853        | 11.0           | 0.07          | 13.3         | 0.09          |
| [REDACTED] | 52A-3854        | 146        | 0.04         | 52A-3855        | 21.0           | 0.05          | 21.9         | 0.05          |

Samples Collected: 5-21-52  
Samples Received: 5-26-52  
Samples Reported: 6-2-52

### INTERPRETATION

From the history of recent hospitalization of [REDACTED] one assumes that he has not worked since 3-25-52. In any case, he seems in a different category from that of the others and is dealt with separately. The levels of lead concentration in his blood and urine are within normal limits at this time. What they were at the time he quit work cannot be guessed except on the assumption above. If this assumption is correct, his exposure during the period shortly prior to 3-25-52 was not very severe. If, however, he had not been working for a much longer time - i.e., for a year or somewhat more or less - his exposure may have been quite severe. Only on the basis of a knowledge of these facts can the present results be interpreted.

The analytical data on each of the other men has provided some evidence of unusual exposure to lead, the severity of which decreased in the order in which they are named.

[REDACTED] has been subjected recently to an hazardous type of exposure, as shown by the fact that the concentration of lead in his blood is in the dangerous range associated frequently with the symptomatology of lead poisoning. His urinary lead level is elevated but not to quite a corresponding extent. This man should be removed from further significant exposure promptly and should not be returned to work involving further exposure until the lead levels have dropped to normal or near normal.

[REDACTED] has been subjected to exposure to lead, but at present has not reached a dangerous level of lead absorption. Whether or not he is likely to reach a dangerous state in the near future can be determined only by consideration of the details of his recent employment. He would not be expected to develop symptoms without further significant exposure.

[REDACTED] gives no evidence of dangerous absorption of lead. The urinary lead concentration is elevated but little beyond the extreme upper normal limit (for a sample of this volume), while the blood lead concentration is at the upper normal level. These results point to recent exposure, but the absorption up to the present has not exceeded the limits of safety.

Signed:

*Robert A. Kenpe*  
Robert A. Kenpe, M. D.

June 2, 1952

Dr. L. H. Hergesheimer  
Plant Physician  
National Lead Company  
2607 E. Cumberland Street  
Philadelphia 25, Pennsylvania

Dear Doctor Hergesheimer:

I am sending you herewith the results on the blood and urine of the following patients, together with an interpretation of the results and an invoice covering the cost of analysis:

[REDACTED]

[REDACTED]

Very truly yours,

E. R. Fortlage, Secretary to  
Dr. Kehoe

ef

Enc.

KE 0018491

N19677.02

REQUEST FOR STUDIES AT KETTERING LABORATORY

Name [REDACTED] Color B Sex M Age 42 S. M. W. D.  
Address 1601 N. 18th St., Phila. 21, Pa. Married  
Request by L. H. Hergesheimer, M. D. Hospital #  
Date 5/21/52

History

Negative. Specimen submitted because of increased number of stippled cells in blood.

Physical

Negative.

Laboratory

|                                       |                                             |
|---------------------------------------|---------------------------------------------|
| January 1952, hemoglobin 80%.         | 22 stippled cells in 30 fields.             |
| April 1952               "       85%. | 50       "       "       "       30       " |

Impression

Chronic lead absorbtion.

Treatment

None

Studies Desired

Blood and urine lead levels.

KE 00184 2

N19677.03

REQUEST FOR STUDIES AT KETTERING LABORATORY

Name [REDACTED] Color W Sex M Age 46 S M W D  
Address 724 E. Clearfield St., Phila. 34, Pa. Married  
Request by L. H. Hergesheimer, M. D. Hospital #  
Date 5/21/52

History

Negative. Specimen submitted because of increased stippling of red cells.

Physical

Negative.

Laboratory

|                             |                                 |
|-----------------------------|---------------------------------|
| April 1952, hemoglobin 75%. | 19 stippled cells in 30 fields. |
| May 1952 " 80%.             | 49 " " " 30 "                   |

Impression

Chronic lead absorbtion.

Treatment

None.

Studies Desired

Blood and urine lead levels.

KE 0018423

REQUEST FOR STUDIES AT KETTERING LABORATORY

Name [REDACTED] Color W Sex M Age 41 S M W D  
Address 1251 Crease Street, Phila. 25, Pa. Single  
Request by L. H. Hergesheimer, M. D. Hospital # Date 5/21/52

History

No symptoms. Specimen submitted because of increased stippling in red cells.

Physical

Negative except for hypertension. Blood pressure 172/100.

Laboratory

|                               |                                |
|-------------------------------|--------------------------------|
| January 1952, hemoglobin 80%. | 22 stippled cells in 30 fields |
| March 1952 " 78%              | 7 " " " 30 "                   |
| April 1952 " 85%              | 50 " " " 30 "                  |

X-ray shows probable pneumoconiosis.

Impression

Chronic lead ingestion.

Treatment

None

Studies Desired

Blood and urine lead levels.

KE 0018494

REQUEST FOR STUDIES AT KETTERING LABORATORY

Name [REDACTED] Color W Sex M Age 56 S M W D  
Address 2570 Collins St., Phila. 25, Pa. Married  
Request by L. H. Hergesheimer, M. D. Hospital # Date 5/21/52

History

Recent hospitalization from 3/25 to 4/28/52 for nausea, vomiting, fatigue and confusion. Periodic vomiting for one year with chronic anemia. During that time no complaint of pain, normal bowel movements.

Physical

confused, mentally sluggish, B. P. 200/100. Enlarged heart. Systolic mitral murmur. Enlarged liver. Neurological examination:

1. Quantitative intellectual deficit with dulling.
2. A left hemiparesis.
3. Marked hyperactivity of the tendon reflexes in both lower extremities and diminution of position sensation.
4. Slow measured gait with some unsteadiness on turning & mildly positive Romberg.

Laboratory  
Hemoglobin 8.4 gm. RBC 2.7 mill ion, WBC 5,100. Bone marrow shows many stippled cells and over active granulocytes. Blood sugar 87, urea 70, CO<sub>2</sub> 45%, chlorides 594, protein 6, serum albumen 3.2, serum globulin 2.8, blood calcium 7, blood lead level 0.201 mgm. per 100 gm. of blood. Gastric analysis: Low total acid with no free HCL, x-ray of intestines, chest and skull, negative.

Impression

1. Chronic lead poisoning.
2. Nephritic, chronic, glomerular.
3. Hypertensive cardio-vascular disease.
4. Anemia, severe. Secondary to No. 1 and No. 2.

Treatment

Digitalis, Unicaps, feosol.

Studies Desired

Blood and urine lead levels.

KE 0018425