

DEPARTMENT OF PUBLIC HEALTH

2151 BERKELEY WAY
BERKELEY 94704

February 21, 1967



Mr. Victor Sussman
Air Pollution Control Commission
P.O. Box 90
Harrisburg, Pennsylvania 17120

Dear Mr. Sussman:

This is to confirm our conversation of last week in which I called to your attention an error in my letter of 9 February.

The third sentence in the paragraph below the prediction equation should read: "We feel that an average exposure of 27 micrograms per cubic meter can be predicted to result in an average blood level of about 27 micrograms per 100 grams of blood." This error in citing units is the more regrettable as the units were not cited in the prediction equation.

Your attention is drawn to the fact that this relationship is useful no matter what fraction is assumed for respiratory retention of airborne lead.

In the off chance that you have not seen it, I enclose a paper published in the Proc. XV Congress Internationale de Medecine du Travail, (Vienna 19-24 Sep. 1966) showing a trend upward of blood and urine lead with experimental exposures to 10 micrograms per cubic meter.

Please accept my apologies for giving you erroneous information due to a typographical slip-up.

I look forward with interest to the results of your Department's study of this problem.

Sincerely,

A handwritten signature in dark ink, appearing to read 'John R. Goldsmith'.

John R. Goldsmith, M.D., Chief
Environmental Hazards Evaluation Unit

JRG:vc

cc: Dr. Sturgis
Mr. Malcolm Schoenly

TABLE M - 4

**BLOOD LEAD LEVELS AND ESTIMATED AMBIENT AIR AND OCCUPATIONAL
EXPOSURES OF SELECTED POPULATIONS**

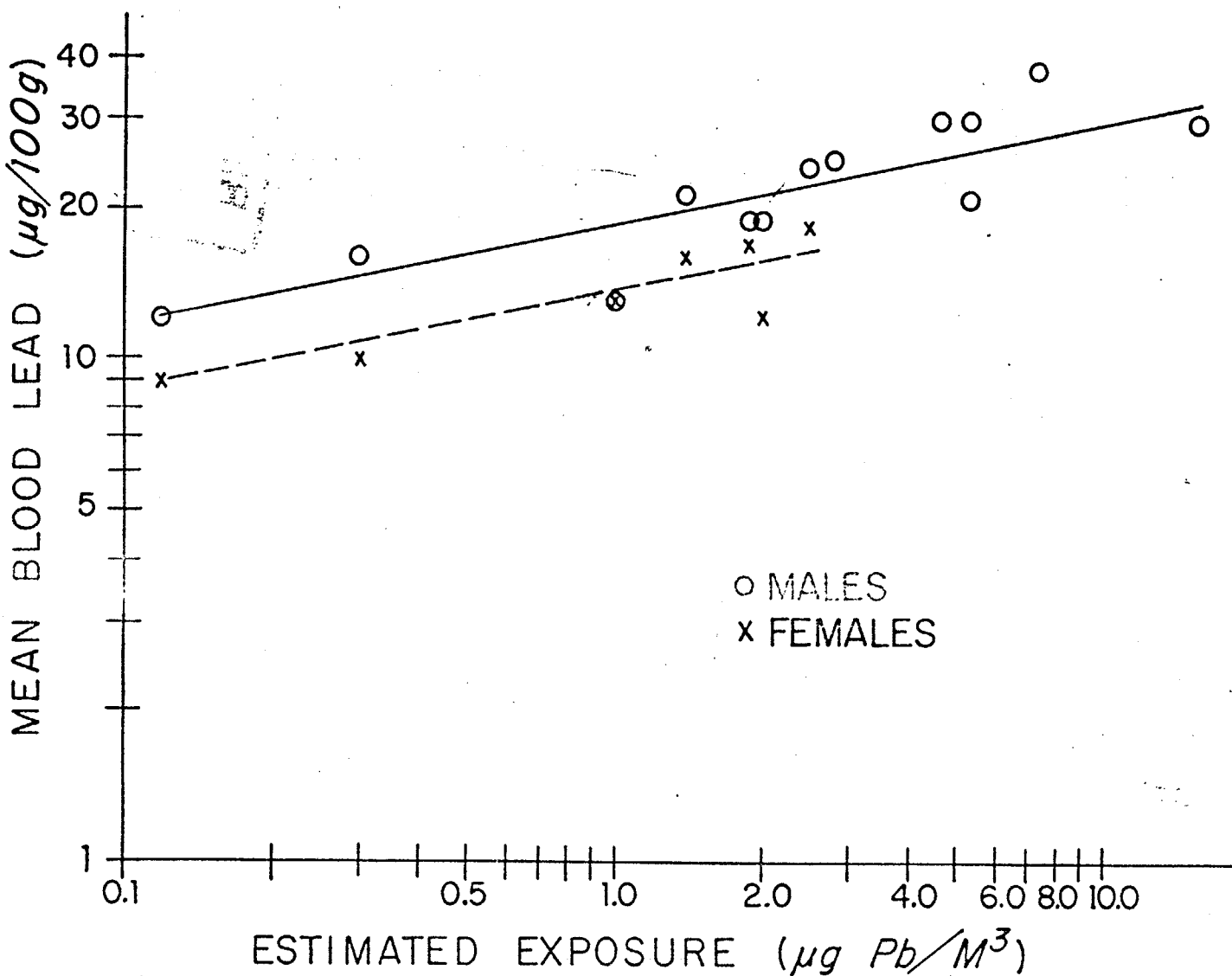
TYPE OF POPULATION	ESTIMATED EXPOSURE ($\mu\text{g}/\text{M}^3$)			MEAN BLOOD LEAD ($\mu\text{g}/100$ Gm Blood)	
	Occupational	Ambient	Average ¹	Male	Female
Community Populations Without Occupational Exposures Known					
Remote California mountain residents		0.12		12	9
Composite rural U.S.		0.3		16	10
Suburban Philadelphia		1.0		13	13
Composite urban U.S.		1.4		21	16
L.A. Aircraft workers		1.9		19	17
Pasadena City employees		2.0		19	12
Downtown Philadelphia		2.5		24	18
Populations With Known Occupational Exposures					
Cincinnati policemen (all)	4.6	2.0	2.8	25	
Cincinnati traffic policemen	10.0	2.0	4.6	30	
L.A. traffic policemen	10.0	3.0	5.3	21	
Cincinnati auto test lane inspectors	14.0	1.0	5.3	30	
Cincinnati garage workers	21.0	1.0	7.3	38	
Boston Sumner tunnel employees	44.5	1.0	15.8	30	

¹ For populations with known occupational exposures, the average is a weighted average of presumed occupational and ambient exposure. Ambient exposures are estimates only and were not necessarily measured at the same times and places at which the populations were exposed.

Source: Mean blood lead levels were taken from U.S. Public Health Publication No. 999-AP-12 (Survey of Lead in the Atmosphere of Three Urban Communities). Atmospheric lead exposures were estimated for these populations from this and other sources.

FIGURE M - 1

BLOOD LEAD LEVELS BY ESTIMATED AMBIENT AND
OCCUPATIONAL AIR EXPOSURE FOR SELECTED POPULA



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