

after their Senate investigation that I referred to before,⁵ and here in the table you can see that with an assumed average dose of 4½ grams the risk of death is one in 36,118, varying upwards to an assumed dose in grams at 7½ with a risk of death of one in 21,671.

Senator NELSON. These statistics don't indicate the length of the course of treatment; that is, how many times 4.5 grams was administered to get these results?

Dr. WESTON. No, sir; it would be impossible in this report; it is all within the complete volume. It is the most accurate statistical tabulation that I have encountered.

Senator NELSON. I see.

So these dosages may have been for a course of treatment for 10 dosages or five or any variety of number of dosages; is that correct?

Dr. WESTON. Yes, sir.

(The table referred to follows:)

ESTIMATED RISK OF DEATH FROM APLASTIC ANEMIA FOLLOWING EXPOSURE TO CHLORAMPHENICOL—
CALIFORNIA, JAN. 1, 1963, TO JUNE 30, 1964

Assumed average dose (in grams)	Risk of death		
	Within 1 year from exposure	More than 1 year from exposure	Combined
4.5.....	1 per 40,769.....	1 per 316,634.....	1 per 36,118.
5.0.....	1 per 36,692.....	1 per 284,971.....	1 per 32,507.
5.5.....	1 per 33,356.....	1 per 259,065.....	1 per 29,551.
6.0.....	1 per 30,578.....	1 per 237,476.....	1 per 27,090.
6.5.....	1 per 28,224.....	1 per 219,208.....	1 per 25,004.
7.0.....	1 per 26,206.....	1 per 203,551.....	1 per 23,219.
7.5.....	1 per 24,461.....	1 per 189,981.....	1 per 21,671.

Dr. WESTON. In addition to the damaging effect upon the bone marrow, Chloromycetin has also been implicated in producing optic neuritis, an inflammation of the optic nerve in both children and adults with resulting extensive loss of vision.^{6 7} This untoward effect is apparently protected by use of high doses of other agents, namely pyridoxine and cyanocobalamin, in a small series of cases.⁸

The widespread use of Chloromycetin continued to grow from 1962, when its gross sales, as enumerated above, were approximately \$39.5 million, to 1966, when the U.S. gross sales slightly exceeded \$45.5 million and sales throughout the world during the same year were slightly in excess of \$70.5 million. During this period, of which 3 years are subsequent to the widely publicized California State Senate investigation, it is apparent that physicians are continuing to prescribe this agent in spite of the warnings to the contrary which are displayed quite prominently in Parke, Davis' literature. Some responsibility for such misuse may still rest with Parke, Davis as represented by the attached reproductions, and these are taken from JAMA advertisements⁹ within the last 3 months in which, in a double-page spread, as you can see, in large print for the physician who doesn't care to read

⁵ "Fatal Aplastic Anemia and Chloramphenicol." Report to the California State Assembly and Senate by the California Medical Association and State Department of Public Health, with cooperation and assistance of the California Pharmaceutical Association, Jan. 1, 1967.

⁶ Cocke, J.G.F.L.: *Journal of Pediatrics*, vol. 68, No. 1, pp. 27-31, January 1966.

⁷ Huang, N.N.F.L.: *Journal of Pediatrics*, vol. 68, p. 27, January 1966.

⁸ Cocke, J. G.: *Amer. J. Dis. Child.* 114: 424-426, October 1967.

⁹ See attachment No. 3, p. 2506, *infra*.