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A consideration of certain foods and of proximity to a previous case as factors in the etiology of pellagra.

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[From the Thompson-McFadden Pellagra Commission of the New York Post-Graduate Medical School.]

A statistical study of the foods used and of the occurrence of pellagra in six mill villages, including about 5,000 persons, failed to reveal any consistent relationship between the use of any particular food and the occurrence of pellagra. A somewhat similar statistical study of the location of domicile of old cases of pellagra in relation to domicile of the remaining population in these same mill villages has shown that new cases of pellagra developed almost exclusively in persons living in the same house with such antecedent cases or in houses next door to them. In other words, the disease spread from a preceding or antecedent case as a center, a phenomenon which can be satisfactorily explained, in our opinion, only by assuming that pellagra is an infectious disease. Apparently it is not readily transmitted to any considerable distance.

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The relation of methods of disposal of sewage to the spread of pellagra.

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As we have observed in our field studies, pellagra has spread most readily in communities in which unscreened surface privies were in use. In those portions of the city of Spartanburg, South

Carolina, equipped with a water-carriage system of sewage disposal, new cases of pellagra were relatively few. In two mill villages completely equipped with a water carriage sewer system, it was impossible to find cases of pellagra which had certainly originated there. Individuals suffering from pellagra contracted elsewhere were not lacking in these communities.

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The fatal action of magnesium salts by absorption from the intestines and the resuscitation by calcium.

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A. Under ether anesthesia, the duodenum of a cat was exposed, ligated, a cannula inserted and fixed in the direction of the small intestines and the abdomen closed so as to permit the rubber tubing part of the cannula which was closed by a hemostatic forceps to protrude. The animal was then permitted to come out from the influence of ether and was wide awake. Ten c.c. of a 20 per cent. solution of $MgCl_2$ per kilo of body weight were now injected through the rubber tubing into the small intestines. The animal died after twenty five minutes by respiratory paralysis without any asphyctic convulsions; the heart continued to beat a little longer.

B. Another cat in which preparation and procedure was the same as in A. But when the respiration began to fail, artificial respiration by the pharyngeal method of Meltzer was started and through a venous cannula ten c.c. of a 2.5 per cent. solution of $CaCl_2$ was slowly injected. Spontaneous respiration soon appeared and the animal was resuscitated.

The experiments show, against the generally accepted view, that magnesium salts are rapidly absorbed from the intestines. They show further that the method of injecting magnesium salts into the small intestines after laparotomies as recommended by McCosh and practiced by some surgeons contains an element of considerable danger.