

a certain quantity of Fowler's solution (from two to twelve drops per day), and he was able to ascertain that under these conditions the milk of these nurses always contained a relatively considerable quantity of arsenic; thus the milk of one nurse who took in six days eight milligrammes of arsenic contained one milligramme of that substance to 100 grammes of milk. It must be added that with these doses the nurses and their infants did not appear to be affected by any accidents. But this does not prove that this would have been the case if the arsenic had been given at once in a single dose. In order to clear up this last point, recourse was had to experiments on female animals. This last series of experiments did not give conclusive results, because the animals presented a very variable susceptibility to arsenic, and the experimenter found it impossible to come to any conclusion concerning these experiments as compared with those performed on human beings. It is, however, evident, from these researches, that the lactic secretion is a means of elimination by predilection for arsenic, and that it is prudent not to administer this agent to suckling mothers. In the particular case under notice, in responding to the Judge d'Instruction, Dr. Brouardel stated that the body of the infant contained a sufficient quantity of arsenic to cause the death of a child of one year, and that this arsenic may possibly have had for vehicle the milk of the mother. This qualified conclusion did not seem to affect the defence or the accusation, and the husband was condemned to twenty years' hard labour.

## SYMPTOMS OF CHRONIC SEWER AIR-POISONING.

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The symptoms of sewer-air poisoning are usually insidious in their development, and by no means always constant. I am disposed to believe that the effects may even remain unnoticed for months, as long as the sewer is not infected with harmful germs, and may develop with

certainly whenever such infection does occur.

In adults the symptoms, when no specific disease-germs are at work, are malaise, headache, loss of appetite, with even dyspeptic symptoms, drowsiness, and slight feverishness. There is a marked tendency to anæmia general debility. These symptoms are frequently grouped under the name of "malaria." In children, to these symptoms may be added a smooth or glazed, broad, flabby tongue, with a marked tendency to digestive trouble, a vomiting diarrhoea, dysentery, and attacks of gastric catarrh and catarrhal tonsillitis.

The tendency of sewer-air poisoning, then, is to derange the organs of primary assimilation, rather than the lungs; as, for example, gastric catarrh, duodenitis, hepatitis, splenitis, diarrhoea, enteritis, and colitis. Besides these effects, the debilitating influences of the polluted air render the persons so effected an easy prey to any intercurrent malady.

In times of epidemic diseases these are apt to assume a severe or malignant type. There is less tendency to periodicity, and more variability in sewer-air poisoning than in marsh-miasm. The effects seem to depend largely upon the bodily vigor and activity, at the time of exposure, and are therefore greater in night exposure than during active working hours. Hence workmen engaged in ventilated sewers and vaults seldom suffer any particular harm. Numerous inquiries upon this subject have been made, and, although there has been some difference of opinion, the weight of evidence would seem to indicate that sewer-workmen suffer no more from disease than do other men, aside from a few accidental cases of asphyxia. Those who suffer most from sewer-gas poisoning, or sewer-malaria, are women and children who spend most of their time in the house, especially in poorly ventilated apartments. As might be expected, an exposure to sewer-air during sleep is more dangerous than during waking hours, and during a period of active exercise.

While we admit the injurious nature of air contaminated with sewer-air, we must admit that we occasionally meet with cases where persons have lived in houses