

production and excretion of uric acid by the human body than constitutional peculiarity. Within the first month after its birth, the human infant excretes a proportionally larger amount of hippuric than of uric acid. The sucking calf's urine contains no hippuric acid at all. Both are milk-fed, and the slight difference in their mother's milk cannot be said to be sufficient to account for this difference in the nature of their urinary crystallizable excrementitious acid ducts. Sugar is supposed to augment the formation of uric acid in the human body. Yet experiment proves that until the digestive functions become seriously deranged there is no evidence of increase of uric acid in the urine. Under certain pathological conditions men have been known, even when many days on a spare diet, to eliminate enormous quantities of uric acid. Muscular exercise increases and hot weather diminishes the excretion of uric acid by the urine. Nevertheless, the following biological facts totally upset the validity of the theory based upon these data. The slow-breathing, sluggish-moving, carnivorous serpent, and the quick-breathing, muscularly active grain-eating bird, and the more strictly vegetarian insect—as the bee and the butterfly—all pass uric acid in their solid urines. And that, too, as far as has yet been ascertained, in much about the same relative proportions to their bodily weight. Hence, the argument that constitutional peculiarity, both as regards species and individuals, is a much more important factor in the production of uric acid in the animal economy than mere diet. L. F. B.

FORCIBLE FLEXION OF THE BODY IN LOCOMOTOR ATAXIA.

The "Canadian Practitioner," January 1, 1890, quoting from another journal, states that at the thirteenth Congress of the Italian Medical Association held at Padua, Dr. P. Bonuzzi communicated the results of a number of experiments made on the cadaver, with the view of ascertaining the physical effects produced on the spinal cord by suspension. During suspension the spinal cord is displaced upward from three to four millimetres, this resulting from slight increase in the distance between the vertebræ owing to relaxation of the muscles and stretching of the vertebral ligaments. The roots of the spinal nerves, with the exception of the cauda equina, do not seem to be appreciably stretched, although they are slightly altered in position. The tension of the cerebro-spinal fluid is increased. During suspension the vertebral column is apparently lengthened

to the extent of from one and one-half to three centimetres. This elongation is due more to separation of the spinous processes than to separation of the bodies of the vertebræ. The body as a whole is lengthened during the process of suspension from two to three centimetres. In a second series of experiments Dr. Bonuzzi found that by bending the body forcibly forward so as to bring the knees in contact with the abdomen, the spinal cord and cauda equina are subjected to considerable stretching. Having made an opening into the vertebral column and inserted a needle perpendicularly to the long axis of the cord, he noted that on bending the body forcibly forward, the needle was carried downwards for a distance from eight to twelve millimetres, the spinal cord becoming thinner and more resistant, the cauda equina being extremely tense. Traction on the sciatic nerve stretched the cauda equina, but did not draw down the cord more than two millimetres. Progressive and lasting improvement resulted from forced flexions in the case of a woman suffering from locomotor ataxia, thus securing the advantages of suspension without its drawbacks.

L. F. B,

THE WARNINGS OF GENERAL PARESIS OF THE INSANE.

In the "British Medical Journal," April 5, 1890, is Dr. George H. Savage's paper with the above title. Extreme difficulty is often found in distinguishing between causes and early symptoms; for in many cases what may be causes of general paresis, in others may be signs of the disease. Possibly drink, extravagance, and sexual excess alone or combined may start the degenerative process; but it is also certain that each or every one of these may be early signs of loss of the highest self-control.

General paralysis is a degeneration rather than a specific disease, which is most commonly met with in middle-aged married men, inhabitants of cities, flesh-eaters, and drinkers of alcohol. It is not common among the congenitally deficient or among epileptics. It is a frequent follower of constitutional syphilis, especially if this disease has affected the higher nervous organs or their envelopes, and is not uncommonly related to head injury or to causes of nerve-tissue disease, such as those produced by lead. A feeling of fatigue is an important early symptom, associated with indecision, doubt, and a tendency to look on the dark side of things, or even hypochondriacal weakness. It may precede other symptoms by a year or so, and be replaced for a