

what has already been stored up in the system. The most careful researches all go to show that the formation of these two important urinary products is in the standard just given of one to thirty-three. This important fact must be held firmly in mind.

Now, when the nature of the foods and drinks used are of a healthful nature, the formation and elimination alike hold the above ratio. In such a condition there could not be a storage of uric acid in the system. If, however, the person used an unduly large amount of nitrogenous food, or drank freely of acid ale or wine, the acidity of the urine is increased, and, per contra, the alkalinity of the blood is lessened. But it is well known now that when the alkalinity of the blood is reduced its solvent power over uric acid is impaired. This product will not therefore be held in such perfect solution and some of it, under these conditions, is deposited in different organs of the body, as the liver, spleen, etc.

On the other hand, if the person should use a vegetable diet freely, and avoid the acid drinks above named, the urine is lowered in acidity, or may become actually alkaline. Laudois and Heidenhain have worked this out with great care. When the acidity of the urine decreases, the alkalinity of the blood increases.

But Roberts, Haig, Lange and myself, have shown that when the alkalinity of the blood is increased, its solvent power over uric acid is greatly increased. If there should be a quantity of uric acid stored up in the system, and the alkalescence of the blood increased, it would hold in solution the daily formation of the acid; and, in addition, dissolve out of its hiding places some that had already been formed. During such a condition, the elimination would be in excess of the formation. The ratio of the uric acid to the urea might be increased to as much as one to twenty. I had one case where, for a time, it stood at one to thirteen. Thus a vegetable diet often increases the elimination of uric acid by increasing the alkalescence of the blood, and thus washing out the store houses.

Grant that a man retains one grain of uric acid daily. In three years the amount stored away in his system would be 1,095 grains, or more than two ounces. This would be quite enough to do serious damage. The retention in many cases is much greater than the above.

I have just mentioned that a vegetable diet decreases the acidity of the urine, and increases the alkalinity of the blood. Fever does the same thing. Suppose then that a person had a large quantity of the urates in his blood, and the alkalinity of the blood was above normal. At such a juncture he is exposed to wet and cold. As a result, he becomes very feverish, and the alkalescence of his blood falls. It can no longer hold in solution the urates it contains. They are precipitated anywhere and everywhere—around the joints, in the muscles, in the pericardium or endocardium, in the cerebral meninges. Thus we have an attack of inflammatory rheumatism in its varied forms. Just think of your cold bath and alkalies! Use both, and presto the reaction of the blood begins to become more alkaline. The uric acid is taken up, gets back into the blood again, and, by free diuresis and diaphoresis, it is washed out of the system.

If a person has a large amount of uric acid stored up in the system and begins the use of alkalies, and puts himself on a vegetable diet, the acid is dissolved and comes into free circulation in the blood. The effect of this is to make the person feel very ill. A large amount of uric acid in the blood deranges the circulation seriously, and gives rise to severe headache and mental depression. This accounts for the violent headaches that so many experience in connection with a uric acid wave. The arteri