

*Formation of Sugar in the Body, etc.*—Professor Seegen (Vienna) presented a paper on the formation of sugar in the body. The author brought forward his views already published—that sugar is formed in the liver from proteids, peptone, fat, and not from glycogen. Professor Hoppe-Seyley (Strassburg) read three short communications: (1) on oxyhæmoglobin; (2) on the formation of alcohol in lactic acid fermentation; and (3) on the formation of sugar and lactic acid in carbonic oxide poisoning, and with insufficient supply of oxygen. Dr. Drechsel (Leipzig) read a paper on the products of decomposition of caseine.

*Transformation of Peptone.*—Dr. Shore (Cambridge) read a paper on the question of the transformation of peptone. He said peptone introduced into the lymphatic system was recoverable as peptone in the lymph taken from the thoracic duct. When the lymph was allowed to enter the blood, peptone appeared in the urine. Introduction into the lymphatic system was effected in two ways, namely: 1. Injected into a lymphatic vessel of the foot, and so passing through the lymphatic glands at the knee, and in part through those in the abdomen, the peptone appeared in the lymph taken from the thoracic duct. The glands were unable to change or assimilate 0.016 gr. dissolved in lymph serum of the same animal flowing in gradually and uniformly during ten minutes, when the total amount injected was only 0.049 gr. (9 kilo. dog). 2. Introduced into the bile duct under low pressure peptone passed largely into the lymphatic system. When only 0.1 gr. per ten minutes (9 kilo dog) was allowed to flow gradually in, peptone was found in the lymph taken from the thoracic duct. Some of the peptone passed into the blood, and appeared in the urine. The liver and spleen had no power to assimilate peptone; if injected into blood vessels of either, all appeared in the urine. Change during absorption was probably due to influence of the epithelial cells of alimentary canal.

*Physiological Action of the Elements.*—Dr. Blake (San Francisco) read a paper on this subject. He contended that substances in the same amorphous group gave rise to the same physiological action.

*New Acid in Urine.*—On Thursday, August 7th, Dr. Baumann (Freiburg) read a paper on the separation out from highly coloured urine of a new acid called homogentisine acid. He stated that tyrosin given to a patient led to a large increase of this acid, and the author considered it to be formed by the action of bacteria on the tyrosin normally found in pancreatic digestion.

*Estimation of Oxyhæmoglobin.*—Dr. Sophus Torup (Christiania) presented a communication on a method of estimating oxyhæmoglobin and CO hæmoglobin in the circulating blood.

*Fever and Urea Production.*—Drs. Wood and Marshall (Pennsylvania) read a paper on the relation between fever and urea production. In this paper it was stated that the common belief of the increased urea elimination in fever to be an integral part of the process is really not proved, for it may be that such increase is accidental or secondary, due perhaps to the fever temperature, for Nauyn, Barfels, and others have been able to produce it by artificially heating lower animals and men. The important fact is that the body temperature and increased urea production do not keep pace with one another, and that, especially in the crisis of a fever, there may be a low body temperature with a great increase of urea elimination. The latter fact indicates that the real relation is between heat discharges and heat production, as Dr. Wood has shown; that frequently, in the crisis of fever, a low

body temperature co-exists with an enormous increase of heat production. In hepatic fever, contrary to Raynaud, the authors found that on the days of fever the urea production was greater than on normal days. The question whether increased heat production and fever heat may exist with lowered urea elimination has hitherto never been answered, but in two cases of intense fever, caused by section of the medulla from the pons, in which cases Dr. Wood had shown that the heat production is universally augmented, the authors found that urea elimination was almost arrested.

*Estimation of Sense of Smell.*—Dr. Zwaardemacker (Utrecht) read a paper on the estimation of the intensity of the sensation of smell. He showed a simple apparatus for measuring the intensity of smell called forth by different substances, applicable for patients with anosmia.

*Effect of Bile and Other Substances on Pancreatic Juice.*—Dr. Rachford (Kentucky) read a paper on the influence of bile, sodium glycochlorate, and hydrochloric acid on the fat-splitting properties of pancreatic juice. The author said rancid fat emulsified spontaneously without shaking when added to sodic carbonate solution; neutral fat, mixed with pancreatic juice, becomes acid, due to the development of fatty acid, and spontaneous emulsification then results. The presence of sodic carbonate or of HCl retards this fat-splitting property, the presence of bile hastens it; if bile and HCl are both added the fat-splitting property is at a maximum. The formation of the emulsions was then very well demonstrated by passing light through the mixed solutions, and reflecting the appearance on a screen.

*Contraction of Ventricles of Heart.*—Dr. Roy and Mr. Adami (Cambridge) brought forward a communication on the contraction of the ventricular walls and of the musculi papillares respectively, and the manner in which these combine to affect the pressure within the ventricles as well as the pulse curve in the aorta. Already in part published in the *Practitioner* this year.

*Form of Red Corpuscles.*—Dr. Mihajlovits (Budapesth) presented a communication on the form assumed by the red corpuscles of different animals under the influence of different reagents, and their staining power with different fluids.

*Movements after Ablation of Cerebral Hemispheres.*—Dr. Sterner (Cologne) read a paper on the movements called forth in different animals after the removal of the cerebral hemispheres.

*Removal of Liver.*—Dr. Ponick (Breslau) showed two rabbits just killed, from which he had, six months ago, removed in one case a half, and in the other three-quarters, of the liver.

*Motor Nerve Supply of Larynx.*—In the afternoon this Section was joined by those for Nervous Diseases and Laryngology, when V. Horsley and Semon gave a demonstration on their work on the motor-nerve supply of the larynx in the cat and in the dog. This was done by means of a lantern and screen. The central nervous system being exposed in the animal, and the trachea being cut through well below the cords. Into the lower half of the trachea a tube for artificial respiration was introduced, and the lower end of divided upper part being drawn forward. At the same time, the mouth being fixed widely open, and the tongue drawn well forward, the light from a lantern being directed into the fauces, all the movements of the cords were represented on the screen. As the result of their experiments, the authors have been able to localise an adductor centre on the cortex in both cat and dog, but stimulation of the centre in the