sulting from removal of the gland. The number of the white cells diminish after the operation. The equilibrium of the leucocytosis is due to the splenectomy, while the paralysis resulting from thyroidectomy only maintains a stability in the leucocytic formula after a rather long lapse of time. The effects of an artificial dyspnea are encountered if, besides removal of the thyroid, splenectomy has been done. Temporary anoxxygenation changes the hematologic formula in every species of animal excepting those who have been thyroidectomized, in the sense that a leucocytosis is produced. Convalescence from anemia is the same in an animal from whom the thyroid and spleen have been removed as in a normal animal. The anemia produces during convalescence an increase of the white cells of the bone marrow in all animals excepting those who have been thyroidectomized, which is a sign of hyperactivity of the bone marrow. Here, therefore, there is a paralysis of the bone marrow without any interference on the part of the thyroid. These results allow one to conclude that there exists an antagonism between the spleen and the thyroid gland as far as the formation of blood is concerned upon the condition naturally, that no hypothesis as to the mechanism is offered. The thyroid accelerates this formation, the spleen delays it. Their regular coöperation results in normal functioning of the hematogenous systems, but this does not exclude the possibility that other glands of the vascular system do not play a part in these functions. [C. G. C.]

Streuli, H. OXYGEN WANT IN ANIMALS DEPRIVED OF THYROID, SPLEEN, OR BOTH. [Biochem. Zeitschr., 1918, 87, 359-417.]

"In rats deprived of the thyroid, oxygen want produced but little distress; in those without a spleen there is more sensitiveness to oxygen want than normal, whereas when both organs are removed, the animal reacts in the normal way. The bearing of these observations on mountain sickness is discussed." [W. H. D. in Physiol. Abstr., Nov. and Dec., 1918.]

Kendall, E. C. THYROID HORMONE AND ITS RELATION TO OTHER DUCTLESS GLANDS. [Endocrinology, April-June, 1918.]

Kendall describes how the active substance of the thyroid has been isolated and analyzed, its empirical and structural formulæ determined, its synthesis completed, and its physiological action studied in a large number of patients at the Mayo Clinic. In considering the rôle of the other ductless glands of the body, Kendall states that they assume positions secondary in importance to the thyroid, and that their part may be preparing the various metabolites for their final action with thyroxin (the active constituent of the thyroid), with the production of energy. In addition to this duty the task of taking care of byproducts and elaborating other substances must be accomplished by some agent in the

body, possibly the parathyroids and others of the ductless glands. A detailed description of the structural formula of thyroxin is given. It contains an indol group with the iodines attached to the benzene ring, and on the carbon atom adjacent to the amino group of the indol ring there is an oxygen atom. The physiological activity of the substance is produced by the CO.NH groups. In explaining the action of iodine in the compound the theory is presented that it renders the active groups more reactive.

Olivier. GALVANIC CURRENT IN THE TREATMENT OF EXOPHTHALMIC GOITER. [Paris médical, October 5, 1918.]

Two cases are reported in which the ultimate results of treatment by galvanic electricity proved highly gratifying. The first case was that of a woman of twenty-six years, suffering from the disease for three years, in whom hematoethyroidin had failed and section of the cervical sympathetic had been refused by the surgeon, owing to the patient's extreme weakness. Her weight had become reduced to about eighty-one pounds. A sixty volt galvanic current was subsequently employed, with broad electrodes over the neck and back, the former being negative and the latter positive. The amount of current was gradually increased to eighty milliamperes. Thirty-seven treatments in all were administered, at first daily, later at increasing intervals, up to one week. Each sitting lasted about half an hour. Five months after the beginning of treatment, the patient weighed one hundred and thirty and her pulse rate had fallen from 140 or 150 to eighty. The second patient was a woman of forty-eight years, with extreme tremor preventing locomotion, a pulse rate of 180, a large soft goiter, diarrhea, vomiting, and marked emaciation. Forty-two galvanic treatments were given. After the eighth treatment the patient could already walk a considerable distance. When seen three years later she was in good health. The author deems the galvanic current one of the best procedures in exophthalmic goiter. The ordinary dose of twenty-five to thirty-five milliamperes is, however, insufficient, even if combined with faradic electricity; a much stronger treatment is required.

Leclerc and Masson. GOITER WITH METASTASES. [Presse Médicale, Jan. 2, 1919.]

These authors report the case of a man aged sixty-seven years, with a small goiter, apparently ordinary in type, of the left lobe of the thyroid, in whom a large metastatic tumor of the size of two adult fists developed on the left eleventh rib and was removed surgically. The original goiter was so small that the patient's attention had never been drawn to it, and had probably been present a long time. The costal tumor had begun to appear two years before. The patient recovered from the operation, but less than six weeks later succumbed after exhibiting spinal symptoms—