morning a Rehfuss tube is inserted into the stomach of the patient. The patient is then given an Ewald test meal, and the gastric and duodenal contents removed simultaneously at varying intervals of time. The extractions are usually made every fifteen minutes for a period of two and a half or three hours. The gastric contents are analyzed for the acid secretions and the enzymes. The duodenal contents are analyzed for the various enzymes. The results are charted in the form of a curve.

A gastro-duodenal tube has been devised which obviates the necessity of passing two tubes. This tube is composed of two compartments—one ending ten inches above the duodenal opening. The tube bifurcates at its free end, and the openings are distinctly labelled G and D to indicate the opening leading to the stomach and to the duodenum.

The clinical and physiological results of the study of the gastric and duodenal secretions by this method will soon be reported.

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Studies on the metabolism of cells in vitro. The toxicity of dipeptids for embryonic chicken cells.

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In a previous paper[1] we have shown that peptone prepared from the yolk of egg is non-toxic for growing chicken cells even when added in considerable concentration to the medium. Egg yolk digested to the point of crystallizing out an *a*-amino acid is toxic. We tested a large number of *a*-amino acids and have found that all are toxic for the cells. In low dilution they stimulate the contraction of heart muscle fragments but did not affect the growth. In higher dilution they inhibit the growth of cells completely and killed.

Having established this fact it became of interest to study the

[1] *Jour. Exp. Med.*, 1917, Vol. XXV., pp. 93–108.

effect of dipeptids in a similar manner. Leucyl-glycin and carnosin have been tested. The leucyl-glycin was a synthetic product. The carnosin was obtained from muscle. It was prepared by Dr. D. W. Wilson.

Both of these substances are toxic in large doses. Their toxicity is not as marked, however, as is that of the *a*-amino acids. The leucylglycin is more toxic than the carnosin.

During the course of these experiments we prepared and tested peptones prepared from beef. These were found not to affect in any way the growth of the cells.

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A note on the healing in and migration of foreign bodies in the animal body.

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We have made some observations on the difference in the behavior of different species of animals towards foreign bodies on which we wish to report very briefly.

If we apply very thin wires of copper around the neck of white rats in such a way that apparently they do not exert any marked pressure on the skin, these wires heal in at the ventral aspect of the neck, but not at the dorsal and lateral aspects, in a considerable number of cases, after they have at first produced some ulceration. About four weeks after the onset of the ulceration the skin begins to heal over the wire and soon the wire is buried deep in apparently normal tissue. Gradually the wire may migrate deeper into the tissues of the ventral parts of the neck and in one case it was found resting on the trachea, the tissues covering it being apparently quite normal. Thus the migration of foreign bodies can be imitated experimentally in certain cases.

In a large number of white mice and in three guinea pigs wires which had been applied in a similar manner, or even somewhat more tightly, did not heal in, but led to a transitory, more or less, superficial ulceration and scab formation. After some time such ulcers