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ORIGINAL ARTICLES.

THE BLOOD IN DISEASE.

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The routine examination of the blood in disease has been very generally neglected by the busy practitioner, and little wonder, for the imperfect technique given in most of the text books, and the uncertain results obtained, were to say the least, discouraging.

Yet from this source, information of untold value may be derived and by modern methods, with comparatively little trouble.

Acting as the carrier of nutritive substance to all parts of the body and bearing from the tissues to the excretory organs the waste products of metabolism, the blood must of necessity be gravely affected in any serious derangement of the organism.

Many of the changes produced by disease are so subtle as to be at present beyond our means of recognition, but wonderful progress has been made in the last few years in this field so that now from a study of the blood, one often gets light on the most diverse pathological conditions.

The examination may be practically brought under four heads, omitting the estimation of the specific gravity and re-

action, which are of minor importance.

- 1st. Enumeration of corpuscles.
- 2nd. Estimation of Hemoglobin.
- 3rd. Examination of fresh unstained preparations.
- 4th. Examination of stained preparations.

The corpuscles are best counted by the hæmoeytometer of Thoma-Zeiss, or fairly accurately by the hæmatocrite, one of which generally goes with the ordinary centrifugal apparatus used for obtaining urinary sediment. It consists practically of two fine graduated capillary tubes with a frame to hold them, the ends of the tubes being closed when fixed in the frame by little spring buffers.

The small tubes after being slightly warmed, are sucked full of blood by means of a small rubber tube, quickly transferred to frame and made to revolve at a high rate of speed for several minutes.

The corpuscles gravitate to the outer end of the tube, and their proportion can easily be read off.

For the estimation of hæmoglobin, the apparatus of Von Fleischl is the most satisfactory.

A little cylinder with a glass bottom is divided into two compartments by a vertical partition, under one of these compartments, a long narrow wedge of color-