

Now having taken up the composition and the special characters to be noted in the examination of the blood, let us consider shortly the method and instruments employed in such examination. The first necessity will be a microscope having a magnification of at least 350 diameters, much better if from 700 to 900 diameters can be obtained, particularly for examination of stained specimens.

The blood is best obtained from the ball of the finger—the middle finger being the best. The finger is first thoroughly washed with warm water and soap, then with a little alcohol and then dried; a large triangular pointed needle is taken and pushed into the ball of the finger and the blood which oozes forth is taken for examination. Pressure should not be used to produce the blood drop.

The examination for diagnostic purposes is best carried out in the following manner, the instruments necessary being mentioned as we proceed. (1) The Haemoglobin reading should be taken by Fleischel's Haemometer, which I consider much superior in efficiency to that of Gowers. It should always be remembered in using this instrument that artificial light is necessary, either lamp or gas can be used. With daylight no correspondence can be found between the Blood coloration and that of the standard comparison Bar. With this instrument, we obtain the percentage ratio of Haemoglobin.

(2). The red and white corpuscles should next be counted. This is best done with Thomas' Haemacytometer. In this instrument a drop of blood is drawn up into bulb and diluted 100 times in a solution of same specific gravity as blood. A drop of this solution is then counted on a special slide with cell and micrometer measurements, by the use of a microscope of from 200 to 350 diameters. In counting red discs, 40 squares of the scale are all that will be required, while to estimate the number of white cells, 200 squares should be counted. From this examination we obtain the number of white and red cells per cubic millimetre and their proportionate relationships. We also note the size, shape, outline and coloration of the red cells, thus noting whether poikilocytosis is present, and forming an approximate estimate of the Haemoglobin percentage per cell. One can also in this way detect a leucocytosis, but cannot certainly say in what the leucocytosis consists, unless he (3) prepares and stains cover glass specimens of the blood. To prepare these films take clean, well-polished cover glass squares; with one glass, pick up a small drop of blood in centre and drop over a second cover square. The blood spreads out in a single film, the covers are then gently slid off from one another.