

any nucleated forms. In healthy blood there are from 5,000,000—5,500,000 red cells per cubic millimetre. Increase in numbers is rare and occurs in no pathological condition. Decrease is quite common in various forms of anaemia etc., and is always of pathological import. Normally the red corpuscles are circular in outline and quite uniform in size, but in disease we may find changes in size and outline—larger or smaller cells making their appearance and being ovoid, tailed or otherwise irregular in outline. Such changes in size and outline are pathological, being found in grave and pernicious anaemias. The irregularity in outline is termed "poikilocytosis" and we also apply the terms megaloblasts to the larger forms of red cell. At times nuclei may be detected in some of the red discs in grave anaemias. They are never found in health. In specimens of fresh blood examined at once microscopically, or to a lesser extent in stained specimens, we can estimate approximately the amount of Haemoglobin by the intensity of coloration of the corpuscles and by the size of the central depression.

The white blood corpuscles are of very great importance in disease conditions, not only in purely blood diseases (so termed) but in disease conditions of other tissues of the body, so that a careful study of those forms is of much import. Normally the white cells are present in the blood in proportion of one white to 500 to 600 red. Now, in the blood we have various forms of white cells, which can not be clearly differentiated in unstained specimens, but when we use certain staining materials, the differences can be readily determined. Various observers classify these cells in various ways, depending either on the re-action of the cell protoplasm, granules, and nuclei to stains (acid neutral or basic) or upon the nature of the granules as regards size and re-action, or further upon the supposed origin of the cell. Most classifications are based upon Ehrlich's work and that of Kanthack and Hardy. I will follow here the classification given in Osler's Practice of Medicine as being perhaps the most convenient. Thus we have the normal white cells of the blood divided into :—

(a) The polynuclear leucocyte, phagocyte, finely granular oxyphile cell of Kanthack, neutrophile cell of Ehrlich, This cell is the common white cell of the blood, making up from 60 to 80% of the white corpuscles. It is about $1/2500$ inch in diameter, contains two or more nuclei—protoplasm is finely granular—the granules being oxyphile