

including additional procedures to identify the cause of the dysfunction. The following discussion is limited to a description of the most common and one of the most valuable tests, the **complete blood count (CBC)**. Other procedures, such as those related to iron, coagulation, and immune status, are discussed throughout the chapter as appropriate. The nurse should be familiar with the significance of the findings from the CBC ([Table 24-1](#)).

**TABLE 24-1**

**Tests Performed as Part of a Complete Blood Count**

Test (Average Value)	Description, Comments
<b>RBC count</b> (4.5 to 5.5 million/mm <sup>3</sup> )	Number of RBCs/mm <sup>3</sup> of blood Indirectly estimates Hgb content of blood Reflects function of bone marrow
<b>Hgb determination</b> (11.5 to 15.5 g/dl)	Amount of Hgb (g)/dl of whole blood Total blood Hgb primarily depends on number of circulating RBCs but also on amount of Hgb in each cell
<b>Hct</b> (35% to 45%)	Percent volume of packed RBCs in whole blood Indirectly measures Hgb content Is approximately three times Hgb content
<b>RBC indices</b>	
MCV (77 to 95 fl)	Average or mean volume (size) of a single RBC MCV value is expressed as femtoliter (fl) or cubic micron (mm <sup>3</sup> )
MCH (25 to 33 pg/cell)	Average or mean quantity (weight) of Hgb in a single RBC MCH value is expressed as picogram (pg) or micromicrogram (mmcg) Whereas MCV and MCH depend on accurate counts of RBCs, MCHC does not; therefore, MCHC is often more reliable All indices depend on average cell measurements and do not show individual RBC variations (anisocytosis)
MCHC (31% to 37% Hgb [g]/dl RBC)	Average concentration of Hgb in a single RBC MCHC values are expressed as percent Hgb (g)/cell or Hgb (g)/dl RBC
RBC volume distribution width (13.4% ± 1.2%)	Average size of RBCs Differentiates some types of anemia
<b>Reticulocyte count</b> (0.5% to 1.5% erythrocytes)	Percent reticulocytes in RBCs Index of production of mature RBCs by bone marrow Decreased count indicates depressed bone marrow function Increased count indicates erythrogenesis in response to some stimulus When reticulocyte count is extremely high, other forms of immature RBCs (normoblasts, even erythroblasts) may be present Indirectly estimates hypochromic anemia Usually elevated in patients with chronic hemolytic anemia
<b>WBC count</b> (4.5 to 13.5 × 10 <sup>3</sup> cells/mm <sup>3</sup> )	Number of WBCs/mm <sup>3</sup> of blood Total number of WBCs less important than differential count
<b>Differential WBC count</b>	Inspection and quantification of WBC types present in peripheral blood Values are expressed as percentages; to obtain absolute number of any type of WBC, multiply its respective percentage by total number of WBCs