

**Unit 7: Hematology**  
**Chapter 29 & 30**  
**ONLINE CONTENT (1.5 H)**

**Complete the worksheet and submit in the Unit 7: Hematology dropbox by March 20, 2023 at 0800. Please be sure to bring a copy to class on March 20, 2023.**

Table 1	<b>Iron Deficiency Anemia</b>	<b>Thalassemia</b>	<b>Cobalamin (Vitamin B<sub>12</sub>) Deficiency</b>	<b>Folic Acid Deficiency</b>
<b>Etiology</b>	Inadequate dietary intake, malabsorption, blood loss or hemolysis	Absent or reduced globulin protein: Group of diseases involving inadequate production of normal hemoglobin	Pernicious anemia caused by absence of intrinsic factor. Can occur with GI surgery, Crohn's, excess alcohol or hot tea consumption, vegetarians,	Needed for DNA synthesis leading to RBC formation and maturation
<b>Clinical Manifestations</b>	Early; no symptoms Palpitations, tachycardia, murmurs, blurred vision, fatigue, anorexia, hepatomegaly, splenomegaly, difficulty swallowing, sensitive to cold, lethargy, pallor, jaundice, smooth tongue, bone pain, tachypnea, orthopnea at rest, headache, vertigo, depression	Minor: asymptomatic Mild to moderate: microcytosis and hypochromia, mild splenomegaly, bronzed skin, bone marrow hyperplasia. Growth slowed mental and physically. Major: splenomegaly, hepatomegaly, cardiomyopathy	Tissue hypoxia, sore red beefy tongue, anorexia, vomiting, weakness, ataxia, impaired thought process, dementia	Symptoms may attribute to other coexisting problems, GI issues including stomatitis, dysphagia, diarrhea, neurological symptoms
<b>Diagnostic Studies</b>	Lab, stool occult blood test, endoscopy and colonoscopy, bone marrow	Lab	Serum test, upper GI endoscopy, biopsy of gastric mucosa	Labs
<b>Drug Therapy</b>	Iron replacement	Blood transfusion in conjunction with chelating agents, deferasirox, deferi-prone, deferoxamine	Parental B12 or intranasal cyanocobalamin	Replacement therapy
		Transfusion, drug	Reduce risk for	Educate about food

<b>Nursing Management</b>	Treat underlying problem causing iron loss	management, safety	injury, PT	high in folic acid
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Table 2	<b>Anemia of Chronic Disease</b>	<b>Aplastic Anemia</b>	<b>Acute Anemia due to blood loss</b>	<b>Chronic Anemia due to blood loss</b>
<b>Etiology</b>	Can be caused by cancer, autoimmune, infectious diseases; underproduction of RBC or shortened life span of RBC	Decreased of all blood cell types; autoimmune activity	Sudden hemorrhage; from trauma, surgery, conditions that disrupt vascularity	Depletion of iron stores
<b>Clinical Manifestations</b>	Fatigue, pallor, SOB, tachycardia, irritability, chest pain	Fatigue, dyspnea, cardiovascular and cerebral responses	Shock, BP, CO low, air hunger, cold clammy skin, rapid thrady pulse, tachycardia	Fatigue, pallor, SOB
<b>Diagnostic Studies</b>	Lab, bone marrow biopsy	Labs, bone marrow	S/S of shock, Labs, pain, numbness	Labs
<b>Drug Therapy</b>	Correct underlying issue, blood transfusion, erythropoietin therapy	HSCT therapy, ATG, immunosuppress therapy, blood transfusion	Replace blood volume, iron, blood	Supplement iron
<b>Nursing Management</b>	Safety, treating underlying condition	Preventing complications from infection and hemorrhage	Find source of bleeding, replace fluids, monitor drains and tubes	Identifying source of bleeding

Table 3	<b>Acquired Hemolytic Anemia</b>	<b>Hemochromatosis</b>	<b>Polycythemia</b>
<b>Etiology</b>	Hemolysis of RBS from extrinsic factors; physical destruction, antibody reactions, toxins	Iron overload; genetic, liver disease	Increases RBC
<b>Clinical Manifestations</b>	Jaundice, dark urine, fever, weakness, enlarged spleen	Fatigue, impotence, abdominal pain, weight loss, liver enlargement, cirrhosis, diabetes, skin pigment changes	Splenomegaly. Dizziness, visual disturbances, angina, stroke, hepatomegaly, tissue hypoxia
<b>Diagnostic Studies</b>	Labs	Labs	labs
<b>Drug Therapy</b>	Fluid replacement, folate, glucocorticoids, C5	Deferoxamine, iron chelating agent	Myelosuppressive agents, anagrelide, aspirin
<b>Nursing Management</b>	Supportive care, hydration, electrolyte replacement, surgery pre/post for surgery	Manage organ involvement	Phlebotomy, assess fluid intake and output, observe for drug reactions, nutritional status, passive leg exercises