

Unit 7: Hematology
Chapter 33 & 34
ONLINE CONTENT (2H)

Complete the worksheet and submit in the Unit 7: Hematology dropbox by March 17, 2025 at 0800. Please be sure to bring a copy to class on March 17, 2025.

Table 1	Iron Deficiency Anemia	Thalassemia	Cobalamin (Vitamin B₁₂) Deficiency	Folic Acid Deficiency
Etiology	Not enough iron in diet, blood loss (heavy periods, ulcers).	Inherited condition that affects red blood cell production.	Poor diet or body can't absorb B12 properly.	Not eating enough folic acid, pregnancy, alcoholism.
Clinical Manifestations	Fatigue, pale skin, brittle nails, shortness of breath, dizziness.	Fatigue, weakness, slow growth, jaundice, enlarged spleen.	Fatigue, pale skin, numbness/tingling in hands and feet, memory problems.	Fatigue, pale skin, irritability, weakness.
Diagnostic Studies	Blood work (low iron, low hemoglobin, low ferritin).	Blood tests, hemoglobin electrophoresis, genetic testing.	Blood tests (low B12 levels, large red blood cells).	Serum folate, CBC, peripheral blood smear
Drug Therapy	Iron supplements, dietary changes (iron-rich foods).	Blood transfusions, iron chelation therapy, bone marrow transplant	B12 supplements (oral or injections).	Folic acid supplements, dietary changes (leafy greens, citrus fruits).
Nursing Management	Monitor diet, take supplements as prescribed, prevent	Monitor iron levels, prevent complications,	Eat B12-rich foods (meat, eggs, dairy), monitor neurological	Ensure proper diet, medication

	further blood loss	genetic counseling if needed.	symptoms.	adherence.
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Table 2	Anemia of Chronic Disease	Aplastic Anemia	Acute Anemia due to Blood Loss	Chronic Anemia due to Blood Loss
Etiology	Chronic conditions (kidney disease, cancer, autoimmune diseases) causing decreased red blood cell production.	Bone marrow failure due to autoimmune diseases, infections, toxins, or medications.	Sudden blood loss from trauma, surgery, or internal bleeding.	Slow, long-term blood loss (e.g., ulcers, heavy periods, GI disorders).
Clinical Manifestations	Fatigue, pale skin, shortness of breath.	Fatigue, infections, bruising/bleeding easily.	Rapid heart rate, dizziness, low blood pressure, pale skin.	Fatigue, pale skin, weakness, shortness of breath.
Diagnostic Studies	Blood tests (low iron, normal or high ferritin).	Blood tests (low blood cell counts), bone marrow biopsy.	Blood tests (low hemoglobin), imaging if internal bleeding is suspected.	Blood tests (low iron, low hemoglobin), stool test for GI bleeding.
Drug Therapy	Manage underlying disease, possible iron supplements or erythropoietin therapy.	Blood transfusions, bone marrow transplant, medications to stimulate blood production.	Stop bleeding, blood transfusions, IV fluids.	Iron supplements, treat source of blood loss (heavy periods)
Nursing	Monitor symptoms, treat the underlying	Prevent infections, avoid injury,	Monitor blood loss, prevent further	Monitor symptoms, treat the underlying

Management	condition.	monitor blood counts.	bleeding,	cause.
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Table 3	Acquired Hemolytic Anemia	Hemochromatosis	Polycythemia
Etiology	Immune system attacks red blood cells, inherited disorders, infections, certain medications.	Genetic disorder causing excessive iron absorption.	Overproduction of red blood cells due to genetic mutations (primary) or low oxygen levels (secondary).
Clinical Manifestations	Fatigue, jaundice, dark urine, enlarged spleen.	Joint pain, fatigue, jaundice, liver disease.	Headaches, dizziness, high blood pressure, itching after a hot shower
Diagnostic Studies	Blood work (low red blood cell count, high bilirubin), Coombs test.	Transferrin saturation, Coombs' Test, Reticulocyte Count:	Bone marrow biopsies, Genetic testing for JAK2, CBC
Drug Therapy	Medications (steroids, immunosuppressants), possible blood transfusions.	Corticosteroids, rituximab, or intravenous immune globulin (IVIG)	Regular blood removal (phlebotomy), iron-chelating medications.
Nursing Management	Prevent infections, monitor for complications.	Avoid iron-rich foods, monitor organ function.	Stay hydrated, monitor for clotting risks.

In order to receive full credit (2H class time) for this assignment, it must be completed in its entirety by the due date/time assigned. Any assignment not completed in its entirety by the due date and time will result in missed class time and must be completed by the end of the semester to pass the course.