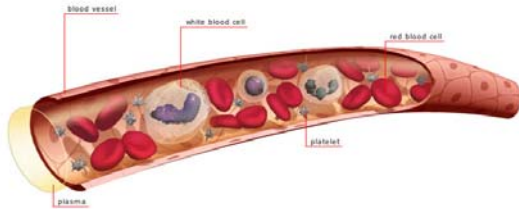


CARDIOVASCULAR SYSTEM

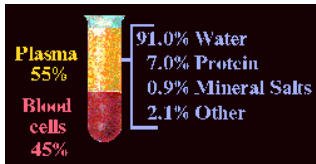


BLOOD

Plasma 55%	Cellular elements 45%
<p>Water (90% of plasma)</p> <p>Proteins</p> <p>Salts (e.g., sodium, potassium, calcium)</p> <p>Substances being transported (e.g., O₂, CO₂, nutrients, wastes, hormones)</p>	<p>Red blood cells (erythrocytes)</p> <p>White blood cells (leukocytes)</p> <p>Platelets (thrombocytes)</p>

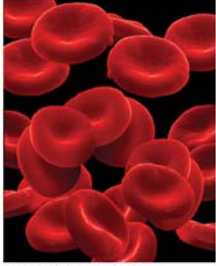
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PLASMA



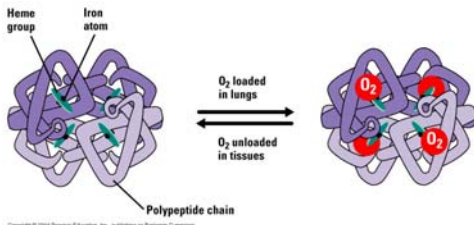
- 90+% H₂O
- Electrolytes (Na⁺, K⁺, Mg²⁺, Cl⁻, HCO₃⁻)
- Hormones, vitamins
- Nutrients (Glucose, amino acids, lipids, cholesterol)
- Wastes (Urea, creatine, bilirubin)
- Proteins
 - Albumins 60%, Globulins 36%, Fibrinogen 4%

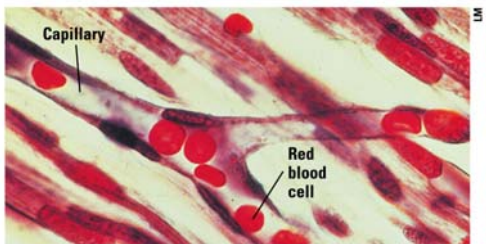
Erythrocytes: RBC's



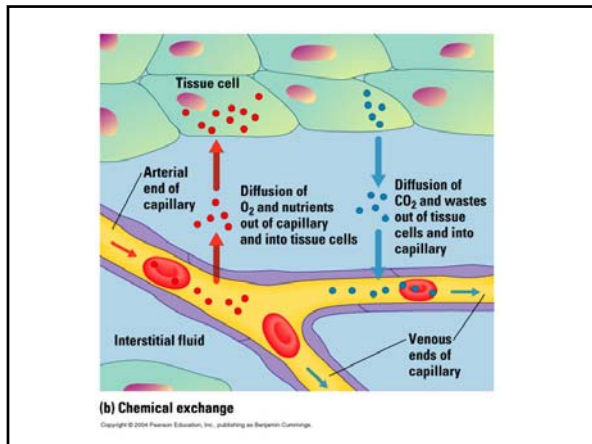
- Hematocrit (PCV):
 - 5.4million/ μ l (men)
 - 4.7million/ μ l (women)
- 99.9% of blood cells
- Biconcave (8μ m X 3μ m (0.45-3)
- No nucleus or organelles
- 120 day life span
- Packed with hemoglobin

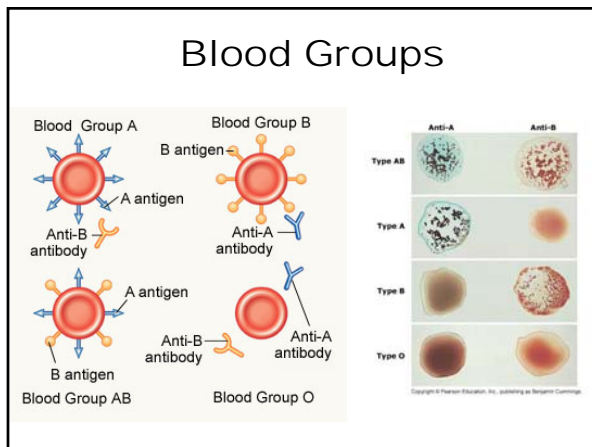
Hemoglobin





(a) Capillaries





Leukocytes

- Granulocytes
 - Neutrophils (50-60%)
 - Eosinophils (3-6%)
 - Basophils (<1%)
- Agranulocytes (30%)
 - Lymphocytes
 - Monocytes (3-9%)

Various White Cells

Lymphocyte

Monocyte

Neutrophil

Basophil

Eosinophil

Platlets

Wadsworth Center
New York State Department of Health

Megakaryocytes

