Circulatory system consists of:

- 
- 
- 

3 Primary functions of the circulatory system:

- 
- 
- 

Circulatory system works with other systems to maintain homeostasis:

Digestive system:

Respiratory system:

Urinary system:

Blood components:
Hematocrit:
  Male values:
  Female values:
Plasma:

<table>
<thead>
<tr>
<th>Constituent</th>
<th>Major function</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water</td>
<td></td>
</tr>
<tr>
<td>Ions (blood electrolytes)</td>
<td></td>
</tr>
<tr>
<td>Plasma proteins</td>
<td></td>
</tr>
<tr>
<td>Other substances:</td>
<td></td>
</tr>
</tbody>
</table>

Cellular components of blood: What’s the percentage?

- 
- 
-
Red Blood Cells (RBCs) or Erythrocytes:

RBC function:

Measurements:
- Hematocrit (HCT):
- Hemoglobin (Hb):
  - Male values:
  - Female values:

Life span?
- Where are the RBCs broken down?

Erythropoietin:

Blood component production (Fig 7.5):
  - Pluripotent cells:

White Blood Cells (WBCs) or Leukocytes:

WBC function:

Types of WBCs:
- Granulocytes:
  - Neutrophils:
  - Eosinophils:
  - Basophils:
- Agranulocytes:
  - Monocytes:
  - Lymphocytes:
    - B cells
    - T cells

Platelets:
Function:
- Reduce blood flow
- Platelet plug formation
- Coagulation

Hemophilia:
Blood Typing:

Antigen:

Antibody:

ABO blood grouping:

Phenotypes → physical appearance
   Type A – homozygous or heterozygous A
   Type B – homozygous or heterozygous B
   Type AB (co-dominance)
   Type O – only homozygous

MN blood grouping → Rheuses factor or Rh factor
   Rh +
   Rh –

Blood donation:

Universal donor:

Universal recipient:

Blood disorders:

Anemia:
   Due to:

Leukemia:

Multiple myeloma:

Mononucleosis:

Hepatitis

Blood doping: