



اسم المادة و الكورس

INTRODUCTION FOR BLOOD

Sawa University

جامعة ساوة الاهلية

College of health and medical techniques

كلية التقنيات الصحية والطبية

Department of Medical Laboratories

قسم تقنيات المختبرات الطبية

..... Stage

..... المرحلة

محاضرة رقم

الجانب النظري

Lecture No.

Theoretical

تدريسي المادة :

Overview

Introduction for blood

-what is the blood transfusion

-purpose

Indication

-type of blood indication

(INTRODUCTION)

BLOOD

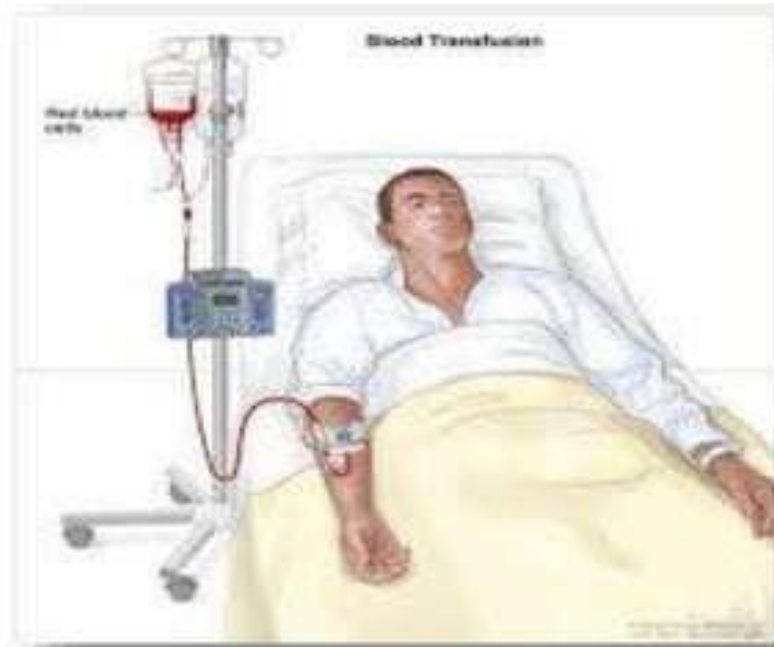
A fluid tissue in human with the principal function of transporting substances from one part of the body to another.

Blood is like the body's transportation system. As blood circulates, it delivers oxygen and nutrients throughout the body. It also collects waste products and carries them to the organs responsible for making sure the wastes leave the body.

Whole blood is a mixture of cells and liquid, and each part has a specific job.

- It consists of a watery solution called plasma, in which there are three types of cells: platelets, red blood cells and white blood cells.
- RED BLOOD CELLS:- carry oxygen to the body's tissues and remove carbon dioxide.
- WHITE BLOOD CELLS:- help defend the body against infection by producing antibodies, which help destroy foreign germs in the body.
- PLATELETS:- the smallest blood cells, help to clot the blood and control bleeding.
- PLASMA:- the pale yellow liquid part of whole blood. It's a mixture of water, proteins, electrolytes, carbohydrates, cholesterol, hormones, and vitamins.

BLOOD TRANSFUSION



INTRODUCTION

- A blood transfusion is a fairly simple medical procedure. In a transfusion, a patient receives whole blood or one of its parts through an intravenous line or IV. This is a tiny tube that is inserted into a vein using a small needle.
- Blood transfusion is usually done as a lifesaving maneuver to replace blood cells or blood products lost through trauma, injury or severe bleeding during surgery when blood loss occurs or to increase the blood count in an anemic patient.

- Transfusions take 1 to 4 hours, depending on how much blood is given and the blood type. No special recovery time is needed.

MEANING/DEFINITION

- *Blood transfusion therapy refers to the process of administering whole blood or blood components to a patient through an intravenous[IV] needle or catheter placed in a patient's vein.*

OR

- *Blood transfusion is a medical treatment that replaces blood lost through injury, surgery, or disease. The blood goes through a tube from a bag to an intravenous[IV] catheter and into your vein.*

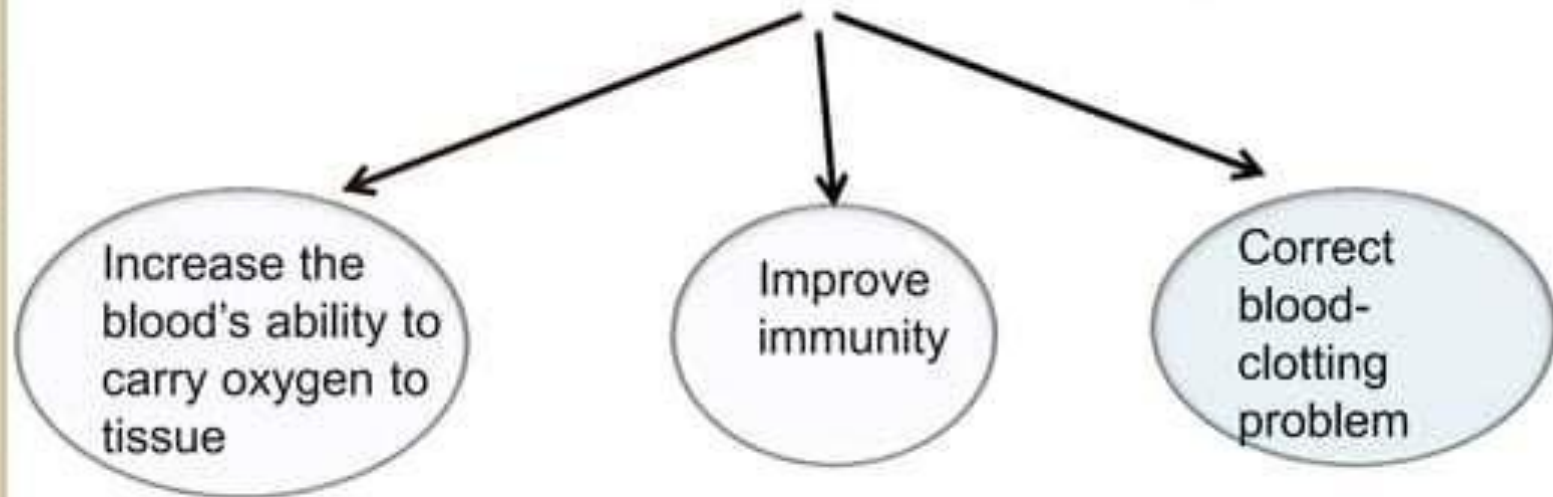
Purpose

- Restore blood volume
- Replace clotting factors
- Improve oxygen carrying capacity
- Restore blood elements that are depleted
- Prevent complications
- To raise the haemoglobin level
- To provide antibodies

PURPOSE

The most common purpose for administering a transfusion is to replace lost blood volume.

Transfusion are also given to



TYPES OF BLOOD DONATION

- Blood can be provided mainly from three sources:
- **Autologous blood** [*comprised of the patient's own blood*]
- **Homologous blood** [*blood donated from another person*]
- **Synthetic blood** [*blood products developed in a laboratory*].

INDICATIONS

- People who have surgery
 - heart surgery
- People who have injury
 - Car crashes, war or natural disaster
- People who have disease or because of illnesses they need blood
 - Anemia
 - bleeding disorders such as hemophilia and thrombocytopenia
- Cancer patients requiring therapy
- Women in childbirth and newborn babies in certain cases
- Patients of hereditary disorders like haemophilia and thalassaemia
- Severe burn victims
- Inability to make enough blood

- I.V. pole
- Gloves
- Gown
- Face shield



- *Multi - lead tubing*
- *Scissors*



- *Adhesive tape*



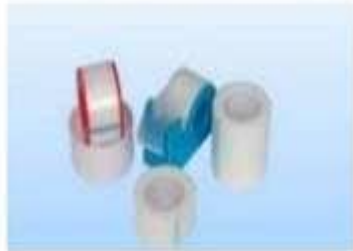
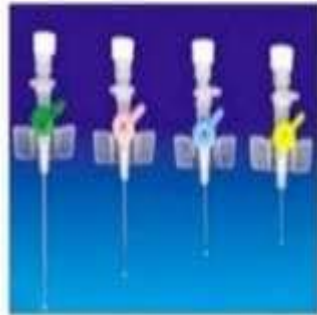
- *Whole blood or Packed RBC's*



- *250 ml of Normal Saline Solution*



- Venipuncture equipment, if necessary[should include 20 G or larger catheter.



- Optional: ice bag, warm compresses



REFERENCE :

mollison's blood transfusion in clinical medicine,

Standards for Blood Banks & Blood Transfusion Services



Any questions?

*Thank
You*