|   | General rules for preparing blood<br>for laboratory testing.         |  |  |
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| Obtaining material for                                    |  |  |  |
| Blood is taken from                                       |  |  |  |
| Blood is taken from                                       |  |  |  |
| Blood sampling from                                       | n the wrist vein should be done with blood flow using a wide slotted |  |  |
| Blood sampling from<br>cannula. The mos<br>anticoagulant. | t common mistake in blood collection is the incorrect use of         |  |  |
| Keywords:   |  |  |  |

Obtaining material for analysis

Blood is taken from a vein

Blood is taken from the finger

Blood sampling from the wrist vein should be done with blood flow using a wide slotted cannula. The most common mistake in blood collection is the incorrect use of anticoagulant.

# The procedure for taking blood from a finger

- Fingertip blood sampling technique.
- Of course, rubber gloves are worn, processed with 70<sup>°</sup> alcohol.
- Blood is taken from the peripheral part of the 4th ring finger (above the ear or heel in newborns).
- We will process the place where the blood is taken with the help of 70<sup>°</sup> alcohol cotton.
- We pierce using a disposable scarifier.
- We wipe the first drop with dry sterile cotton.
- We put the blood in a glass and a test

tube.

• We put a 70<sup>°</sup> sterile cotton swab on the finger from which the blood was taken.

## Used anticoagulants and preservatives.

- 1. Test tubes with EDTA. Blood is used for general clinical examination and glycosylated hemoglobin.
- 2. Test tubes with sodium citrate. It is used to check the hemostasis system.
- 3. Test tubes with sodium fluoride. Used to determine glucose. Other biochemical parameters can also be determined.
- 4. Test tubes with heparin. Used for immunogram.

## Blood sampling technique.

Blood is taken on an empty stomach. Before blood collection, the skin intended for puncture is wiped with sterile cotton soaked in 70°C alcohol and dried. Skin treated with a disinfectant is not palpable. Disposable

#### Volume 26| November 2023

syringes or vacuum blood collection systems — Vacuette, Vacutainer — are used for blood collection. The syringe is opened immediately before use. 2-2.5 ml of venous blood is taken in a 5 ml sterile test tube. Blood collected in a test tube can be stored in a freezer at +4+6°C for up to 24 hours. The tube is not frozen.

#### Vacuum tubes

For different analyses, blood is drawn into different vacuum tubes with specified additives, following the correct order of the tubes.

Empty vacuum tubes are stored in a vertical position on a tripod at a temperature of  $+4 \dots + 25$  ° C.

The shelf life of vacuum tubes should be monitored. Expired vacutainers should not be used.

Harness and underarm pillow Skin cleansers

# **The procedure for taking blood from a vein** Identify the patient.

To ly ou his informat

To know his information.

To find out if the patient follows the prescribed diet and is allergic to the substances contained in the disinfectant for cleaning the skin at the venipuncture site.

Ensuring that the patient is in a comfortable

and suitable position for blood collection - the patient's arm should be extended so that it forms a straight line from the shoulder to the wrist.

Wear gloves.

Choosing a venipuncture site, ask the patient to make a fist so that the veins are more visible. Clean the place intended for venopuncture with a disinfectant and dry the skin.

The tourniquet is tied approximately 10-12 cm above the place where the blood is drawn.

The protective cap is removed from the needle. A venipuncture is performed and the skin is slightly stretched so that the vein does not move; the vessel wall should be pierced with a needle at an angle of 15-30 degrees, and the hole of the needle should be directed upwards.

Hold the test tube in such a way that the blood should flow along the wall of the test tube.

After filling, the vacutainers are mixed 4-8 times (coagulation tube - 4 times, the rest - 8 times) to mix the blood. The movement should not be sudden.

An alcohol swab is applied to the needle and the needle is removed from the vein.

For 3-5 minutes, the place where the blood was taken is pressed with alcohol cotton, the patient's hand is asked to straighten

| Test tube  | Cover color | Filling solution                                 | Number of turns       |
|--|-------------|--|-----------------------|
| Without solution                                 | Red         | -  | 0                     |
| Blood<br>coagulation activator                   | Red         | Blood<br>coagulation activator                   | 5-8                   |
| Activator of<br>blood coagulation using<br>a gel | yellow      | Activator of<br>blood coagulation using<br>a gel | 5-8                   |
| EDTA- from<br>ethylenediamineacetic<br>acid      | purple      | EDTAK2<br>EDTAK3                                 | If liquid: 3-5<br>5-8 |

| Sodium citrate<br>solution | blue  | Sodium citrate<br>0,129 mol/l (3,8%)<br>0,109 mol/l (3,2%) | 3-5 |
|----------------------------|-------|--|-----|
| Glucose                    | Gray  | Sodium fluride/<br>EDTA<br>Sodium Fluorite/ K<br>Oxalate   | 5-8 |
| Heparin                    | Green | Lithium heparin<br>Sodium heparin                          | 5-8 |
| Heparin and gel            | Green | Lithium heparin and<br>gel<br>Sodium heparin               | 5-8 |

# Vacutainers

A vacuum blood storage system or vacutainer is a disposable tube for quick and safe collection of venous blood. Special substances in vacutainers are aimed at proper storage of biological material and accurate results during analysis. Durable plastic is used for production, which prevents gas exchange

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