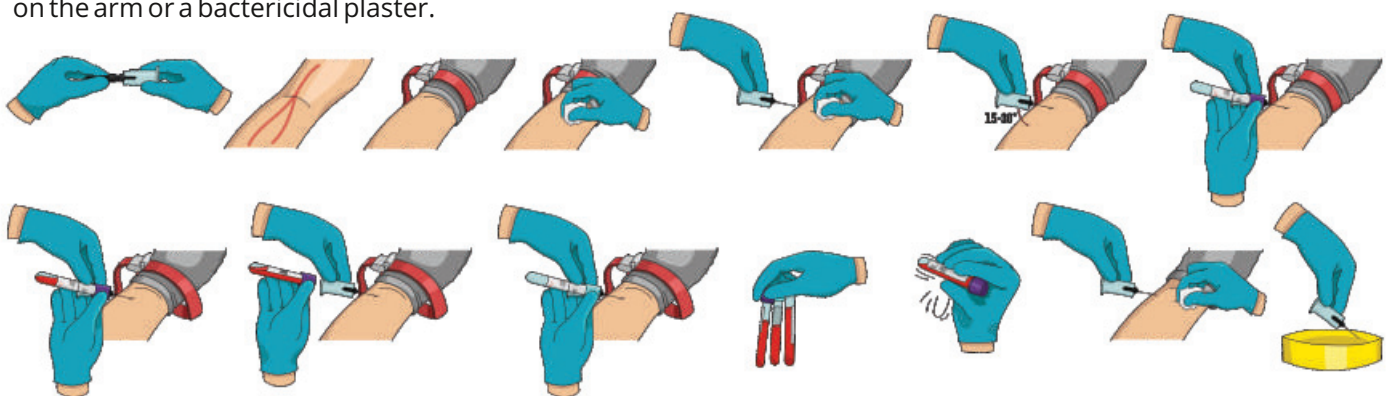


Venipuncture techniques by Multi Sample needles

1. Label the required tubes, specifying the name of the patient, department (in order to exclude errors when identifying the biomaterial sample).
2. Treat your hands hygienically, dry them.
3. Treat your hands with an antiseptic. Do not dry; wait until the antiseptic is completely dry.
4. Put gloves on hands.
5. Select tubes corresponding to required laboratory tests; prepare a needle, a holder, alcohol wipes, and a plaster.
6. Place a tourniquet on the arm 7-10 cm above the venipuncture place. Tourniquet must be applied no more than one minute. A longer vein squeeze time can influence the test results due to changes in the concentration of parameters in the blood.
7. Ask the patient to clench a hand into a fist. Do not give physical exertion to the arm, like "clenching and unclenching of a fist" because it can influence the test results due to changes in the concentration of parameters in the blood.
8. Select the venipuncture place. The ulnar and saphenous veins are the most common but smaller and fuller veins of the wrist and hand can be punctured too. Depending on the characteristics of the vein select the most convenient option for the venipuncture: a multisample needle or a blood collection set (a butterfly needle).
9. Take the needle and remove the protective cap.
10. Attach the needle into the holder.
11. Disinfect the venipuncture site with a gauze napkin or a pad moistened with an antiseptic solution, in a circular motion from the center to the periphery.
12. Wait until the antiseptic solution is completely dry.
13. Remove the cap on the other side of the needle. Position the needle along the line with the vein level up and puncture the vein at an angle of 15-30 ° to the skin.
14. Insert the prepared tube into the needle holder until it stops and hold it until the blood stops flowing into the tube. The tourniquet must be removed or released immediately after the blood flow has started leaking into the tube. Make sure the patient unclenches his fist. The blood passes into the tube until it completely compensates for the created vacuum. If the blood does not flow it means that the needle has gone through the vein. In this case there is need to pull out the needle slightly but not to remove it completely. Do it until the blood goes into the tube. The certainty of filling the tube is $\pm 10\%$ of the nominal volume.
15. Remove the tube from the holder. After filling the tube it must be immediately gently inverted to mix the sample with the filler: tubes without anticoagulants - 5-6 times; tubes with citrate - 3-4 times; tubes with heparin, EDTA and other additives - 8-10 times.
16. You can attach a number of other tubes to the holder to draw blood for various researches.
17. After all the required tubes are filled in put a dry sterile cloth on the venipuncture site and remove the needle. Make sure that the patient does not have external bleeding in the area of venipuncture. Apply a pressure bandage on the arm or a bactericidal plaster.



Recommended order of taking blood with tubes

