

Physiology

3rd stage

Lab . 4

Bleeding and Clotting Time

BY

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Bleeding Time

The time it takes for bleeding to stop (i.e. the time it takes for a **platelet plug** to form) is measured.

- Normal bleeding time is 3 -6 minutes.
- Estimation of bleeding time is not a reliable test, because the results at this test would vary depending on the site and depth of puncture.
- More ever it is short timed during cold weather due to capillary constriction, and reverse case in hot weather.
- A prolonged bleeding time may be a result from decreased number of thrombocytes or impaired blood vessels.

Diseases that cause prolonged bleeding time include:

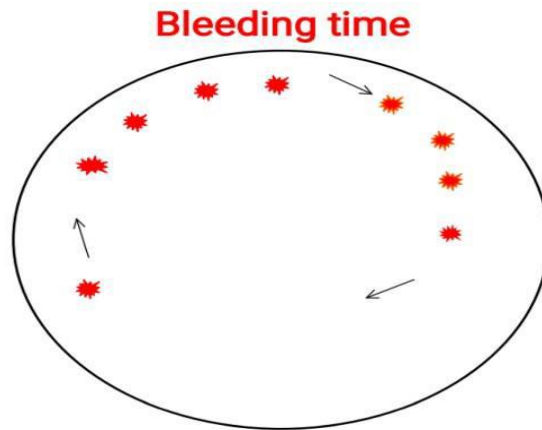
- ☐ Thrombocytopenia.
- ☐ Von Willebrand Disease.
- ☐ Bernard-Soulier disease.

Use of these medications as well prolong bleeding time:

- ☒ Aspirin
- ☒ heparin.

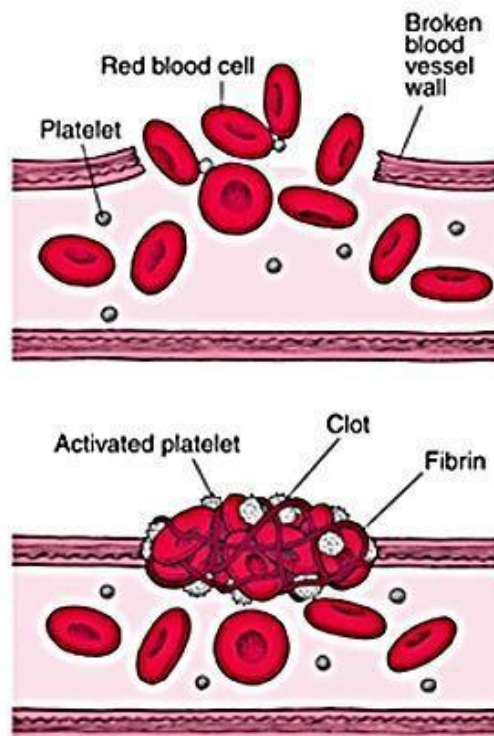
Dukeś method Procedure:

- Clean fingertip or earlobe with spirit and with sterile lancet give at least 2 mm deep prick.
- Note the time.
- Every 30 second blot off the drop of blood by filter paper until no more blood appear on the puncture site, note the time at which the bleeding has stopped.



Clotting Time

- It is the time taken by blood to coagulate after it has been shed. Coagulation (clotting) of the blood is the most effective defense against bleeding.
- It is important for the blood to clot quickly when a vessel has been broken, but equally important for it not to clot in the absence of vessel damage.
- The clotting time will be prolonged if the volume of blood per tube or the diameter of the tube is increased, or if the temperature decreased.
- The normal range of clotting time is (5-15) minutes.



Capillary tube method

Procedure:

- 1- Prick a finger with a sterile lancet, fill 2 non heparinized capillary tube with blood (capillary tube should touch the bleeding point), wipe any excess blood from the outside of the tube.
- 2- Wait for 4 minutes, then cut the tube after each 30 seconds.
- 3- Note the time if the fibrin thread is formed between the 2 broken capillary tubes.