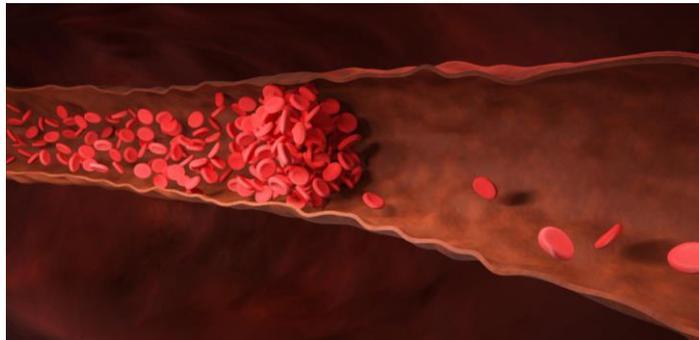




**Physiology**  
**3<sup>rd</sup> stage**  
**Lab . 4**

**Bleeding and Clotting Time**



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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.

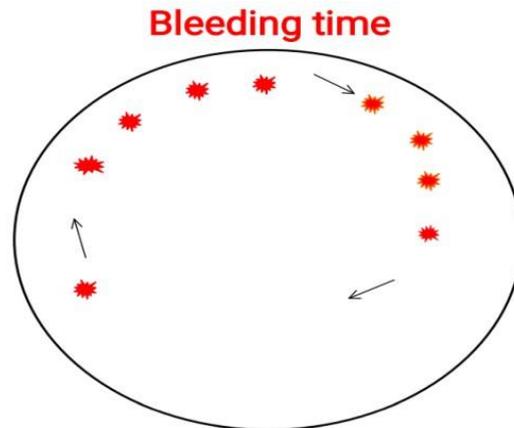
**Use of these medications as well prolong bleeding time:**

- Aspirin
- heparin.

### Duke's method

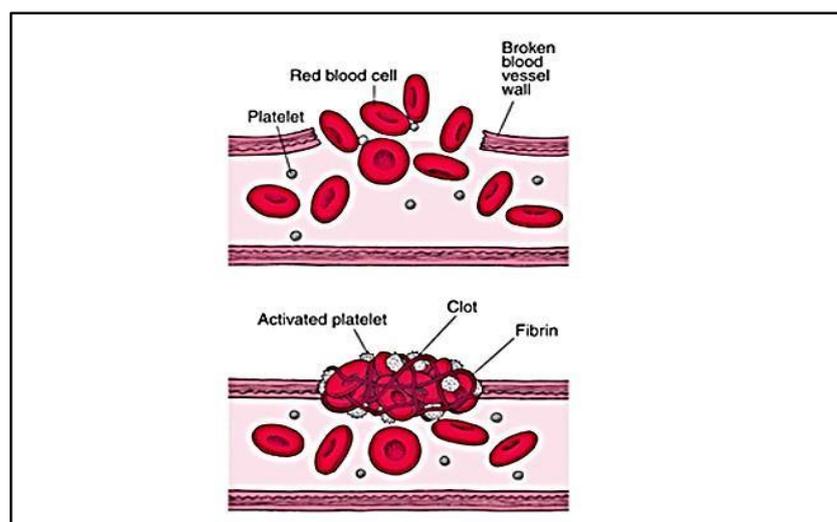
#### Procedure:

- 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.

