

# Bleeding Time and Clotting Time Study

Experiment 14 - Practical Notes

Name: \_\_\_\_\_ Roll no.: \_\_\_\_\_ Date: \_\_\_\_\_

## Aim

To distinguish primary haemostasis from clot formation and calculate intervals using a supervised demonstration or simulation.

## Principle

Bleeding time is the interval until bleeding stops under a specified test method and is influenced by platelet and small-vessel function. Whole-blood clotting time records a method-specific clot endpoint and relates more to coagulation. These historical teaching tests are not interchangeable with modern platelet studies, PT or aPTT; bleeding time is rarely used clinically today.

## Requirements

- Instructor-selected video, simulated timing record or approved demonstration.
- Timer, endpoint descriptions and observation sheet.
- Any invasive demonstration is conducted only by authorised trained staff under institutional procedures.

## Procedure

### 1. Identify the method

Record whether the demonstration concerns bleeding time or clotting time. Note the named method, time-zero definition and endpoint.

### 2. Observe bleeding endpoint

In a simulation or authorised demonstration, record the start and the first endpoint meeting the stated method. Do not carry out cuts or punctures on classmates.

### 3. Observe clot endpoint

Record when the stated clot criterion is reached and the conditions shown, including temperature where relevant.

### 4. Calculate intervals

Subtract the starting timestamp from each endpoint. Write both minutes and seconds; a decimal minute is not the same as a minute:second notation.

### 5. Discuss limitations

Compare the recorded interval with the method-specific laboratory interval. Discuss observer dependence and why modern investigations may be preferred.

## Human Anatomy and Physiology

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### Observations and Record

| Test                     | Start / endpoint | Elapsed interval |
|--------------------------|------------------|------------------|
| Bleeding-time simulation | ___ / ___        | ___ min ___ s    |
| Clotting-time simulation | ___ / ___        | ___ min ___ s    |
| Method / conditions      | _____            | _____            |

### Worked Example

The numbers below are illustrative; enter your own observations in the record.

- Illustrative bleeding record: start 09:02:00; endpoint 09:05:30. Interval = 3 min 30 s = 3.5 min.
- Illustrative clotting record: start 09:10:00; endpoint 09:14:45. Interval = 4 min 45 s = 4.75 min.
- These times demonstrate arithmetic and are not patient findings or universal normal limits.

### Result

Bleeding-time simulation: \_\_\_ min \_\_\_ s. Clotting-time simulation: \_\_\_ min \_\_\_ s. Method-specific limitations were identified.

### Precautions

- Use the approved simulation rather than student self-puncture or improvised cuts.
- Do not stop medicines or infer a bleeding disorder from a classroom timing result.
- Test conditions and endpoint definitions must be recorded; different methods cannot be compared by one universal cutoff.

### Viva Questions and Answers

#### 1. Which process is especially relevant to bleeding time?

Primary haemostasis involving platelets and small vessels.

#### 2. Are clotting time and aPTT the same?

No; they have different procedures and endpoints.

#### 3. Why is bleeding time uncommon today?

It is difficult to perform reproducibly and more suitable investigations are available.

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