

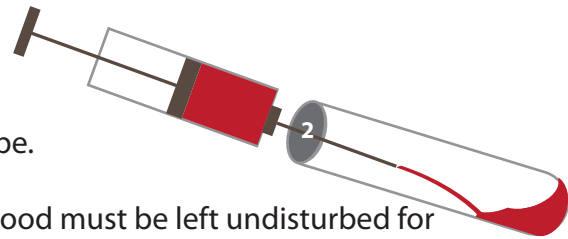
Myanmar Snakebite Project

Instructions for Performing the 20 Minute Whole Blood Clotting Test (20WBCT)

The only bedside clotting test that has been scientifically validated to detect coagulopathy in snakebite patients is the 20WBCT. Therefore, we recommend only the 20WBCT.



1. The tube used to test the 20WBCT **must be made of glass** (NOT plastic) and **must be clean and dry**. Ideally, it should also be new. Exposure to washing detergent or soap will stop the blood from clotting, a so-called false-positive test result. We recommend that you use only disposable glass tubes. If disposable glass tubes are not available, you can use clean glass antibiotic vials after they have been boiled with salt only, never with detergent, soap or other chemicals, and dried afterwards with hot air.



2. Place about 2mls of venous blood in the **glass** tube.

3. Let it stand for 20 minutes. The **glass** tube with blood must be left undisturbed for 20 minutes. The tube must not be flicked or agitated whilst waiting for 20 minutes.



4. At 20 minutes gently invert/tip the **glass** tube checking for the presence of a blood clot. Sometimes, after 20 minutes, a thin layer of serum appears on top of the clot, and this serum may run slightly down the side of the tube when gently inverted. If the tube is left for 30 minutes or longer after the blood has been placed in it, the clot may start to break down, leading to a false-positive result. Therefore, try to read the test at exactly 20 minutes.

4A. **Clot present = negative test** (no coagulopathy present). On gently inverting/tipping the tube the blood does not down the tube because it is clotted. If a clot has formed after 20 minutes (a negative test), the clot will stop the whole blood from running freely down the side of the tube when gently inverted, although the serum may run down the tube. In this case, you can ignore the serum on top of the clot.



4B. **Clot absent = positive test** (coagulopathy present). On gently inverting/tipping the tube the blood runs down the tube because it is still liquid, unclotted.



5. If there is any uncertainty about the result of the 20WBCT, a separate 20WBCT ought to be done in parallel using blood from a healthy individual to prove that normal blood will clot after 20 minutes. This is your negative control.

6. If blood from a healthy individual clots after 20 minutes, the finding that blood from a snakebite patient does not clot is a very significant positive test result.

7. If blood from a healthy individual clots after 20 minutes, the finding that blood from a snakebite patient also clots after 20 minutes implies that the patient does not have coagulopathy at that time.

8. If blood from a healthy individual does not clot after 20 minutes, it will be difficult to interpret the result of the 20WBCT from the patient. The most common problem here is contamination of the tube with washing detergent or soap.

9. Note that the 20WBCT must be repeated at regular intervals after the initial test to detect late-onset coagulopathy.