

Guidance for pulse oximetry reading

The blood oxygen saturation level (SpO₂) is measured in all participants over 12 years and older, included in the ANTICOV study, at the following time points:

D0	D1	D7	D14	D21	Unscheduled
X	X	X	X	X	X

The measurements are due as per appendix 4, table 8, Master protocol version 5.0/9 July 2020.

Procedure for resting blood oxygen saturation level (SpO₂)

This measurement is not invasive and will not be of any discomfort to the participant.

The pulse oximeter measures two values:

1. The oxygen saturation of haemoglobin in arterial blood
2. The pulse rate.

This picture shows a pulse oximeter. The screen shows that the SpO₂ is 97% and the pulse rate is 84 beats per minute.

The equipment you need is:

- A finger pulse oximeter
- A chronometer (e.g., you can use your mobile phone or a stopwatch).



Please Note

- Read the leaflet/manual of the finger pulse oximeter **first before** use and keep it at hand.
- Check if the calibration is performed by the manufacturer (written in leaflet/manual). It is possible that your device goes automatically through internal calibration and checks when you turn it on.
- Perform and document a weekly quality check: compare on one person if all pulse oximeters indicate the same result. If you observe any abnormalities/differences, you must discard the respective device. Do this weekly check for all applicable thermometers used in the study.
- Please note as well that any broken equipment must be documented on the weekly quality check form, this might not be the same day as the day of quality check. If necessary replace the equipment and assign the new equipment with another identifier.

The SpO₂ is collected **twice at 5 minutes interval**. If one value is above and the other is below the threshold of 94%, **a third measurement** is performed to categorise the participant at inclusion and for failure. **All values** are recorded in the source notes.

1. Explain the participant how you are going to measure pulse and SpO₂ and guide the participant through the steps, which does support you in achieving an accurate measurement.
2. Make sure your hands are washed or disinfected and that the device is clean.
3. Pulse and SpO₂ are taken in sitting position.
4. Position the device on the index. Avoid the arm being used for blood pressure as cuff inflation will interrupt the pulse oximeter signal.
5. Allow several seconds for the pulse oximeter to detect the pulse and calculate the oxygen saturation.
6. Look for the displayed pulse indicator, without a pulse signal, any readings are meaningless.
7. In case of doubt of the values, rely on your own clinical judgement and check the device on your own finger. Then position the device on another finger of the participant.
8. Tell the participant to keep still during measurement and to relax and focus on breathing.
9. Read the results and inform the participant. *Remember to take the SpO₂ twice at 5 minutes interval!*
10. Document pulse and SpO₂ on the source notes and precise measurement site (e.g. index/right hand). Any abnormal value must be documented and reported to the doctor in charge.
11. If any abnormality is observed, then the temperature must be rechecked or the device replaced.
12. Clean the pulse oximeter after use.

Reference:

1. ANTICOV 01 COV Master protocol, Version 5.0, 09 July 2020
2. https://www.who.int/patientsafety/safesurgery/pulse_oximetry/who_ps_pulse_oxymetry_training_manual_en.pdf?ua=1