



# How to treat low oxygen in adults with COVID

1) Check the patient's oxygen saturation (SpO<sub>2</sub>). If the saturation is below 90%, start oxygen. Chose the appropriate oxygen mask and the corresponding oxygen flow rate to achieve saturations of 90% - 96%.



**Nasal cannula:** 1 – 6 litres / minute  
*Start with nasal cannula if initial oxygen saturations are 80 – 89%.*



**Non-rebreathe mask:** 10 – 15 litres / minute  
*Start with non-rebreathe mask if initial oxygen saturations are less than 80%.*

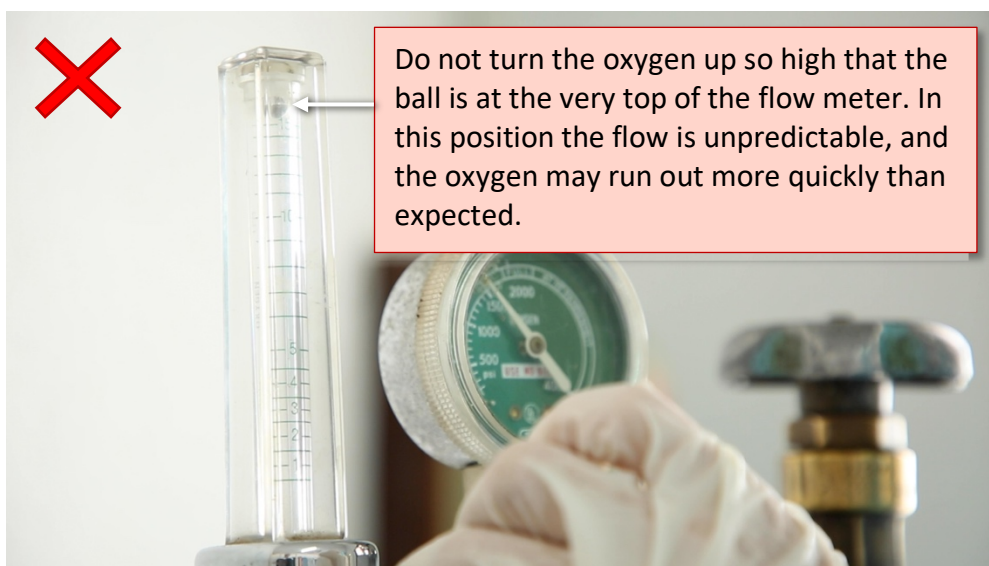
- If the patient's oxygen saturations are *already* above 90%, no additional oxygen is required.
- When oxygen is scarce, it is better to aim for saturations of 90 – 92% to save oxygen.
- After starting oxygen, recheck the oxygen saturations after five minutes. If the saturations are still <90%, increase the oxygen or switch from nasal cannula to a non-rebreathe mask until the patient has saturations in the target range.



- Be precise with the oxygen flow rates and read from the centre of the ball

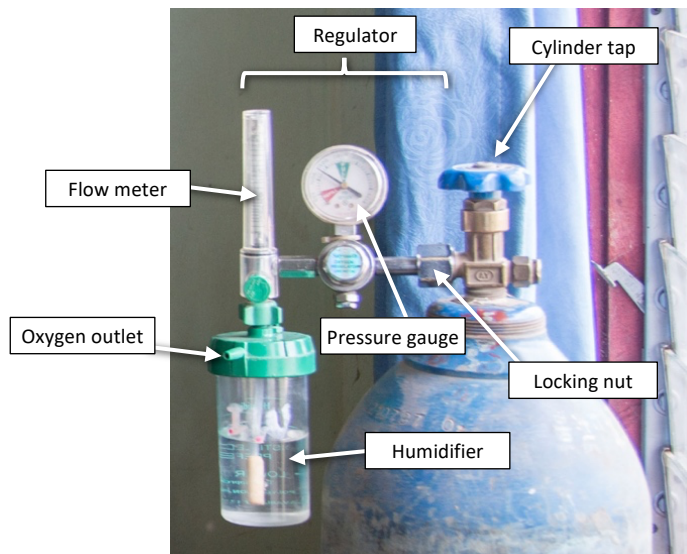


- When giving 15L / minute, do not turn the flow above the 15L/ minute mark or it will waste oxygen

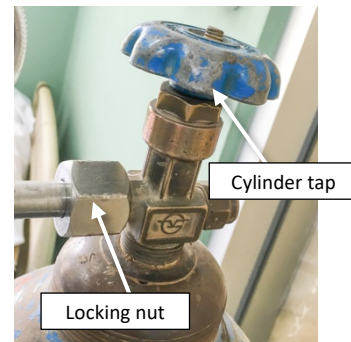
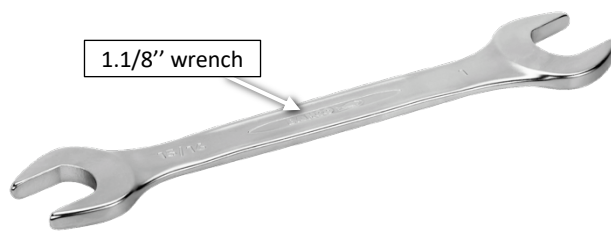




## 2) Check the equipment is working properly



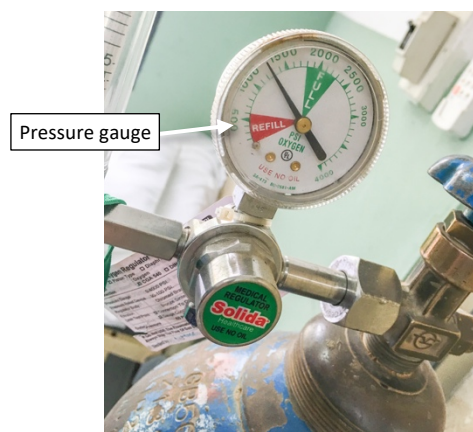
- - Check the oxygen regulator is correctly attached to the cylinder and that the locking nut is tightened with a wrench. Do not use oil or soap to lubricate the connection.



- Once the regulator is firmly attached and the locking nut tightened, check that the cylinder tap is fully open.

REMEMBER: *Always close the cylinder tap before adjusting the locking nut or removing the regulator.*

- - Check that there is oxygen remaining in the tank by looking at the pressure gauge.



- Check that the ball in the flow meter is showing the desired flow.



- Check that the humidifier (if using) is tightly attached and that the lid is not cracked and fully screwed on. This is a common source of leaks.



- Check the humidifier has the correct amount of water in it (between the maximum and minimum line) and that oxygen is bubbling.



Check that the oxygen tubing is properly attached at both ends, and that the tubing is not bent (feel along the length of the tubing to be sure).



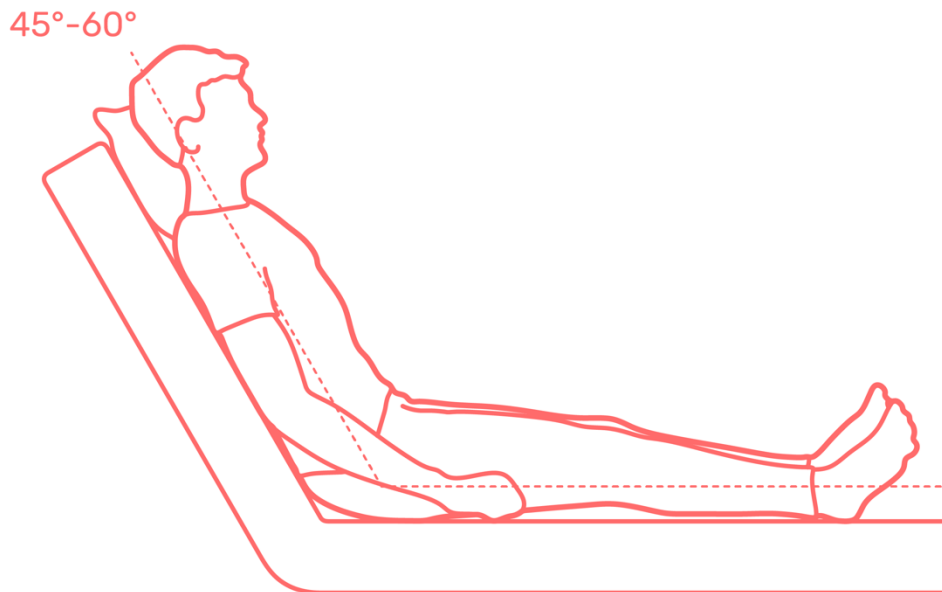
Check that the mask is working, with an intact valve, no holes and the bag is fully inflated

### 3) Check the mask fits well to the patient's face

- Tighten the elastic strap
- Mould the metal nose piece to their nasal bridge
- Explain to the patient the importance of keeping it on

### 4) Position the patient

- Sit the patient up in bed by raising the head of the bed and prop them up with pillows. Recheck their oxygen saturations.
- If their oxygen saturations are still <90%, ask the patient to lie on their tummy in 'prone' position for as long as they are comfortable (including sleeping in that position if possible). Make sure they are comfortable and use pillows and blankets to pad their pressure areas. Recheck their oxygen saturation regularly. (see separate guide for more details).
- Another position that may help is the lateral position, with the patient lying on their side.



### 5) Check for painful breathing

- If the patient has painful breathing, give analgesia
- Give regular paracetamol
- Give a small dose of opiate as required

### 6) Nurse-led physiotherapy to promote sputum clearance (see separate guide)

- Keep the patient active – encourage them to move and sit them out in a chair twice a day if possible
- Give them exercises to do in bed
- Get the patient to 'huff' rather than cough to clear sputum if in pain / tired.

### 7) Try adding nasal cannula at 5L / min

- If steps 1 – 6 haven't worked and the oxygen saturations are still below 90%, call a doctor to consider what to do next (depending on what is available locally).
- While you are waiting, if there is an oxygen concentrator available, try adding nasal cannula at 5L / min to the reservoir mask at 15L / min.

➔ Remember, COVID-19 patients who need oxygen should also receive dexamethasone 6mg once a day for 5 - 10 days. They should also be wearing TEDS stockings and have a prophylactic dose of low molecular weight heparin daily to prevent blood clots.



- ➔ If the patient's saturations are already 90 – 96%, there is no need to give any additional oxygen.
- ➔ Wean off oxygen as early as possible.