



## Coronavirus Disease 2019 (COVID-19)

### Demonstration: How to Monitor Oxygen Level and Deliver Oxygen Therapy

Today we're going to demonstrate how to check a patient's oxygen level using a pulse oximeter and deliver oxygen therapy using an oxygen cylinder tank and nasal cannula.

Make sure to keep your pulse oximeter charged so it's ready to go.

Turn on the pulse oximeter by pressing the power button.

Place the pulse oximeter so there is a snug fit on the finger. The probe shouldn't be too tight, which may constrict the blood vessels, or too loose, which may cause it to fall off or let light in.

If the patient has henna, tattoos, nail polish, or other dye on their finger it may lead to inaccurate results; you might have to switch the probe to a different finger.

Many probes will beep when the reading is complete.

The pulse oximeter shows that our patient has an oxygen saturation of 85 percent. An oxygen saturation below 90 percent, even in a patient without symptoms, requires oxygen therapy.

First, attach the regulator to the tank. You don't have to screw it in too tightly, just enough so it's secured.

Slowly turn the valve counterclockwise to allow oxygen to flow.

Next, check the pressure gauge to make sure the needle isn't in the red zone - that means there's enough oxygen in the tank.

The flow meter can be started at a flow rate of 0.5-1 liter per minute for neonates, 1-2 liters per minute for infants and older children, up to a maximum of 4 liters per minute for preschool and school-aged children, and up to a maximum of 5 liters per minute for adults.

Make sure that all the tubing is properly connected. If it's loose, tighten the connection.

If you aren't sure whether the equipment is working, place your hand in front of the nasal cannula to feel if oxygen is coming out.

Since the patient is an adult, you can start the oxygen at 5 liters per minute.

The nasal cannula prongs should be facing down as you place them. For optimal results, make sure the person's nose is not blocked. The tubing will go over the patient's ears to keep it in place.

After the oxygen has been flowing for 15 minutes, check the patient's oxygen levels again using the pulse oximeter.

The patient's oxygen levels have come up to 96 percent. The goal saturation is above 90 percent. The target has been reached.

The patient may need continued oxygen therapy for multiple days or weeks. Options may include having them stay at the clinic if there is capacity or transferring them to another facility or hospital for continued oxygen therapy. There, providers can continue to monitor the patient's oxygen levels and wean the patient off of the oxygen therapy once they no longer require it.

Now that the patient's oxygen saturation is remaining above 90 percent, the patient can be reassessed every 4 to 6 hours or at least once a day to try decreasing the oxygen.

If the patient's oxygen levels do not remain above 90 percent with the oxygen therapy, do not go above 2 liters per minute for children or above 5 liters per minute for adults using the nasal cannula. More intensive care is needed.

When you are done using the pulse oximeter, clean it gently with a disinfectant cloth or alcohol swab. Dispose of the nasal cannula.

This equipment is safe to use in children, adults, and pregnant women and can deliver life-saving therapy to people who need it.

Provider: What brings you in today?

Patient: I've had a cough and muscle aches for a few days and one of my friends was recently diagnosed with COVID-19.

Provider: Are you having any trouble breathing?

Patient: No.

Provider: I'm going to check your oxygen levels because some patients who have COVID-19 have low oxygen levels even without feeling shortness of breath.

Provider: Although you may not be having trouble breathing, your oxygen levels are lower than normal. This can happen with illnesses like COVID-19. I recommend starting oxygen therapy. Oxygen therapy can help bring up your low oxygen levels so your brain and heart can get the oxygen they need.

Patient: If you think it will help me... is it painful?

Provider: It's not painful.

Provider: I'm going to place these small tubes in your nose so you can breathe in the oxygen.

Provider: How does it feel? Are you comfortable?

Patient: Yes, thank you.

Provider: Now, with the oxygen flowing, I'm going to measure your oxygen levels again.

Provider: Your oxygen levels are improving with the therapy.