



COVID

Management & Response

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This is not a medical advice but some learnings from personal experiences of people writing this document (who took care of there loved ones on ICU@home for months/years). If you don't easily get access to hospital/critical care, these tips may come in handy in crisis situations. Also, you may feel better prepared if you understand the sequence of things that would happen over the course of covid treatment.

IMPORTANT:

ALWAYS FOLLOW YOUR DOCTOR'S ADVICE IF YOU HAVE ACCESS.

A. Things to do when you got diagnosed:

1. Consult doctor/s for medication. Usually, Doctor prescribes 5 days medication to begin the treatment. Follow them and re-consult them during the whole period of 2-3 weeks and share issues if you feel any.
2. Every 6 hours, monitor reading using pulsoxymeter.
3. Keep hydrated -Plenty of fluids like tender coconut water, ORS, protein powder and maintain proper healthy but light diet.
4. It is also very important to keep the nasal-throat circuit clear - this is where mucus if not drained/cleared can enter into lungs and later cause infections and further complications.
5. Please drink warm water only. Steam inhalation -5-6 times daily.



A. Things to do when you got diagnosed (contd.):

6. Gargles twice a day.
7. Take Giloy or Kaadha - 3 cups of water in a bowl, 10-12 tulsi patte, 4 sabut kaali mirch, 2 long, 1 choti elaichi, 1 chota tukda kachi haldi (1inch), 1 chota tukda adrak (1inch). Heat it in a pan for 30 min on low flame till liquid gets reduced to half. Store in thermos (consume within a same day). Drink it 3-4 times in a day (4-5 tablespoon of kaadha + 1 teaspoon of honey in a cup for one time serving).
8. To keep the nasal circuit clear, one may use a nebulizer with a bronchodilator like levolin (levosalbutamol). It is important you start doing this as soon as there are first signs of any mucus or cold like symptoms.



A. Things to do when you got diagnosed (Contd.):

9. Do 1-2 round of breath holding exercise every 1-2 hours. (2-3 mins task).
10. Take 6 mins walk test and note down the oxygenation. [Pls click this video link to understand point 9 & 10 details.](#)
11. Watch relaxing and entertaining programs on TV or listen to music. (Stay away from news).
12. No need to rush to hospitals or labs for getting tests and CT/X-Ray done. Oxygenation reading will be good indication of your well being.

Note : Majority of cases completely get fine at home and don't require any visit to the hospital.



*Keep Calm,
Don't panic and
stay safe at
home!*

B. Second week is more crucial :

Even if you don't have fever and other symptoms, do NOT ignore and continue to follow recommended twelve activities which you were following in first week to monitor yourself and act timely, if issues appear.

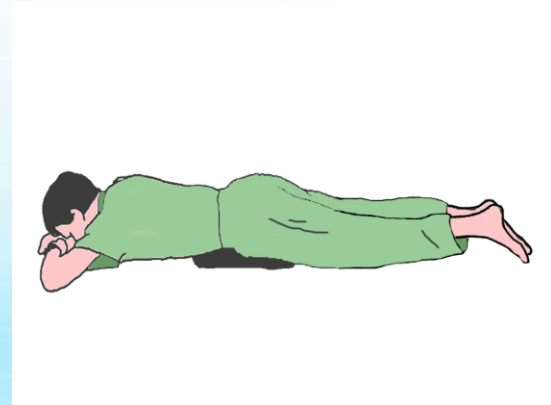
Very few % of people may notice fall in oxygen in second week. If oxygenation reduced by 8-10 points, that indicates involvement of lungs (no need to panic for getting HRCT, if that is not easily accessible).

If the SpO2 numbers fall below 95:

1. You must start practicing **PRONING**. The backside of our lungs have airways that are typically not exercised a lot. The prone position opens up (by gravity) and helps leverage those airways. This will help to increase oxygenation by 7-10%. [Pls must watch this video where this is very well explained by a pulmonologist.](#)



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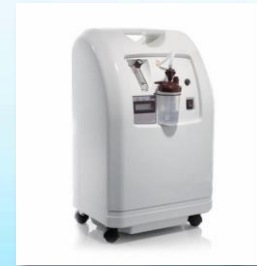
B. Second week is more crucial (Contd.) :

2. At this stage, doctors may prescribe steroids that can be taken using a nebulizer/orally. Prefer non-oral steroids since they're only absorbed in the target tissue (lungs). Oral steroid gets into the 'system' and may affect the patient with other co-morbid conditions (like diabetes).
3. If doctor prescribes IntraVenous administration of medicines, please call/arrange any nurse for IV administration at home.
4. Few blood tests (not required to do daily). The nurse you call for IV should take care of that for sample collection.
5. If SpO2 fall below 90, you plan to arrange supplemental oxygen either through Oxygen Cylinder or Oxygen Concentrator at home. Please do read next two slides (B1 and B2) about usage guidelines.

You still don't need to run to a hospital, if you can't find appropriate one - the system is overwhelmed and there are chances of getting neglected.



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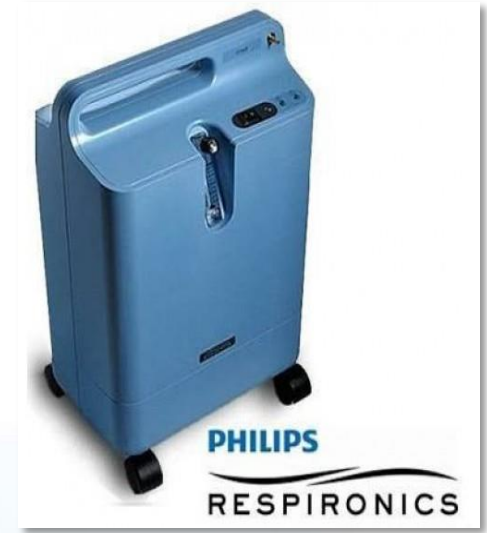
B1. Oxygen Concentrator



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Pls watch quick video- [How to use an Oxygen Concentrator at home](#)

1. If you need to buy an Oxygen concentrator, the known reputed makes are Philips, Nidek, Medtec, Devilbliss. There are other fake brands out in the market as well, but their actual efficacy and reliability is not guaranteed.
2. If you can, you may use an O₂ concentration purity analyzer/meter.
3. In the hydrator bottle, use only distilled/filtered water.
4. Place the oxygen concentrator unit at least 1 feet away from the wall and the unit's back should face an open space. (e.g. close to door which is frequently opening/closing).



5. For Covid patients, a 10Ltr concentrator is recommended since they may come to a need of high flow of consumption. However, 5Ltr can also be used to manage situations.

6. Clean the filter daily once to remove the dust. Follow instructions on cleaning from your concentrator manual.

7. Please install UPS/inverter of sufficient capacity with the concentrator which will help in case of power failure (otherwise, do keep oxygen cylinder as a backup for that period).

B2. Oxygen Cylinder

1. If you're solely relying on oxygen from a cylinder (i.e. no concentrator is available), arrange two cylinders - one active and another standby/ready for refill.



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2. Do not try to open the nozzle unless a flowmeter/controller is attached. The gas inside is at a very high pressure, and it is very dangerous to open the valve uncontrolled.
3. Control the flow of oxygen aptly based on the patient's need. Start slow with 1 LPM, observe SpO₂ numbers, and increase in small increments. More than needed oxygen will not have a favorable effect.
4. Oxygen cylinder is usually 100% pure O₂ gas. This means that the required flow needed from cylinder will be lower than that needed on an oxygen concentrator (usually 90-93% pure) for the same patient's need.
5. There must NOT be a chances of fire spark in vicinity of oxygen cylinder, as it is highly inflammable.



C. When condition gets deteriorated:

Please keep in regular contact with your doctor.

If taking supplemental Oxygen either via OC or cylinder does not help along with medicines prescribed by doctor and **oxygen still falls below 80**.

This indicates either patient needs more oxygen flow or their own breathing effort has been reduced which is not optimal for proper ventilation. So, there are two more options as next steps:

1. **HFNC** - or high flow nasal cannula, which is a special type of cannula that, as the name indicates, can help take in more oxygen (up to 60 LPM). In my opinion, you may try Two 10Ltr oxygen concentrators in conjunction with HFNC device for home. However, in current crisis situation you may find difficult to procure and set that special equipment at home.



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C. When condition gets deteriorated (contd..)



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2. Respiratory support device(Bipap/Vent).

- **Non-invasive** - If device is attached via mouth/nasal mask is usually termed as Bipap (which is actually a mode technically) but in common terms used by doctors they call this setup as BIPAP.
- **Invasive:** If device is attached to endotracheal tube inserted via mouth(for support required for <10 days period) OR tracheostomy hole in neck (for long term ventilator requirement like in ALS) called as 'person on Ventilator'.

As scary it may sound, it is not. Many people in world and in India are using Bipap and Ventilator at home for months/years.



on BiPAP



on Ventilator

C. When condition gets deteriorated: (contd..)

Please note, all over world there are significant data available which says rate of survival of covid patients on invasive ventilation is extremely low, so usually “**invasive ventilation are NOT suggestive for COVID patients**”. Please refer following articles for more details:

Article 1: [COVID-19 disease: Non-Invasive Ventilation and high frequency nasal oxygenation](#)

Article 2: [Non-invasive respiratory support strategies in COVID-19](#)

Article 3: [80% of New York's coronavirus patients who are put on ventilators ultimately die, and some doctors are trying to stop using them](#)



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D. You can setup Bipap (Non-Invasive) at home easily

BiPAP stands for Bilevel Positive Air Pressure. It is typically used as a respiratory aid for patients of COPD, ALS(MND), ARDS and Asthma.

BIPAP device can be easily setup at home. Consider this as an “inhale exhale” aide. Your oxygen inlet pipe is connected to the BiPAP mask. If you have access to an ICU technician/pulmonologist, they can help on Covid parameters settings. The display on the machine are pretty self-serve to configure and monitor. [Refer to these videos/article to learn and setup these:](#)

1. [Understand basic medical terms/parameters of these devices.](#)
2. [How to assemble a CPAP, BiPAP Device](#)
3. [How to Use a BiPAP machine](#)

Note: You will need the right “Epap/Ipap”(kept higher from usual) and tidal volume-air volume per cycle/min (kept lower than usual) for covid lungs management in my understanding.



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There seems to be a severe shortage of 'ICU beds', so it may give comfort to the reader that any of the above steps are doable with your own efforts with support from a competent nurse/doctor at home, if the supplies can be procured.

Disclaimer: Please just refer this document for your knowledge and we do not claim it to be medically certified information. You are free to research more and build your own logic to follow decision in your situation.



Collaborative efforts by:

Satvinder Kaur, Gursharan Singh, Anjali Samal, Mayank Malhotra, Sukhvinder Kaur who are not medically certified individuals but they learned and managed ICU@home setup for their loved ones.
ALS Care and Support India (alslifemanagement.weebly.com)

Same content is available in form of YouTube Video

<https://youtu.be/c4tepyej-AY>

Reference case :

Treatment at home isolation for COVID 19 (From experience of 48 years old Indian patient)



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Week 1:

- Day 1 when mild symptoms occurs isolated yourself till test done.
- Consulted Doctor who prescribed following medicines to start from Day 1 immediately for 5 days
 - AZITHROMYCIN 500 mg once or 250 mg twice daily
 - LIMCEE 500 vitamin C once daily
 - ZINCOVIT once daily
 - PCM-500/ DOLO 650 thrice for fever
- *After confirmation of Covid positive in RT PCR/rapid test, following 3 medicines were added.*
 - IVERMECTIN 12 mg once daily 5 days
 - DOXYCYCLINE 100 mg once a day
 - Meftal forte in case severe headache and high temperature of more than 102

Week 2:

Oxygen drops to 90 and below. Fever as well continue for more than 6-7 days. Consulted doctor regularly.

- Supplemental oxygen started through Oxygen Concentrator. **10th Day it was reaching to 80 within few minutes without oxygen support.** So, continuously on nasal cannula oxygen support.
- PRONING done many times daily.
- Got the following tests (sample collection was done at home)
 - CBC, LFT, KFT, hBa1c, crp, ldh, ferritin, d Dimer IL-6
 - Chest X ray (at home) got done.



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- Doctor suggested following medicines for 7 days immediately.
 - Fabiflu 1800 mg twice daily on Day 1 and 800 mg twice daily from day 2 to day 7
 - Defcort 30 mg (steroid) once daily after breakfast
 - Eliquis 5mg twice daily
 - ZiFi CV 200 twice daily
 - Vizylac twice daily
 - Limcee once daily
 - Dolo 650 thrice daily
 - Levolin 0.63 nebuliser thrice daily
 - Mucinac 600 twice daily in water

Condition started to improve 12th day onwards. And oxygenation without support getting stabilised at 92. Was using oxygen support intermittently. On 16th day recovered to 95 and 98 on 18th day on normal air.

Daily routine followed:

- Steam inhalation minimum 4 times per day (put two drops nasal drop- ANU oil -ayurvedic)
- Nebulisation 2 times a day with livolin 2.5 ml
- Regular monitoring of O2 level (started oxygen support when SPO2 dropped to 92-90).
- Cough Syrup (Honitus) 3 times a day.
- Plenty of fluids like lemon water, Glucose, juices, tender coconut water, ORS, protein powder, proper diet, fruits. Avoided fridge things, cold water. Drank warm water.
- Giloi, Tulsi tablet or boiled form (kadha) 2 times. Gargle with betadine oral solution 2 times if throat irritation/ pain

Week 3/4:

- Vitamins Cap BioD3 Max to continue for next 30 days .