Pulse oximeter for heart rate and blood oxygen level – Remote Monitoring

Your doctor has referred you to the COVID-19 remote monitoring service and provided you with this this leaflet and **pulse oximeter** because you have symptoms of COVID-19. Most people with COVID-19 will recover within two to three weeks without needing to see a doctor or being admitted to hospital. However, a few people **might** need hospital treatment. Using a pulse oximeter will help your doctor to find out early, the people that may need additional treatment and make sure that they are looked after.

**This document will explain:**

**1. Getting started with Telehealth Monitoring.**

**2. How to use pulse oximeter to check your oxygen level**

**3. When to get in touch with a doctor**

**4. How to return the pulse oximeter.**

A pulse oximeter helps you monitor how fast your heart is beating and the level of oxygen in your blood. Blood oxygen level is the most accurate way of keeping an eye on your progress with COVID-19. An ideal blood oxygen level is between 95% and 99%.

An ideal heart rate is between 50 and 90 beats per minute (bpm). For people with existing health conditions, these readings may be different. If you have an existing condition i.e. COPD/asthma and you are not sure what your baseline oxygen saturation should be, speak to your GP Practice who will be able to tell this.

**Your ideal range is:**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Pulse** **(Heart rate)** | **Oxygen level** | **Temperature** | **Blood Pressure (BP)** | **Respiratory rate****(Breaths per minute)** |
|  |  |  |  |  |

 Getting started with Telehealth monitoring

You have agreed to measure your oxygen levels on a daily basis, and text the readings into the Telehealth Hub using your own mobile phone.

You will be called within 24 hours by one of our Telehealth team to check your contact details (including your mobile phone number) and ensure you are happy to proceed and understand what you need to do. During this call you will be asked to consent to our nurses accessing your medical notes and allowing them to share information about your care with your GP. Once you have been enrolled onto the Telehealth system you will receive a welcome text message.

You will receive a daily text message at 10.00am for the next 14 days requesting your oxygen reading. Please try to reply by 11.00am each day.

You should take your oxygen reading using the oximeter provided and text back OX with your reading, **e.g.** **OX 98**. Please do not include any additional information in the text. You will then receive a text thanking you for your reading.

Texts will be charged at your standard mobile rate.

If you text in readings after 5.00pm your text will not be read until 9.00am the following day.

Our Telehealth nurses will contact you if they have any concerns, they may also ask you to take additional readings.

We recommend repeating your oxygen readings a few times each day and giving us a call if you are worried. We have included a monitoring diary which may help you keep track of your readings

How to use a pulse oximeter

Follow these instructions to make sure the pulse oximeter gives an accurate reading (diagram to right courtesy of Denis Barbulat):

1. Remove any nail polish or false nails and warm your hand if cold.
2. Make sure you have been resting for at least five minutes before taking your measurement.
3. Whilst sitting, rest your hand on a table and hold still.
4. Switch the pulse oximeter on and place it on your finger. It works best on your middle or index finger (see diagram). It should not be used on your ear.
5. The reading takes time to steady. Keep the pulse oximeter in place for at least a minute, or longer if the reading keeps changing.
6. Record the highest result once the reading has not changed for five seconds.
7. Be careful to identify which reading is your heart rate and which is your oxygen level.
8. Repeat steps 4 to 7 after some light exercise such as, walking upstairs, or around your room.

**Decontamination:** If you are handling equipment or items (e.g. pulse oximeters) used on/by patients with suspected COVID-19, then please wash your hands carefully after touching the equipment, and if being used on different people, then ensure that it is cleaned between each person, following the [published guidance](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/877533/Routine_decontamination_of_reusable_noninvasive_equipment.pdf) using the link below.1

1 DHSC:

<https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/877533/Routine_decontamination_of_reusable_noninvasive_equipment.pdf>

Recording and acting on the results

On day one record the date and the number of days since you first developed symptoms.

As well as texting in your daily oxygen reading you can use the diary below to record additional readings throughout the day. Three times a day is ideal - for example when you normally eat in the morning, at lunchtime and in the evening.

You can also record any changes in how you are feeling and your breathing.

Telehealth will be monitoring you between the hours of 9.00am to 5.00pm 7 days per week.

If you are unsure what to do, have any questions about how to monitor your oxygen, or require any further advice, please contact the Telehealth Team on **0151 285 4651**. (Answer-phone service only at weekends).

Calls will be charged at your standard mobile or landline rate.

Telehealth is not an emergency service, so if you start to feel more unwell outside these hours please contact your GP, 111 or 999.

What do I do if I begin to feel worse?

**Ring 999 if:**

* **Your oxygen level is below 93%, unless you have been advised otherwise.**
* You are **unable to complete short sentences at rest** due to being breathless.
* Your **breathing suddenly worsens quickly** within an hour.

**OR** if these more general signs of serious illness develop:

* + you are coughing up blood
	+ you have blue lips or a blue face
	+ you feel cold and sweaty with pale or blotchy skin
	+ you have a rash that does not fade when you roll a glass over it
	+ you collapse or faint
	+ you become agitated, confused or very drowsy
* Inform the person you are speaking to that you are being monitored, have symptoms of Covid-19 and provide your latest readings.

**Ring your GP from 8am – 6.30pm or NHS 111 at all other times and as soon as possible if:**

* Your oxygen level is 93% - 95%, unless you have been advised otherwise.
* Your heart rate is persistently (which is a period of 2 minutes) 110 and above, unless you have been advised otherwise.
* You slowly start feeling **more unwell or more breathless** for two or more hours.
* You are having difficulty breathing when getting up to go to the toilet or similar.
* You sense that something is wrong, or unable to care for yourself such as washing, dressing or making food).
* You have stopped passing urine, or not passing as much as usual.
* Inform the person you are speaking to that you are being monitored, have symptoms of Covid-19 and provide your latest readings.

**For some people with existing health conditions readings may be different. Your doctor will explain why and what this means for you:**

* Mild deterioration will be defined as up to 1-2% below baseline
* Moderate deterioration will be defined as between 3-4% below baseline
* Severe deterioration will be defined as 4% or more below baseline

You do not need to contact your GP/NHS 111 if you have a temperature or other symptoms, such as cough, muscle aches, tiredness and change in taste or smell. Paracetamol and regular fluids can help with these symptoms, and most people will get better by themselves within two to three weeks. Please see the [NHS website](https://www.nhs.uk/conditions/coronavirus-covid-19/what-to-do-if-you-or-someone-you-live-with-has-coronavirus-symptoms/) for information on self-isolation or how to access care.

Troubleshooting

If you experience any issues using the equipment, please check these steps first before contacting your Telehealth Monitoring Centre or GP Practice:

* Have you removed your nail varnish or false nails?
* Are your nails clean?
* Is the screen on the device clean? Can you see the display clearly?
* Do the batteries need replacing? (contact your practice for a replacement)
* There are certain medical conditions that may alter your readings, so if you are unsure of your reading and feel well please contact your own GP

If you have any questions, or need help with the equipment, please contact the Telehealth Monitoring Hub on **0151 285 4651**.

# Returning the pulse oximeter and diary

You will be contacted on day 14 to discuss your discharge from the Telehealth service and returning the oximeter. (Please do not share the oximeter with anyone inside or outside your household).

**When you no longer need the device, please**:

* Wash your hands with soap and water
* Clean the pulse oximeter with an antibacterial wipe
* Put it in two sealed plastic bags, or a sealed bag in a small sealed plastic box. Clearly mark with your name and address.
* Please return it to your GP surgery. If you are shielding please ask a friend or volunteer to do this for you.

Please return the diary along with the pulse oximeter so you can help the NHS learn how best to help other patients with COVID-19. If your GP sends you a link to return the diary electronically (text message/Accurx) you will not need to return the paper version as well.

If you have any concerns or complaints about the telehealth monitoring service please contact out PALS and Complaints Team who provide support, information and advice to service users, carers and their families. We would also really like to hear about your positive experiences with our services. Tel: 0151 471 2377 of Freephone 0800 328 2941. Email: palsandcomplaints@merseycare.nhs.uk.

# Pulse Oximeter Instruction Videos

Videos courtesy of Health Education England and Slough Virtual Ward

|  |  |  |
| --- | --- | --- |
| English: | English | <https://www.youtube.com/watch?v=ifnYjD4IKus&feature=youtu.be> |
| Polish: | Polski | <https://www.youtube.com/watch?v=Lkd-BNeMvLs>  |
| Hindi: | Image result for hindi | <https://www.youtube.com/watch?v=e1ipiJY-zwk>  |
| Punjabi: |  | <https://www.youtube.com/watch?v=wU5V6wVEHoM> |
| Urdu: | Image result for urdu | <https://www.youtube.com/watch?v=rkGRRLlumW4> |

# Patient COVID-19 pulse oximetry diary

Please record three times a day, where possible, at breakfast, lunch and dinner time, when you are at rest and again after light exercise, such as walking up the stairs, around your living room, or out to the car and back. Take extra measurements if you feel there has been a change in your health.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **DAYS SINCE FIRST SYMPTOMS\*** | **DATE** | **PULSE** | **OXYGEN LEVEL %** | **TEMPERATURE****OPTIONAL** | **FEELING: BETTER / SAME / WORSE**  | **BREATHING: BETTER / SAME / WORSE** |
| **AT REST**  | **AFTER EXERCISE**  |
| **DAY** | **TIME** |  |  |  |  |  |  |  |
| **Baseline Readings** **Reduction in 3% to be agreed by clinician**  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |

#

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **DAYS SINCE FIRST SYMPTOMS\*** | **DATE** | **PULSE** | **OXYGEN LEVEL %** | **TEMPERATURE****OPTIONAL** | **FEELING: BETTER / SAME / WORSE**  | **BREATHING: BETTER / SAME / WORSE** |
| **AT REST**  | **AFTER EXERCISE**  |
| **DAY** | **TIME** |  |  |  |  |  |  |  |
| **Baseline Readings** **Reduction in 3% to be agreed by clinician**  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **DAYS SINCE FIRST SYMPTOMS\*** | **DATE** | **PULSE** | **OXYGEN LEVEL %** | **TEMPERATURE****OPTIONAL** | **FEELING: BETTER / SAME / WORSE**  | **BREATHING: BETTER / SAME / WORSE** |
| **AT REST**  | **AFTER EXERCISE**  |
| **DAY** | **TIME** |  |  |  |  |  |  |  |
| **Baseline Readings** **Reduction in 3% to be agreed by clinician**  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |