

User Guide to Your Child's Oximeter

Oximetry

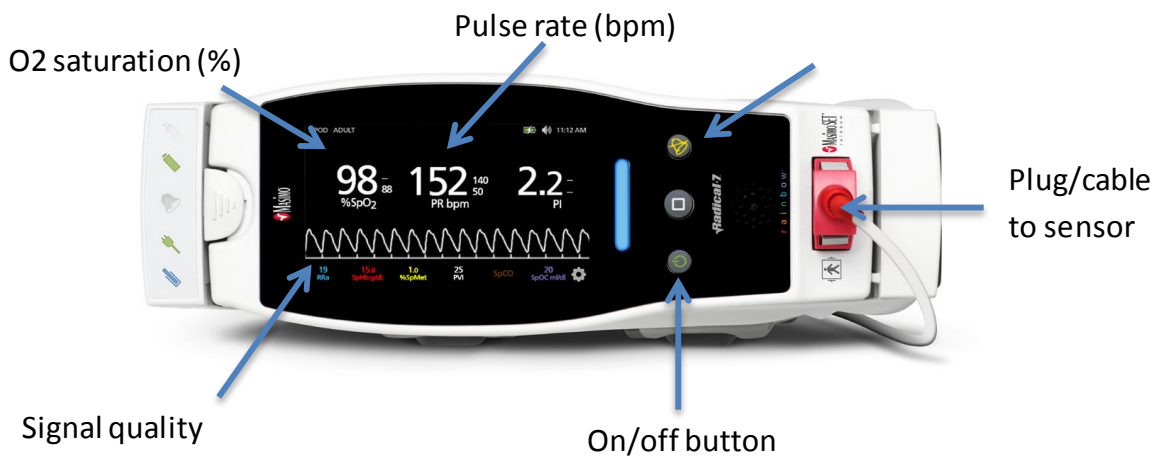
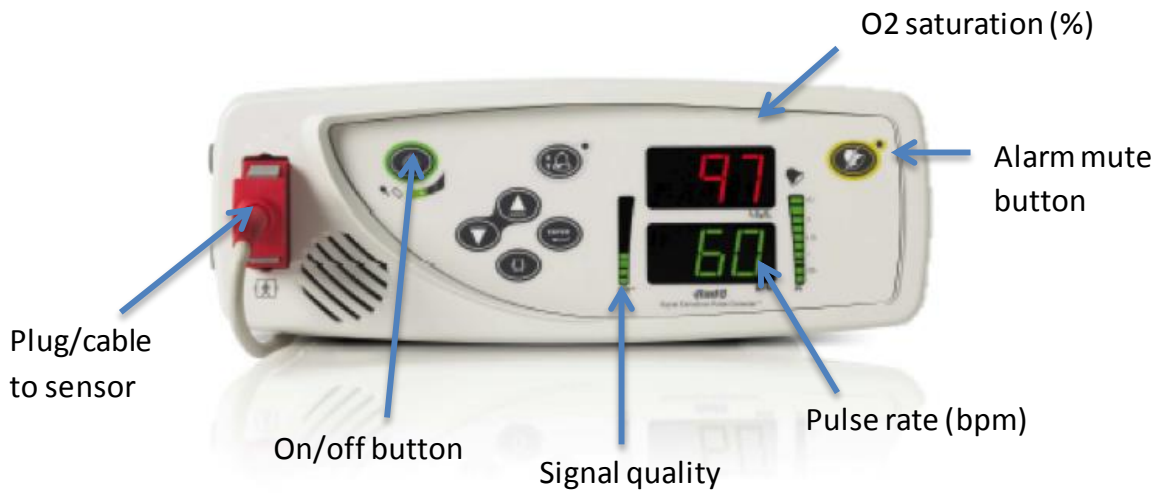
Oximetry measures how full or how 'saturated' the blood is with oxygen (O_2). The result is shown as a percentage. Your health team will tell you what is right for your child, but we generally aim for saturations at or above 93%. A 'desaturation' is when the oxygen levels in the blood drop. This may also be called hypoxia.

Oximetry works by shining light through the skin (usually the finger or toe) and to see how saturated the blood is by its colour. This is great because it doesn't require any needles and it can be measured continuously for monitoring. Unfortunately, lots of things can make the oximeter think saturations are lower than they really are. If an oximeter reports desaturation, you should always check on your child and see how they look and how their breathing is. But it may be a technical problem – most commonly:

- the sensor is not on properly
- the sensor is in bright sunlight
- your child is moving their finger or toe so the oximeter is not getting a good reading
- something is blocking the sensor light (nail polish, for example).

Modern oximeters do a lot to minimise these problems, but this means there is a little delay between what is happening in the body and what is shown on the oximeter. If your child has an oxygen desaturation, it will take a few seconds to show up on the oximeter. As your child recovers, it will take a few seconds to improve on the oximeter.

Oximetry at a glance (your child's oximeter may vary)



Using your oximeter

Setting up your oximeter

- Place the oximeter where you can easily see, hear and operate it.
- Make sure it is secure (can't fall).
- The power cable goes to the rear and is plugged in.
- Plug in the sensor cable (often in the front).

Turning your oximeter on/off

- Check power is connected appropriately.
- Press the on/off button on the front until the screen lights up.
- The oximeter will start to work immediately (if the cable/sensor are connected).

Placing the sensor on your child

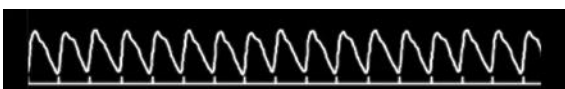
A variety of sensors may be available for your oximeter/child. Your health team will help you choose the best one for your child. Sensors may be different for a child continuously monitored and for outdoors.

Select the right spot. This will often be a finger or toe. If your child wears an oximeter continuously, it may be best to vary the spot, such as rotating between fingers. Check their finger/toe is clean and free of nail polish. Place the sensor on as you have been taught. It needs to be in close contact with the skin and secure but not so tight that it's uncomfortable or stops blood flow.

Checking the oximeter signal

Once the oximeter and sensors are on, the oximeter will 'search' for the pulse. After a few seconds both the heart rate and oxygen saturations will appear. If they don't appear, the sensor probably needs adjusting. Also check that the sensor and machine are plugged in correctly and it is charging/has enough battery life.

Reliable results depend on good signal quality. The oximeter will show signal quality either as a wave graph (each pulse beat being one wave – see image below) or a signal bar (as shown below). Try re-positioning the sensor if there are no waves or very small waves, or if the signal bar is very weak.



Using your oximeter

Beeping

Sometimes beeping with every pulse beat is helpful, but mostly this is an unnecessary nuisance. Your health team can tell you how to turn this on/off.



Alarms

Your pulse oximeter will be set to trigger an alarm if oxygen saturations are too low. This is to warn you that something is wrong (often it will be an error – the sensor needs adjustment or child is moving too much). If the alarm sounds, you should check your child, the sensor and their respiratory support.

An alarm can be silenced by pressing the mute button. Even if there is a genuine problem this may be appropriate (it can be hard to think with an alarm going) but you must monitor your child more closely while an alarm is muted. To unmute the alarm, press the button again.

Alarms are generally set to warn you of changes from your child's normal oxygen saturation and heart rate limits. The oxygen saturation limit will commonly be at a SpO₂ of 85 or 90% – the medical team will discuss this with you and tell you what is appropriate for your child.