

### Equipment



#### Equipment needed in recording:

1. Bittium Respiro™
2. Pulse oximeter
3. Quick Guide/ Notes and Warnings
4. Nasal cannula
5. Two RIP belts
6. Medical tape
7. Respiro™ Patch for 2 RIP Belts and a spare patch
8. Respiro™ ECG Adapter
9. Bittium OmegaSnap™ 1-CH ECG Electrode

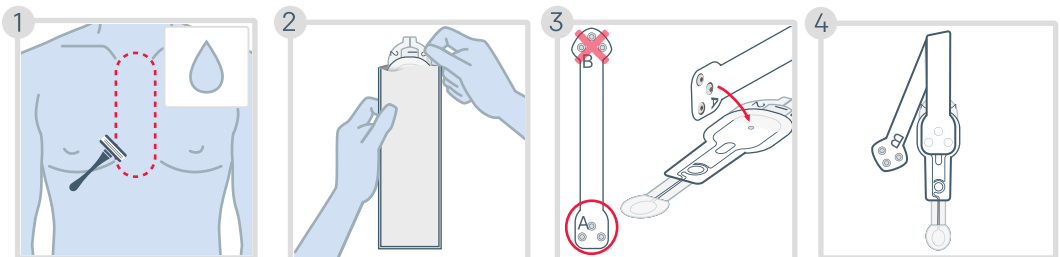
**Do not use a broken device or electrodes/cannulas whose packing is opened.**

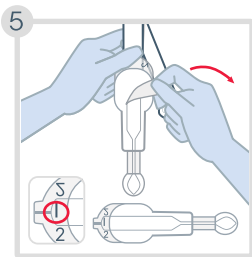
#### Equipment needed for charging Respiro (if required):

10. Charger
11. Charger dock

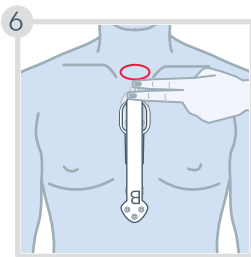
### Starting a recording

If needed, remove excess body hair using a razor or an electric shaver. Clean the skin according to the instructions given by your healthcare professional. The skin should be clean and dry when attaching the electrode.

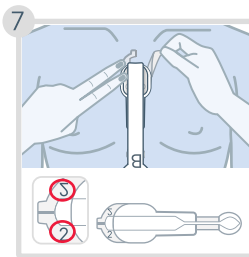




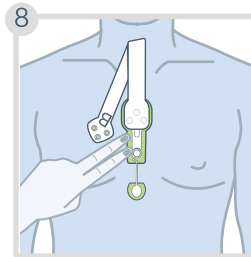
Remove the liner marked 1.



Place the top of the electrode approximately two fingers' width below the suprasternal notch.

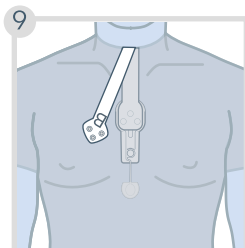


One at a time, remove the liners marked 2) to the sides while making sure the electrode attaches to the skin.

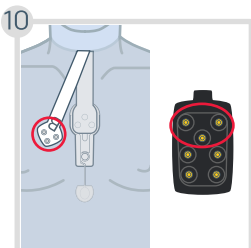


Press on the sides to fasten it properly.

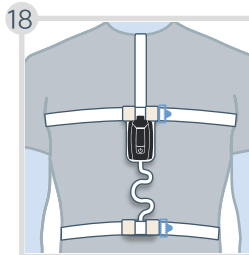
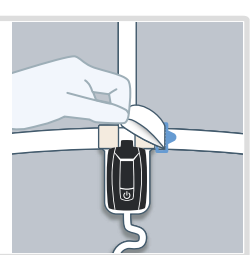
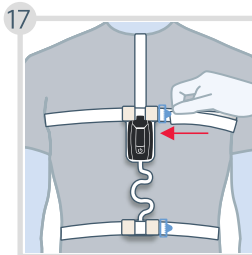
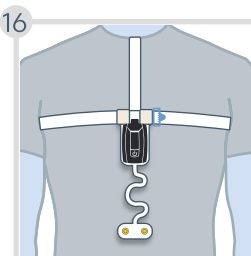
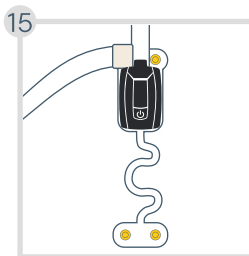
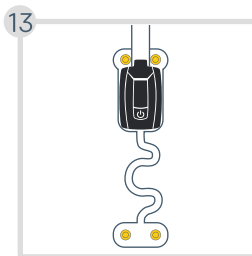
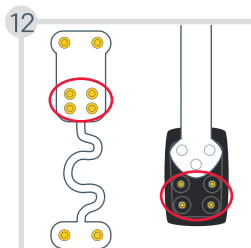
Wear a shirt over the electrode now.



Take the other end of the adapter through the shirt's neckline.



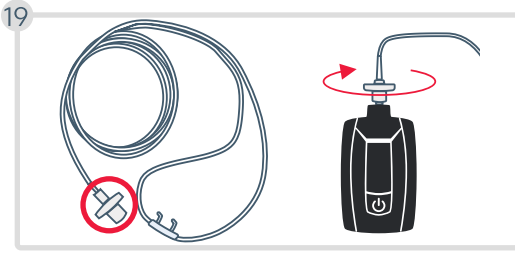
Attach device to the adapter and RIP belt to the patch as shown in pictures 10 - 16.



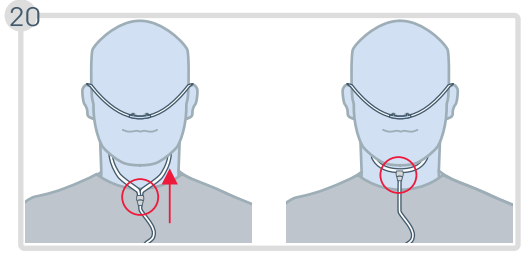
Check that the belts are not crossed.

One belt for thorax and one for abdomen.

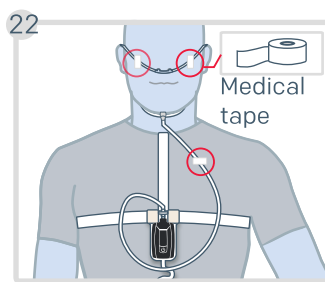
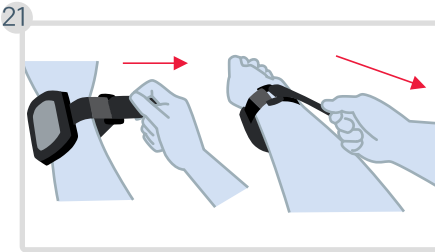
Adjust the belts if they are too loose.



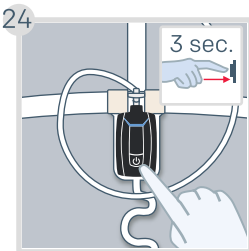
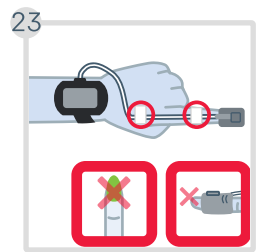
Attach the cannula to Respiro and rotate the connector slightly clockwise until you feel it connect.



- Move the slider up the tubes to adjust the fit.
- **Choking hazard!** Position the nasal cannula carefully as shown in the figures.
- In case a cannula with a mouthpiece is used, the oral part should be pointed towards your mouth.

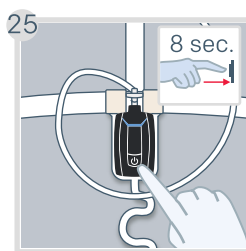


**Choking hazard!** Use medical tape for securing the cannula.

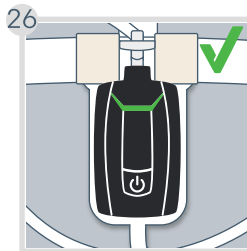


**If your recording is set to start automatically, skip the steps 23 and 24.**

Press the power button for about 3 sec. until the LED indicators are lit in blue.

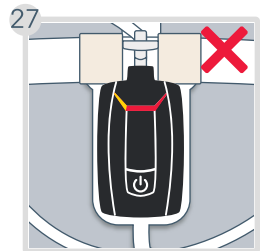


Press the power button again for about 8 sec. until the device vibrates and the LEDs start blinking blue.



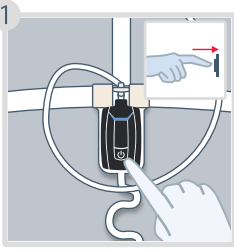
The LEDs are lit in **green** to indicate a successful recording start.

The LEDs will turn off automatically after 30 seconds if everything is OK and you are lying down.



If any LED indicator blinks **red** or **yellow**, check that the item corresponding to the indicator is connected properly. Explanations for the indicators can be found on the **next page**.

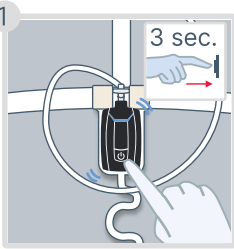
## During a recording



You can shortly press the power button to mark times when you are not sleeping, such as going to bed, going to the bathroom, waking up... (Optional)

## Stopping a recording

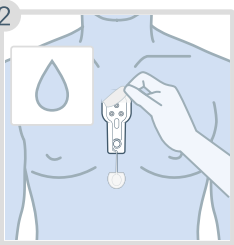
**If your recording is set to end automatically, skip the step 1.**



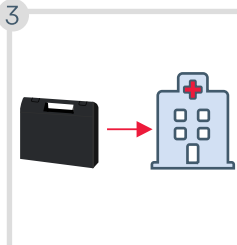
Pulse oximeter turns off automatically about in 10 minutes when you remove the sensor from your finger.

The LED indicators are lit in blue for 5 minutes but you can move to the next step.

Press the power button for about 3 sec. until the device vibrates 3 times and the LED indicators are lit in blue one by one from left to right.



Detach the equipment from yourself. If needed, you can use mild soapy water to remove the electrode from the skin.









Place all the items back into the carry case and return it to the clinic.



## LED indicators: viewed from the front of Respiro

If any LED indicator blinks red or yellow, check that the item corresponding to the indicator is connected properly. Once connections are OK, the LEDs will be lit in green. There are two patterns of blinking indicators and they are displayed on the recorder one by one. Contact your healthcare professional if LEDs are lit solid red or there are no lights at all.

Pattern 1	Pattern 2	
<p>Pulse oximeter</p>  <p>Nasal cannula</p> 	<p>RIP belts Change the patch if the red light stays on</p>  <p>ECG electrode</p> 	<ul style="list-style-type: none"> <li><span style="color: red;">●</span> Error</li> <li><span style="color: yellow;">●</span> A finger is not inserted into the finger sensor</li> <li><span style="color: green;">●</span> OK</li> </ul>

Examples		
<p>Pulse oximeter: A finger is not inserted into the finger sensor.</p>	 <p>Nasal cannula: OK</p>	 <p>RIP belts: OK ECG electrode: Error</p>

Connect Respiro to an outlet using the charger dock and the charger if you want to see the battery charge level. The LED indicators represent the device battery charge level. If at least two green LED indicators are blinking or all the LEDs are continuously lit, the battery charge is sufficient.

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# Bittium