NEOBLUE® LED PHOTOTHERAPY OVERVIEW

Natus' neoBLUE LED Phototherapy System is a floor-standing, mobile phototherapy device that delivers a narrow band of high-intensity blue light via blue light emitting diodes (LEDs) to provide treatment for neonatal hyperbilirubinemia in the hospital setting. Blue LEDs emit light in the range of 400 – 500 nm (peak wavelength 450 - 470 nm). This range corresponds to the spectral absorption of light by bilirubin, and is thus considered to be the most effective for the degradation of bilirubin. Blue LEDs do not emit significant ultraviolet (UV) or infrared (IR) radiation, so they can be placed close to the baby.

STEPS FOR USING THE neoBLUE LIGHT ON A PATIENT

1. Per hospital protocol or at least every 6 months, check light intensity. LEDs have very gradual degradation of intensity over time. A typical LED panel will provide over 4,000 hours of intensity above 30 µW/cm²/nm with a total of 10,000 hours of life (intensity above 12 µW/cm²/nm*). When intensity drops below the desired level, biomedical engineering can adjust it via the potentiometer on the side of the enclosure. (Refer to service manual)
   *As measured by a neoBLUE® Radiometer at 12 inches (30.5 cm) from the baby.

2. Shield infant’s eyes with appropriate protective eye shields.

3. Position light over infant. The light can be tilted and adjusted both horizontally and vertically on the roll stand assembly. The light enclosure can be tilted to approximately 40° up from horizontal (the resting position). The light enclosure can be tilted by grasping the device on either side and adjusting to desired angle.

4. Note hour count on timer. If you track patient treatment time, note the number of hours at the beginning of treatment, and again at the end of treatment.

5. Turn on power switch on front of light enclosure. This is the green switch in the center of the front panel.

6. Press Target Illumination Switch to center light over infant. Confirm placement of the light to cover maximum surface area of the baby for best results. The target light is red and should be centered over the baby’s torso.

7. Per physician order, select High or Low intensity at Irradiance Level Control Switch. Depending on your hospital protocol, high may correspond with “double” or “triple” phototherapy. Low typically corresponds to “single” phototherapy.

Intensity Measurements

The neoBLUE light is calibrated at the factory with the neoBLUE® Radiometer to yield the following intensities at 12 inches (30.5 cm) from the baby:

a. High intensity: 30-35 µW/cm²/nm
b. Low intensity: 12-15 µW/cm²/nm

Different radiometers will yield different measurements. Some radiometers are calibrated to broad band light sources (e.g., white light) and will not register high intensity with a narrow band blue light. Refer to the chart below for more information on what your radiometer may read if you are not using a neoBLUE® Radiometer.

<table>
<thead>
<tr>
<th>Radiometer Intensity (µW/cm²/nm):</th>
<th>neoBLUE® Radiometer</th>
<th>Ohmeda BiliBlanket® Meter II</th>
<th>Olympic Bili-Meter™</th>
</tr>
</thead>
<tbody>
<tr>
<td>neoBLUE overhead light measured at 12 inches / 30.5 cm distance</td>
<td>35</td>
<td>35</td>
<td>22.7</td>
</tr>
</tbody>
</table>

NOTE: Vents are located on the underside of the enclosure. Do not block vents when using drapes or other light shielding methods.

[Continued On Reverse Side]
The LED panel will show slight degradation over time. After biomedical engineer
Bili-Meter is a trademark of Olympic Medical.
BiliBlanket is a registered trademark of Ohmeda Medical.
• For service information, please refer to your service manual.
• If you have additional questions, please refer to your user manual.

FREQUENTLY ASKED QUESTIONS
• How often should I check the intensity? LEDs can last for thousands of hours at high intensity. Natus recommends checking
intensity at least every 6 months. When the intensity drops below the desired level, biomedical engineering should be called to
trim the potentiometer as noted in the service manual.

Use with a Radiant Warmer
When used with a radiant warmer, care must be taken to angle the light and
position it to the side of the heat source. The enclosure must be placed
no further than 12 inches (30.5 cm) from the baby and out of the path
of the radiant heat source.
Note: The neoBLUE drape is not indicated for use in conjunction with a radiant warmer.

Use with a Bassinet
The neoBLUE light can be used to treat babies in bassinets. Keep the
light as close to the baby as possible to reduce convective heat loss caused by
traffic in the nursery. The neoBLUE drape can also be used to reduce
draft and lessen the light to caregivers.

ADDITIONAL NOTES
• To avoid overheating, do not cover vents. Clean filters once per month (see user manual).
• Do not place directly under radiant heat source.
• If you have additional questions, please refer to your user manual.
• For service information, please refer to your service manual.

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Billi-Meter is a trademark of Olympic Medical.