neo**help**[™]

Neonatal Heat Loss Prevention Suit



Neonatal hypothermia: a worldwide issue

Hypothermia is an **important factor** in **morbidity** and **mortality** of all birthweights and gestational ages, and **particularly for vulnerable preterm infants** ⁽¹⁾.

Incidence of hypothermia on admission in the NICU from the delivery room is ⁽²⁾:

• **≥ 56%** for infants **< 750g**

• ≥ **25%** for infants ≤ **2500g**



Consequences of neonatal hypothermia (1,4)

Respiratory distress

Metabolic acidosis

Hypoxia

Coagulation defects

Intraventricular hemorrhage

Brain damage

Hypoglycemia

Infection / Septicaemia



For every 1°C decrease (4): • sepsis increases by 11% • risk of death increases by 28%



neohelp[™], polyethylene occlusive suit to prevent heat loss (5)

 $neohelp^{\text{TM}}$ is a sterile suit to swaddle the baby immediately after delivery (before resuscitation).

Adjustable hood

- Limits heat loss by radiation, convection and evaporation
- More efficient than stockinette cap⁽⁶⁾
- Adjustable to the baby's head

Double layer of Polyethylene

- · Limits heat loss by convection and evaporation
- Allows good skin contact due to the thin inner layer
- Allows passage of radiant heat from the warmer ⁽⁴⁾
- Transparent and silent material that enables the visualisation of the skin color and the baby's breathing movement

neo**help**™

• Non-toxic and biocompatible material (ISO 10993-1)

According to UNICEF, such interventions can help reduce neonatal mortality or morbidity by 18-42% (6) Pre-shaped foam cushion **Central opening** • Velcro closure that ensures heat conservation

- · Easy and quick placement of the baby
- Easy access to the baby's body
- Designed for easy placement of monitoring equipment, IV and umbilical catheters

· Limits heat loss by conduction

- · Helps to maintain an open airway
- (by raising the shoulders level) (7)
- Stabilises the baby's position
- Facilitates carrying of the baby
- Provides comfort to the baby

International recommendations

- "The transparency of bags makes it easier for caregivers to observe and manage the infant with minimal disruption of the wrap." (4)
- "The transport incubator used to limit heat loss can be cumbersome and difficult to obtain. It may be «replaced» by a stockinette cap and a transparent polyethylene bag wrapping whilst the baby is still wet. This greatly reduces the risk of hypothermia." (8)
- "Meta-analysis of [...] studies found that plastic wraps (polyurethane or polyethylene bag) were statistically significantly more effective than routine care in reducing heat losses in infants aged < 28 weeks' of gestation. Stockinette caps were not effective in reducing heat loss in infants".⁽⁶⁾



How to use neohelp™



Unfold neohelp[™] completely.
 Place it on the resuscitation table, under the heat lamp (if applicable).

3 Fully open the Velcro and the hood to facilitate the baby's reception.



- 4 Do not dry the baby at birth.
 5 Place the baby immediately after birth in neohelp[™].
- 6 Align the shoulders at the upper edges of the foam.
- **7** Close the Velcro tightly along its entire length.



8 Adjust the hood to the head of the baby.
Do not cover the airways due to the risk of suffocation.
9 Other heating appliances (e.g. heating) will need to be adjusted accordingly due to risk of hyperthermia.



10 The baby should be kept wrapped until temperature stabilization.
11 Temperature of the baby should be monitoredcontinuously or consecutively (ideally every 5 minutes).
12 Do not use more than 24 hours.

Indications for use & ordering information

| Designation | Dimensions | Indications | Code | Quantity |
|--|------------------|--|----------|----------|
| neo help[™] SMALL < 1KG | L. 38 x W. 30 cm | NICU Delivery room Operating room Transport | 37.09.14 | 10/box |
| neo help™ MEDIUM 1KG – 2.5KG | L. 44 x W. 38 cm | | 37.09.15 | 10/box |
| neo help™ LARGE > 2.5KG | L. 50 x W. 38 cm | | 37.09.16 | 10/box |

References

- 1 The Cochrane Collaboration. Interventions to prevent hypothermia at birth in preterm and/or low birthweight infants (review), 2010.
- 2 DR Bhatt, R. White and al. Transitional hypothermia in preterm newborns. Journal of Perinatalogy, 2007
- **3** World Health Organization (WHO). Thermal protection of the newborn: a practical guide, 1997.
- 4 T. Cordaro and al. Hypothermia and occlusive skin wrap in the low birth weight premature infant. NAINR. 2012;12(2):78-85.
- 5 S.Vohra et al. Heat Loss Prevention (HeLP) in the delivery room: A randomized controlled trial of polyethylene occlusive skin wrapping in very preterm infants. 2004 Dec;145(6):750-3.
- 6 Wariki WMV and Mori R. Interventions to prevent hypothermia at birth in preterm and/or lowbirth-weight infants: RHL commentary (last revised: 1 June 2010). The WHO Reproductive Health Library; Geneva: World Health Organization
- 7 ANZCOR Guideline 13.4, Management and mask ventilation of the newborn infant, 2016.
- 8 J.F. Diependaele and A. Fily. Management of a newborn baby, 51st congress of French Society of Anesthesia and Intensive care, 2009.

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For further information, please contact: questions@vygon.com

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