



Neonatal Care Unit Provides Developmental Positioning for Premature Infants (20120316)

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An All-Inclusive Neonatal Care Unit

The BiliBlossom neonatal care unit is comprised of eight sturdy but flexible arms that envelop the baby, recreating a womb-like environment. This neonatal care unit allows beneficial developmental positioning, swaddling, and womb simulation while allowing treatment for common neonate syndromes. The insides of the arms are soft to the touch, but resist repositioning from movement of the neonate. The arms can be individually moved and detached to allow for access to any other required treatment, including IV lines. Additionally, the device can be tilted to treat GERD.

Importance of Developmental Positioning

One of every eight babies is born prematurely. Preterm infants have less chance for proper development in the womb, and as such, proper after-birth care is necessary to stimulate further development. Developmental positioning – properly positioning the body and limbs while neuromuscular mechanisms are still being developed – is a common neonatal nursing technique for babies born prematurely. Placing a baby in a uterine-like environment has been shown to speed development. Current methods and devices designed to provide this environment unfortunately do not allow for easy clinician or equipment access to the patient, or for concurrent treatment, such as phototherapy for hyperbilirubinemia.

Hyperbilirubinemia Treatment

The BiliBlossom has been designed to accommodate treatments for hyperbilirubinemia. Each of the eight arms on the device can be lined with phototherapy lights for omnidirectional treatment of hyperbilirubinemia. The device treats hyperbilirubinemia while also maintaining the proper positioning and womb-like environment the child requires to develop properly.

NEONATAL CARE UNIT AND WOMB SIMULATOR BENEFITS:

- One-size fits all device can be modified for different sized or growing neonates
- Easy access for other required interventions without removal of neonate from enclosure
- Maintenance of shape against neonate movement without sacrificing neonate comfort
- Allows phototherapy without disturbing neonate positioning
- Phototherapy can be combined with other treatments, such as inclined positioning for infant GERD

Phase of Development Early design and prototype development

Researchers

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