







Holding during Therapeutic Hypothermia in the NICU



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Why hold while cooling?











Holding is not appropriate:





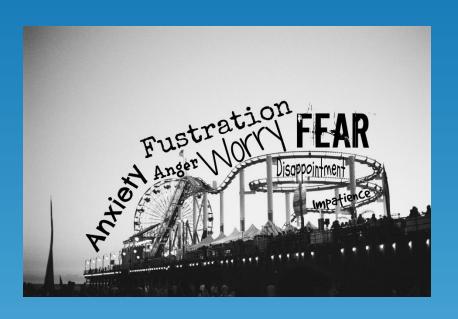
- Severe PPHN
- High Frequency ventilators
- Active seizures
- Vasopressors –dopamine/dobutamine 5mcg/kg/hr
- Peripheral arterial line
- During rewarming phase























"Chaos"

"Experiencing a traumatic delivery."

"Emotional Chaos."



"Understanding that something is wrong."

"Alone."

"Feeling abandoned."

"No one to talk to."

"Helpless."

"Understanding the seriousness of the situation."





Heringhaus, Blom, & Wigert, (2013).



State of unreality

• "It felt unreal and I felt like a robot doing what I" * should."

• "I don't really understand...they explained a bit about what they were doing, but I couldn't' take it all in just then."







State of unreality



• "It was a tragic first night, and really horrible... I was alone, I thought I was going to take my life like I'm going to jump out of the window here."









State of Uncertainty:

• "Waiting, not knowing, receiving information."



• "Does not know about the NICU."



• "Waiting for an MRI."



• "What injuries will the child have?"

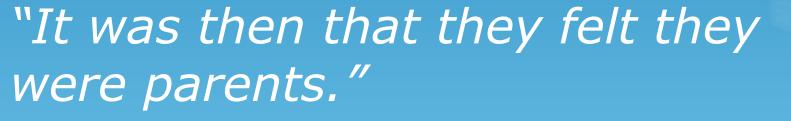


Holding after Cooling

















Family Centered Care



• "The staff were very good because you became involved in the care. They said "Now you can do this and then you can feed A (the infant). Tube feeding, changing diapers and taking care of A. Yes it felt good to be of some use to A."





Maternal stress in NICU

• Alteration of the parental role.



O"Feeling helpless about how to help my baby during this time."



"Not feeding my baby myself."



"Not being able to hold my baby when I want."



Chourasia, N., Surianarayanan, P., Adhisivam, B., & Vishnu Bhat, B. (2013).



Maternal stress in NICU



• 25.5% of mothers faced depression



 27.4% of mothers had moderate to severe anxiety



 14% of mothers had both moderate to severe anxiety AND depression



Segre, L. S., McCabe, J. E., Chuffo-Siewert, R., & O'Hara, M. W. (2014).



Long term implications



Significant correlation between parental alteration stress and later child and language development.











Woodward, L. J., Bora, S., Clark, C. C., Montgomery-Hönger, A., Pritchard, V. E., Spencer, C., & Austin, N. C. (2014).



Long term implications



Mothers who experience depression are less likely to engage in developmentally enriching activities.



Depression in mothers hinders them from understanding infant's signals and responding in a sensitive way.









Nursing Care for Holding



- Standard Operating Procedure
- Checklist









Holding during Hypothermia Checklist

If the infant meets any of the following exclusion criteria, holding will have to be delayed until
infant is stable.
o Exclusion criteria:
 Severe PPHN-requiring significant oxygen requirements and/or iNO.
 Patients on High Frequency ventilators, such as a Jet or oscillator.
 Any patient with active seizures.
 Patients on significant vasopressor therapy related to severe hypotension.
 Any patients with a peripheral arterial line.
 During the rewarming phase, due to the increased likelihood of seizures.
Notify MD/ARNP for order to initiate holding
If infant is on respiratory support, notify respiratory therapist and discuss time availability. RT
must be present if infant is ventilated.
Notify EEG at this number: 303-7998. EEG must be notified prior to and after holding.
Is PRN sedation needed?
IF infant has a UAC/UVC:
o Document line placement
o Is line secure? (sutures/tegaderm)
IF infant is intubated:
o ET tube location
o Is ET tube secured?
Infant Temperature (prior to holding)
o Axillary, Core, and Blanket
o Did you document?
Nurse in charge of infant Nurse in charge of cooling equipment
Is mom/dad in a chair with wheels locked?
Give pillow to mom/dad.
Assess there are no kinks in cooling blanket connections.
Parents can hold for a minimum of 1 hour. Maximum time allotted is 3 hours.
Two nurses and if needed, respiratory therapist, must be present to put the infant back to the
radiant warmer. Line placement and ET tube securement should be re-documented prior to
putting infant back on warmer as well as once infant is stabilized on warmer.
Holding will be discontinued if infant doesn't tolerate the procedure as evidenced by but not
limited to:
o Seizures ,Increasing respiratory support, Desaturation episodes requiring increases in
oxygen.
o Bradycardia, Increased irritability.

Nurse MUST be present at bedside during time of holding. This is NOT time for break. If you need to break, another nurse MUST be present at the bedside.





















• Florida Hospital for Children will be conducting a mixed methodology research study to analyze the effects of holding during hypothermia.



 Assess physiologic effects of holding on both mother and baby.





Thank you!

















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