

## PHOTOTHERAPY

- PURPOSE:** To outline the management of newborns receiving phototherapy.
- SUPPORTIVE DATA:** Phototherapy is the most common treatment for hyperbilirubinemia. Exposure to phototherapy lights (bili-lights) causes the unconjugated bilirubin to chemically change into non-toxic products that are excreted in the urine and stool. The duration of therapy depends on the newborn's bilirubin clearance.
- Kernicterus is a form of brain damage caused by excessive bilirubin and is a complication of hyperbilirubinemia.
- ASSESSMENT:**
1. Assess the following a minimum of every 4 hours (every 2 hours ICU)
    - Activity Level / Level of Consciousness (LOC)
    - Vital signs (VS) including axillary temperature
    - Skin color (including for tanning)
    - Peripheral circulation
    - For skin rash
    - Eyes for condition, drainage, and scleral color
    - Ambient temperature
  2. Assess for Signs/Symptoms (S/S) of dehydration.
    - Monitor IV intake a minimum of every hour
    - Monitor oral intake a minimum of every 2-3 hours
    - Weigh all diapers (except newborn nursery)
    - Monitor frequency and consistency of stool
  3. Assess for S/S of kernicterus:
    - Seizures
    - Opisthotonos (arching of the back)
    - Lethargy
    - Upward deviation of eyes
    - Decreased muscle tone
    - Vomiting
    - High pitched cry
    - Poor feeding
  4. Weigh on admission and then every 24 hours.
  5. Obtain physician's order for phototherapy. Order to include:
    - Number and types of lights
    - Type and frequency of laboratory tests
      - Monitor results as drawn
- MAINTENANCE:**
6. Undress and use bikini diapering while under phototherapy.
    - Undress completely if diaper rash occurs
  7. Place eye protectors and change every 24 hours.
  8. Reposition newborn a minimum of every 3 hours.
  9. Shield skin temperature probe from light using a reflector.
  10. Maintain newborn under bili-lights except when feeding or drawing labs.

SAFETY:

- 11. Adjust the height of bili-lights from the newborn as specified by manufacturer.
- 12. Ensure eye protectors cover eyes at all times while under phototherapy lights.
  - Remove eye protectors during feeding, holding, or drawing labs to decrease sensory deprivation
- 13. Maintain ambient temperature.

PATIENT/ FAMILY EDUCATION:

- 14. Instruct on the following:
  - Purpose of phototherapy
  - Participation in care, e.g., feeding, diaper changes, holding, removal of eye protectors during feeding/holding

REPORTABLE CONDITIONS:

- 15. Notify the provider for the following:
  - Changes in VS/baseline assessment
  - Skin rashes or tanning
  - Eye drainage
  - Abnormal lab values
  - S/S of dehydration
  - S/S of kernicterus

ADDITIONAL STANDARDS:

- 16. Implement the following protocols as indicated:
  - Physiologic Monitoring/Hygiene/Comfort - Newborn/Pediatric
  - Seizure activity

DOCUMENTATION:

- 17. Document in accordance with “Documentation” standards.
- 18. Document in iView, Quickview Navigator Band, Newborn phototherapy section.

Initial date approved: 12/00	Reviewed and approved by: Professional Practice Committee Nurse Executive Committee Attending Staff Association Executive Committee	Revision Date: 03/05, 01/14, 1/20
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