PHYSICAL ASSESSMENT OF THE NEWBORN

This document has been reviewed and approved by the Standards and Research Committee of the Association of Ontario Midwives (AOM) on June 24, 1998. The final draft was approved by the AOM Board of Directors on April 27, 1999.

INTRODUCTION

These guidelines are written for an initial newborn examination which should be conducted in the first four hours after birth. The AOM recommends two further assessments, one at 10 to 14 days of age, and a “discharge exam” at 4-6 weeks. The examinations should be repeated as some abnormalities do not become evident until later (e.g., heart murmurs), and some become more reliable (e.g., dislocated hips). A list of the items/areas that should be reassessed at 10-14 days and at discharge is included.

It is important that a thorough examination of each area be conducted. These guidelines note the areas that should be examined, and some of the essential points, but do not include all of the possible abnormal findings which a midwife might note. Any unusual finding should be documented and appropriate follow-up should be initiated. Each practice needs to develop their own protocols for follow-up of abnormal findings.

PRINCIPLES

- The exam should be thorough and systematic.
- The approach should be flexible to accommodate the newborn’s behavior.
- The midwife can use the newborn exam as an opportunity to model ways of interacting and handling the newborn.
- Ideally, the exam is conducted in a way that maximizes parental involvement and opportunities for education about newborn appearance and care.
- Remembering that the parents are experts on their baby’s behaviour and appearance, physical assessment should include a history from the parents.

PREPARATION

- Conduct the exam in a warm place, free from drafts.
- Keep baby warm throughout.
- Ensure adequate lighting.

This guideline reflects information consistent with the best practice as of the date issued and is subject to change. The information is not intended to dictate a course of action. Local standards may cause additions to or modifications of this guideline. Such changes should be well documented by practice groups.

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COMPONENTS OF THE INITIAL NEWBORN EXAMINATION

1. General Assessment
   - Note gestational age
   - State of alertness, behavior
   - Muscle tone
   - Symmetry
   - Response to sound and movement
   - Temperature, apical rate and respirations (for one full minute)

2. Reflexes
   - Rooting reflex
   - Sucking reflex
   - Other neurodevelopmental reflexes such as Moro, Plantar, Babinski and Grasp

3. Skin
   - Colour
   - Rashes, lesions, petechiae
   - Birthmarks
   - Vernix
   - Lanugo
   - Peeling, dryness
   - Turgor
   - Skin tags

4. Measurements
   - Head circumference
   - Chest circumference (optional)
   - Length
   - Weight

5. Head
   - Sutures
   - Fontanels
   - Bones of skull
   - Symmetry
   - Moulding
   - Caput
   - Cephalhematoma

6. Eyes
   - Colour of sclera
   - Pupil size, position and reactivity
   - Red reflex
   - Tracking and abnormal gaze
   - Spacing and shape of eyes

7. Ears
   - Position in relation to eyes
   - Presence of canals
   - Pinna recoil

8. Nose
   - Shape
   - Nares

9. Mouth
   - Hard and soft palate intact (palpate and visualize)
   - Lesions

10. Neck
    - Webbing
    - Masses
    - Nuchal thickening

11. Chest
    - Auscultate lungs, air entry
    - Symmetry during respirations
    - Signs and symptoms of abnormal respirations (e.g., grunting, or retractions)
    - Clavicles
    - Breasts

12. Heart
    - Auscultate heart sounds over the 5 areas of the heart: aortic, pulmonic, 3rd left interspace, tricuspid and mitral
    - Rate and regularity

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1 Midwives may wish to use a scoring system such as the “New Ballard Score” when gestational age is ambiguous. Ballard JL, Khoury JC, Wedig K, et al. New Ballard Score expanded to include extremely premature infants. J Pediatrics 1991: 119: 417-423.
COMPONENTS OF THE INITIAL NEWBORN EXAMINATION (Continued)

13. Abdomen
   • Palpate the abdomen for liver, spleen, distention, masses and hernia
   • Observe the umbilical stump for bleeding or oozing
   • Count the number of vessels in the cord (optional - can also be done on the placenta)
   • Check femoral pulses comparing character bilaterally

14. Genitalia and Rectum
   • Patency of the rectum
   • Note if meconium and/or urine have been passed
   • Male Newborn
     ➢ Palpate for presence of testes in scrotum or inguinal canal
     ➢ Presence and placement of urethral meatus
     ➢ Presence of hydrocele
   • Female Newborn
     ➢ Presence of labia minora, labia majora and clitoris
     ➢ Patency of vaginal opening
     ➢ Note vaginal discharge

15. Arms and Hands
   • Symmetry, shape and size
   • Number of digits
   • Webbing
   • Palm creases

16. Hips, Legs and Feet
   • Assess hips for congenital dislocation
   • Legs and feet, noting symmetry, size, shape and creases
   • Number of toes
   • Webbing of toes

17. Spine
   • Alignment
   • Skin disruption, sinus, tufts of hair

COMPONENTS OF THE 10-14 DAY INFANT ASSESSMENT

1. General Assessment
   • General appearance
   • State of alertness, behavior
   • Muscle tone
   • Symmetry
   • Response to sound and movement

2. Skin
   • Colour
   • Rashes, lesions, petechiae
   • Birthmarks
   • Peeling, dryness
   • Turgor

3. Measurements
   • Weight

4. Head
   • Bones of skull
   • Fontanelles
   • Sutures
   • Cephalhematoma

5. Eyes
   • Colour of sclera
   • Pupil size, position and reactivity
   • Tracking and abnormal gaze

6. Mouth
   • Lesions

7. Neck
   • Masses
COMPONENTS OF THE 10-14 DAY INFANT ASSESSMENT (Continued)

9. Heart
   • Auscultate heart sounds over the five areas of the heart: aortic, pulmonic, 3rd left interspace, tricuspid and mitral
   • Rate and regularity

10. Abdomen
    • Palpate the abdomen for liver, spleen, distention, masses and hernia
    • Observe umbilicus

11. Genitalia and Rectum
    • Male newborn: palpate for descent of testes if not present at initial exam

12. Arms, Legs and Hips
    • Assess hips for congenital dislocation
    • Symmetry and movement

COMPONENTS OF INFANT ASSESSMENT AT COMPLETION OF MIDWIFERY CARE

1. General Assessment
   • General appearance
   • State of alertness, behavior
   • Muscle tone
   • Symmetry
   • Response to sound and movement

2. Skin
   • Colour
   • Rashes, lesions, petechiae
   • Birthmarks
   • Turgor

3. Measurements
   • Head Circumference
   • Length
   • Weight

4. Head
   • Sutures
   • Fontanels
   • Bones of skull
   • Symmetry
   • Cephalhematoma
   • Gaze, tracking

5. Heart and lungs
   • Auscultate heart sounds over the five areas of the heart: aortic, pulmonic, 3rd left interspace, tricuspid and mitral
   • Rate and regularity
   • Auscultate lungs, air entry
   • Symmetry during respirations
   • Clavicles

6. Abdomen and hips
   • Palpate the abdomen for liver, spleen, distention, masses and hernia
   • Observe umbilicus
   • Assess hips for congenital dislocation

7. Developmental markers
   • Smiling
   • Cooing
   • Head control