GAUTENG PROVINCE
HEALTH
REPUBLIC OF SOUTH AFRICA

OCCUPATIONAL THERAPY

ROLE AND LESSONS LEARNT WITH NEONATAL CARE

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PRESENTATION OVERVIEW

- COMMON CONDITIONS OT TREAT IN NICU
- SIGNS AND SYMPTOMS OF NEONATAL CHALLENGES LEADING TO OT REFERRAL
- MULTIDISCIPLINARY TEAM
- ROLE OF OCCUPATIONAL THERAPIST WITH NEONATES
- LESSONS LEARNT

- Assessments
- Educate on stress cues
- Positioning
- Handling techniques
- Splinting techniques
- Baby massage

WHAT IS OCCUPATIONAL THERAPY?

- Occupational Therapy is a client-centered healthcare profession that promotes people's health and well-being of **all ages**, so that they can participate in meaningful **daily activities** and live lives that are **meaningful** to them in their communities and cultures as **independently** as possible.
- People who benefit from OT are individuals with physical, sensory, or cognitive challenges.
- We use activities which are personally meaningful and purposeful to enable **functional recovery** after disability, illness or injury.

GENERAL ROLE OF OCCUPATIONAL THERAPIST WITH NEONATES

- To provide comprehensive services, including evaluation, treatment, education, decision making, family support, preventing disabilities and discharge planning

- To help the mother bond with their baby and help develop skills that will lay groundwork for achieving future developmental milestones

MULTIDISCIPLINARY TEAM MEMBERS OTS WORK WITH IN NICU

- **Nurses;** New precautions; any seizures, Vitals, ward programme, etc.
- **Neonatologists**; Medical condition confirmation, precautions, discuss progress and D/C Plan
- **Paediatric specialists/ General Practitioners;** depending on level of care
- **Surgeons;** OP done, to be done, recommendations, precautions,
- **Ophthalmologists**;
- **Pharmacist**
- **Dieticians;**
- **Speech Therapist**
- **Audiologist;**
- **Social workers;**
- **Physiotherapists;**
- **Parent/caregiver:** Carryout ward and home programs, Stimulations, Education on handling, KMC, etc
- **Occupational Therapist**

COMMON CONDITIONS OT TREAT IN NICU

- Prematurinty, Neurological conditions (HIE, Increased or decrease tone), mostly NNE,
- Orthopedic conditions (clubfoot, congenital deformities, positional abnormalities, brachial plexus, erbs palsy)
- Anemia, Apnea, Pneumonia, Respiratory Distress Syndrome, Heart defects conditions,
- Feeding difficulties, Gastroschisis, Intraventricular Hemorrhage
- Jaundice, Sepsis, Congenital and Genetics conditions
- Other conditions affecting development

ROLE OF OT WITH NEONATES

SUPPORT THE BABY BY:

- Positioning the baby to be comfortable

  - Swaddling, Nesting, Splinting, etc

- Recognizing signs of stress and ways to move and interact with the baby

  - Helping the mother to know when the baby is ready for touch, movement and visual stimulation (avoid overstimulation)

- Teach the mother 'infant massage' to use with the baby

  (Teach positive touch and support bonding)

- Strengthening the baby's arms, legs and body to be able to move freely

- Therapy sessions, head control facilitation, rolling, reaching, play

EXAMPLES OF OT GOALS IN NICU

- Help the baby bring hands together (so they can hold a bottle and toys or clap hands later on)
- Help the baby reach their feet (so they can put on socks later on)
- Help the baby use their eyes to follow movement, your face or mobile (so they can be able to read later on)
- Help the baby's limbs to be in functional positions ''splinting'' (so that we can prevent deformities later)
- Help achieve developmental milestones according to age (so that they grow up as expected according to milestones)

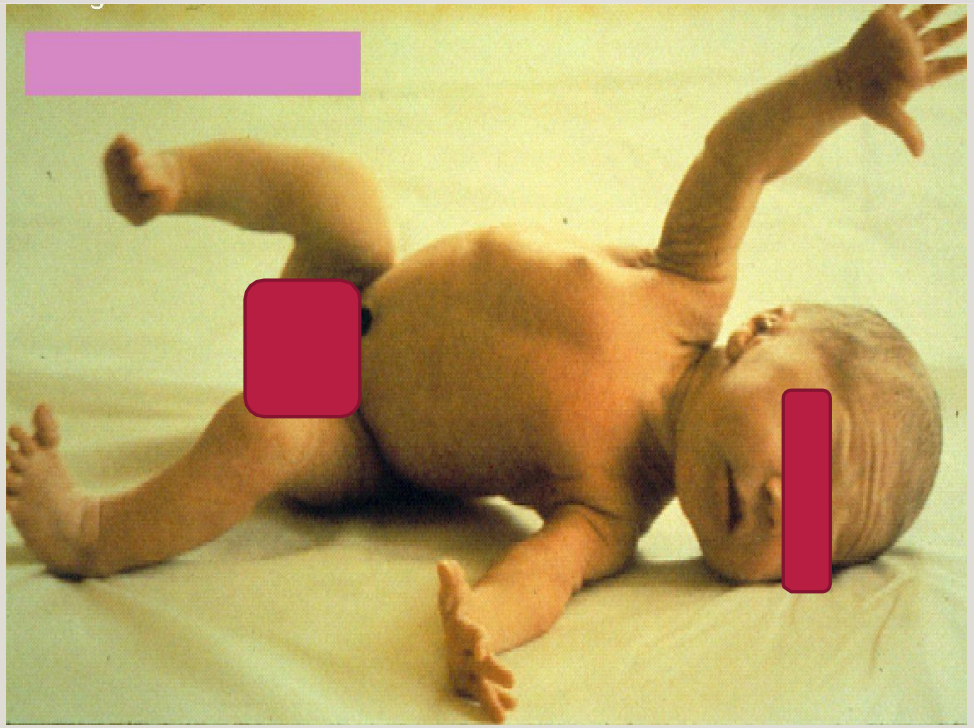
OT ASSESSMENTS

- **Neurobehavioral Organization** – infant's state of alertness, stress signals, and ability to transition between sleep–wake states.
- **Physiological Stability** – monitoring vital signs during handling, feeding, and interaction.
- **Neuromotor Function** – muscle tone, reflexes, posture, spontaneous movements, and motor patterns, deformities
- **Sensory Processing & Responsiveness** – reactions to auditory, visual, tactile, vestibular, and proprioceptive input.
- **Parent–Infant Interaction** – infant's ability to engage/respond to caregiver, bonding cues, and parental handling competence.
- **Developmental Risk Factors**– impact of prematurity, medical interventions, and NICU environment on development milestones.
- **Call for early stimulation and discharge planning**

PHYSIOLOGIC/MOTOR STRESS CUES: TO OBSERVE, NOTE AND EDUCATE ON

- Colour changes - pallor or flushing
- Changes in vital signs (e.g. Heart rate, breathing)
- Hiccups
- Spitting up
- Sneezing
- Yawning
- Hyperextension of extremities - saluting, arching, airplane, sitting on air, "stop" sign
- Frantic movements
- Finger splaying
- Generalised hypotonia - low muscle tone

STRESS QUES TO LOOK OUT FOR…



OT ROLE INCLUDES: IMPORTANCE OF CORRECT POSITIONING

- **Prone positioning:** increases oxygenation, tidal volume, and the compliance of the lungs
- **Side lying or lateral positioning:** has been found to also support oxygenation while decreasing the incidence of external rotation of the extremities.

- <u>POSITIONING:</u>

- Nesting of neonates can be done by giving them the boundaries of the womb

  - NOTE: It is important to ensure that the neonate is able to reach his/her mouth with his/her fingers as in the womb, for this encourages self-organizational-behaviour
  - Self-soothing and self-regulatory behaviours are encouraged: proper positioning also contributes to neurobehavioral development.

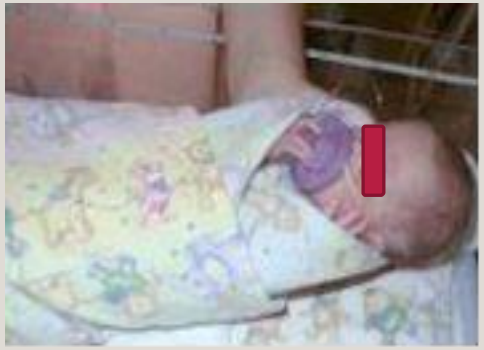
BENEFITS OF SWADDLING AND NESTING. AND HOW?

- Containment holding reduces stress by calming the neonate, promotes sleep and parental bonding and involvement.
- It almost instantly calms a distressed neonate and therefore gives the parents great satisfaction that they are able to comfort their neonate.
- It also proves a successful tool in reducing the stress involved during painful or stressful procedures such as blood taking, as determined by the neonate's cues.
- It helps if a neonate is contained when bathed and is showing signs of stress via her cues.

- Hold your baby firmly but gently in a curled position.
- Place your hand on your baby's feet and on head or shoulders to help your baby curl up and relax.
- **Swaddle** your baby in a blanket. Bend the legs up and bring the arms to the middle of the body. Leave your baby's hands free to find the mouth.
- Help your baby bring one hand up to the mouth. Let your baby suck on a fist, thumb, or fingers. Roller for grap training can also assist
- Place your baby on the side and surround with blanket rolls. These blanket boundaries will keep your baby in a curled position and provide a feeling of security. This is called **"nesting".**

POSITIONING TECHNIQUES

SWADDLING AND HANDS-TO-MOUTH



NESTING

CALMING TECHNIQUES

POSITIONING AND SPLINTING

- **Many premature infants demonstrate hypotonia as flexion develops in the last trimester.**

(Flexion, tone, posture and contractures need to be assessed)

- **OT fabricate special supports in the form of splints:**

- to help manage muscle tone or range of Motion and prevent deformities or stretching a club foot

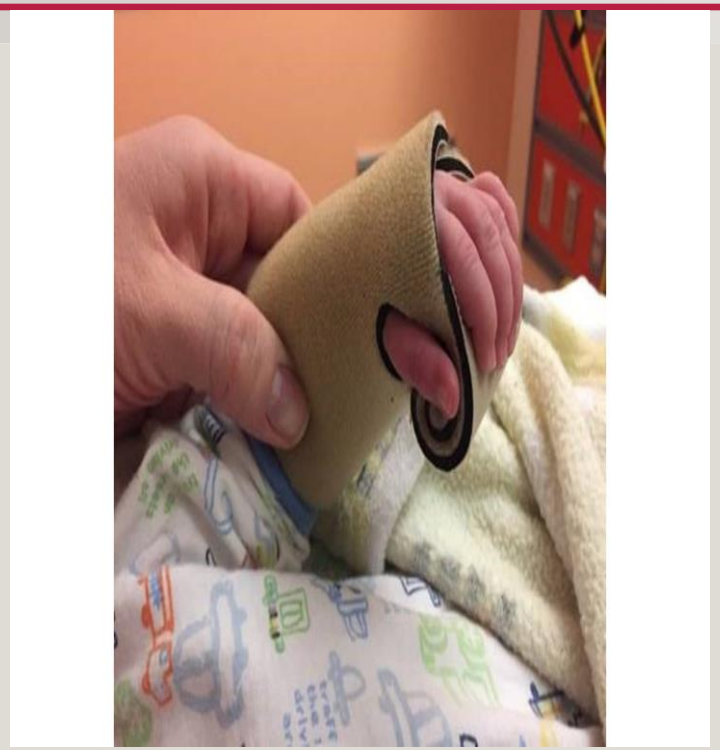
- **OTs may be involved in splinting with infants born with physical deformities:**

- such as brachial plexus injuries, erbs palsy or who have developed contractures.

- NB: Precautions for splinting with babies

- Splinting in the NICU is a very delicate operation, however, **infants have reduced skin surface as well as thin and delicate skin.**
- The splint should be removed often to check for skin breakdown
- Infant splint need to be modified frequently to allow for growth
- Not to be put directly on the skin
- Education to the Nurses and caregiver is vial on the wear-remove plan and duration.

SPLINTING IN NEONATES



BENEFITS OF BABY MASSAGE AND PRECAUTIONS...(LINDREA & STAINTON, 2000:97).

The early introduction of positive touch lays the foundation for continued positive interaction with the neonate.

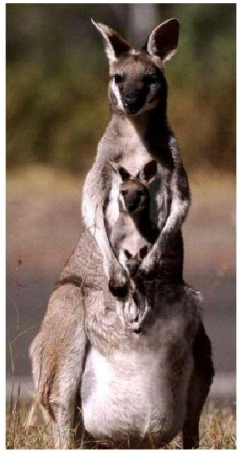
Advantages associated with neonatal massages:

- It helps re-educate the neonate that touch does not always mean pain.
- It enhances the bonding process.
- The parents experience interaction with their neonate.
- It increases parent confidence as they are always watching for their neonate's cues.
- It relaxes both parent and neonate.
- It gives permission for the parents to touch their neonate.
- It helps increase the neonate's weight gain.
- It may even give rise to earlier discharge.
- Both the parents and neonate enjoy it.

THE MASSAGE AND PRECAUTIONS... (LINDREA & STAINTON, 2000:97).

- The initial session is usually about 10 minutes, however, neonates less than one (1) month old will tend to accept a short massage.
- Neonates older than 28 weeks gestation and in incubators are massaged no longer than 5 minutes.
- When the neonate shows a stable and relaxed response to the sensations the session can be lengthened.
- Massage sessions can be continued for as long as the mother and neonate enjoy them.
- Avoid more than one stimuli at a time - only talk or touch.
- Prevent visual over-stimulation by using busy toys, eye contact, bright lights and colours.
- Handle your premmie slow and gentle and keep her in flexion, midline and contained.
- Provide time-out when she seems stress while you are caring for her.
- Stop and do still touch or containment hold until she calms down and then continue with nappy change, or what you were busy with.

OT'S ENCOURAGES KANGAROO MOTHER CARE (KMC)



Benefits

- increases duration of breast-feeding, reduced hospitalization and high costs, and reduced crying
- it promotes warmth, love, stimulation, and prevents irregular breathing and abandonment.
- When kangaroo mother care cannot be continuous, it should be as frequent as possible

OTHERS LESSONS LEARNT

- Benefits of OT neonatal care: developmental milestones reached on time (decreased dev delays)
- Decrease in deformities due to early intervention, splinting, early movements
- Well stimulated infants and earlier awareness of the surrounding
- Developmental delays noted earlier (High-Risk Clinics)
- Value of multidisciplinary team work
- Decrease long stay in-hospital
- Premmies gain weight quicker
- Mother-child early bonding

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THANK YOU…