Babyem™ Childcare courses for parents and professionals

ocn LONDON

OCN Postnatal Maternity Nurse 2 Day Training

Shel Banks - BSc IBCLC

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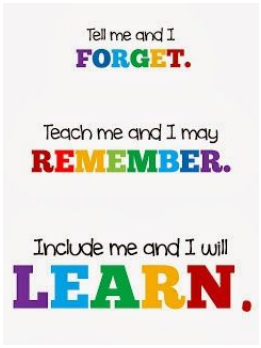
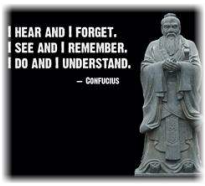
Quote by Benjamin Franklin…





…or Confucius!

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Questions:

Who are you?

What do you think being a Maternity Nurse means?

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Online pre-course modules

- **Module 1 - Working as a Maternity Nurse**
  - Lesson 1 – The day to day role
  - Lesson 2 – Working as a Maternity Nurse
  - Lesson 2: Sleep Theories
- **Module 2 – Sleep**
  - Lesson 1 – Sleep cycles
- **Module 3 - Baby Care**
  - Lesson 1 – Caring for babies
- **Module 4 - Feeding basics**
  - Lesson 1 – Bottle feeding (pace feeding)
  - Lesson 2 – Formula feeding
- **Module 5 – Colic and Reflux**
  - Lesson 1 – Colic
  - Lesson 2 – Reflux
- **Module 6 – First Aid**
  - Lesson 1 – Infant First Aid
- **Module 7: Assessment**
  - Lesson 1: Assessment

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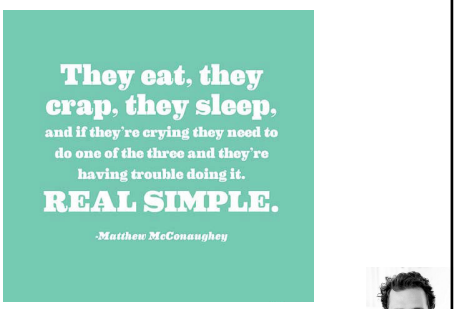

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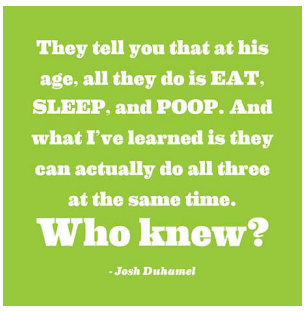

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Shel's Health Warning!

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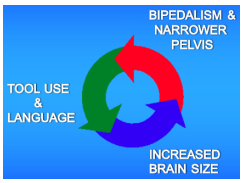
What sort of animal are we?

8

Why are humans so immature at birth?

- Walking upright
- Smaller, flattened pelvis
- Using our hands more
- Using our brains more
- Using language
- Bigger brains need bigger head
- "The Evolutionary Compromise" (McKenna et al 1993)



"the birth of exceedingly neurologically immature infants, for whom the majority of brain growth will occur postnatally and not in the womb"

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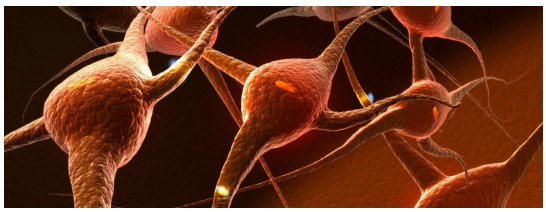
Infant Cognitive Development: "Brain Wiring"



Babies are born with all the neurons they will ever need, but the neurons don't TALK to one another. Connections are formed via synapses, which fire out in all directions and the neurons start to be wired up as more connections are made and the synapses get stronger. This is known as 'firing and wiring'.
The synapses not used will die away. This is known as 'blooming and pruning'.

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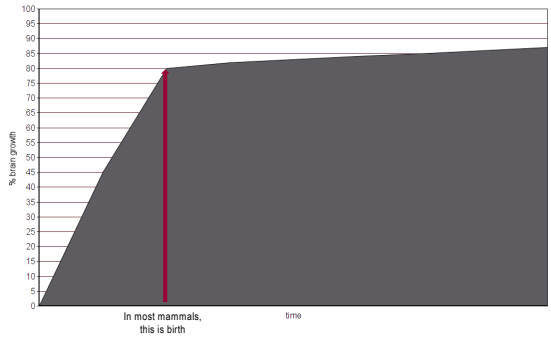
Infant Brain Development



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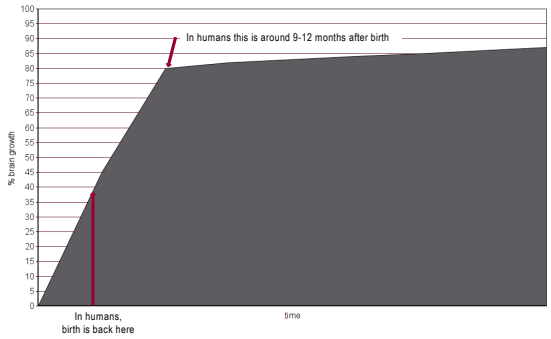
Infant Brain Development



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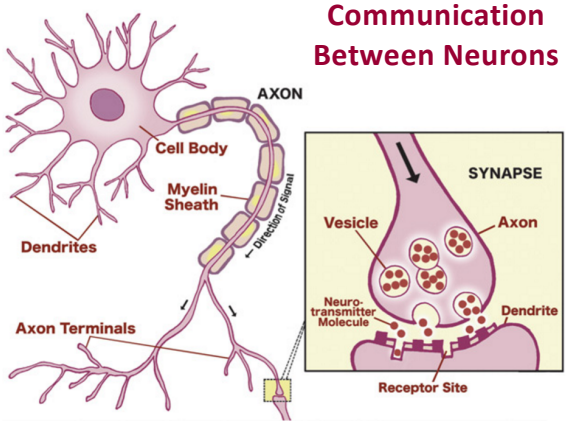
Communication Between Neurons



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Infant Cognitive Development: "Brain Wiring"

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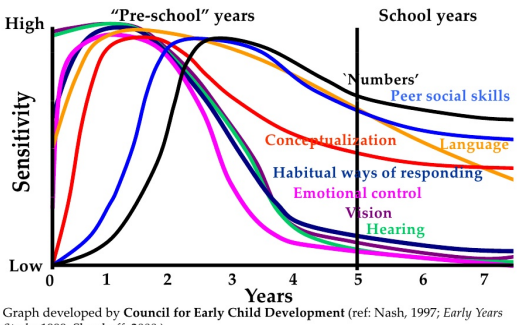
`Sensitive periods' in early brain development



Graph developed by **Council for Early Child Development** (ref: Nash, 1997; *Early Years Study*, 1999; Shonkoff, 2000.)

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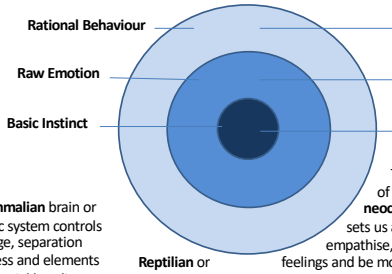
Types of Brain



Mammalian brain or Limbic system controls rage, separation distress and elements of social bonding: this instinct and raw emotion does not allow for rational decision making

Reptilian or ancient brain controls basic instinctive needs for survival

The largest part (85%) of the human brain is the **neocortex** and this is what sets us apart: we are able to empathise, to make sense of our feelings and be more self aware.

Babies have very active mammalian brains & cannot make rational decisions about their raw emotions: they are not being devious or manipulative when they cry if they are lonely

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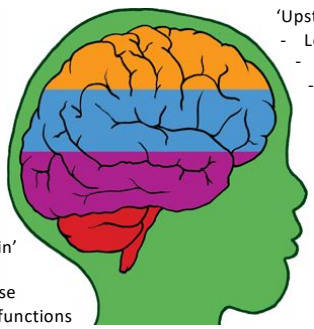
Brain Development



'Upstairs brain'
- Logical reasoning
- Problem solving
- Empathy

'Downstairs brain'
- Fight or flight
- Stress response
- Basic human functions

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Hormones and Brain Development

Oxytocin - fertiliser for the brain

Cortisol – prunes back brain growth, stops synapses connecting

Oxytocin and Cortisol

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Hormones in Pregnancy

oestrogen

Encourages blood flow to your uterus, promotes breast growth, and softens the cervix once a momma reaches full term.

At full term, your estrogen levels are 1000 times higher than before pregnancy.

After delivery, estrogen rapidly drops. This sudden drop in estrogen is one reason why roughly 80% of mommas have postpartum blues.

progesterone

Suppresses your immune system so that it doesn't attack your growing babe. Stabilizes the uterus and staves off contractions—until everyone's ready.

During pregnancy, progesterone is 10 times higher than pre-pregnancy levels.

The abrupt loss of progesterone—after you birth your placenta—can contribute to postpartum depression.

cortisol

A "stress" hormone that boosts your blood sugar and suppresses your immune system.

During pregnancy, cortisol is 2 – 4 times higher than pre-pregnancy levels. It helps shape your babe's nervous system—regulating things like mental development and temperament.

After pregnancy, high levels of cortisol can pass into your breast milk and influence your babe's mood.

oxytocin

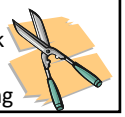
Your love + lactation hormone. Helps dilate the cervix during birth and stimulates contractions.

Also triggers the letdown of breast milk and helps you bond with your babe.

You can thank oxytocin (and a brain chemical called dopamine) for that feeling of being in love with your new little.

Oxytocin - fertiliser for the brain

Cortisol – prunes back brain growth, stops synapses connecting



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The 'Fourth Trimester'

In groups: what are the main differences between these environments, for the baby?

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Self Soothing

A made up term!

Proper name is "self regulation"

This means being able to take oneself from a state of **arousal** – whether positive (e.g. excited) or negative (e.g. stressed, scared, angry) to a state of **calm**

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Self Regulation

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Stressed

to

Calm

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Group Work – 2 minutes

- In pairs, write down
  - 5 ways adults become calm
  - 5 ways infants become calm

What are the key differences?

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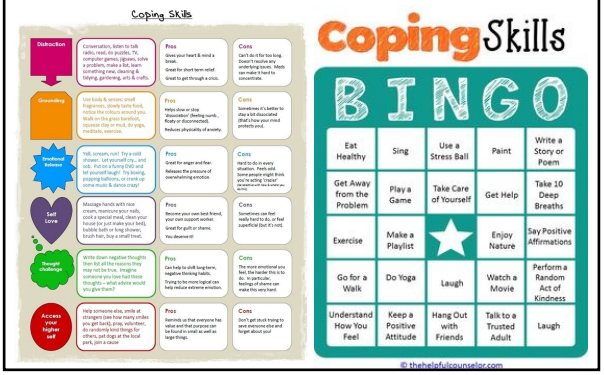
How Do You Calm Down?



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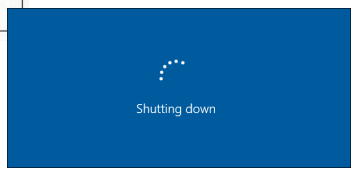
How Can Infants Calm Down?

And what happens if they cannot regulate their stress?



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Helping Babies to Calm Themselves

Remember:

They do not calm alone, their brains are immature and they need our help

Things to try:

- Feeding
- Rocking
- Holding
- Soothing voice
- Massage
- Swaddling
- Bathing

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Sleep

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Why do we sleep?

- To organise and cement memories (which is key to brain development)
- Growth
- Energy and mental wellbeing
- Heal better and faster
- Helps fight off illness

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Being Awake is Important Too!

- Mother : infant synchronicity (dyad) – being 'in sync'
- Feeding
- SIDs

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Infant Sleep

- **Babies enter sleep differently** – REM for up to 20 mins (vs adults who quickly fall into QS)
- **Babies have shorter sleep cycles** – 40-60 mins (vs adults 90 mins)
- **Babies do not 'sleep like babies'** – REM is >50% of total sleep (vs 20-25% REM sleep for adults)
- **Babies do not know night from day** – circadian rhythms take several months to set up.
- **Babies need to wake up** – length of a single sleep should be no more than 4 hours max in the first week
- **Restful days promote sleepful nights** – most newborns will only comfortably be awake for 1-1.5 hours at a time (increasing to 1.5-2.5 hours at 4 weeks)

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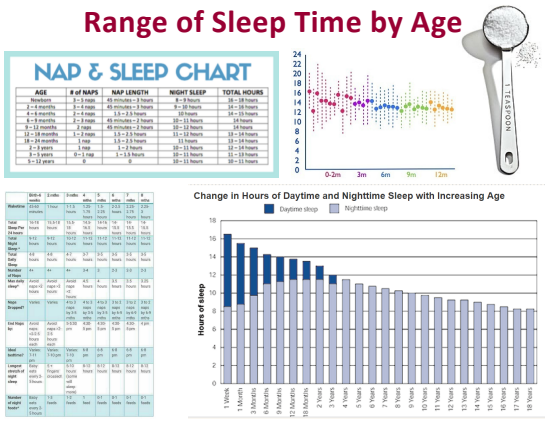
Range of Sleep Time by Age



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Avoid labels:

there are no 'bad' babies!

Ask why the baby is having a hard time

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Self Soothing

Reason for Waking	How Adults Self Soothe the Problem	How Babies Self Soothe the Problem
Too hot	Take off covers/ open window	Cry for parental help
Too cold	Add extra covers/ close window	Cry for parental help
Uncomfortable	Readjust bedding	Cry for parental help
Need the toilet	Go to the toilet	Go to toilet. cry for parental help with soiled nappy
Need a drink	Get a glass of water	Cry for parental help
Hungry	Get something to eat	Cry for parental help
In pain	Take pain medication	Cry for parental help
Not tired enough to sleep	Get up/read a book/count sheep	Cry for parental help
Hear unexpected noise	Check where noise is coming from and try to stop it.	Cry for parental help
Room too light	Close curtains/ turn off lamp	Cry for parental help
Room too dark (scared of dark)	Turn on lamp	Cry for parental help
Scared of something	Talk rationally to self to calm down - e.g "no such thing as ghosts".	Cry for parental help
Anxious or stressed	Self talk, deep breathing, meditate, wake partner, talk to friend, write thoughts down, use social media.	Cry for parental help
Overwhelmed/overstimulated	Wear sleep mask, mindfulness	Cry for parental help

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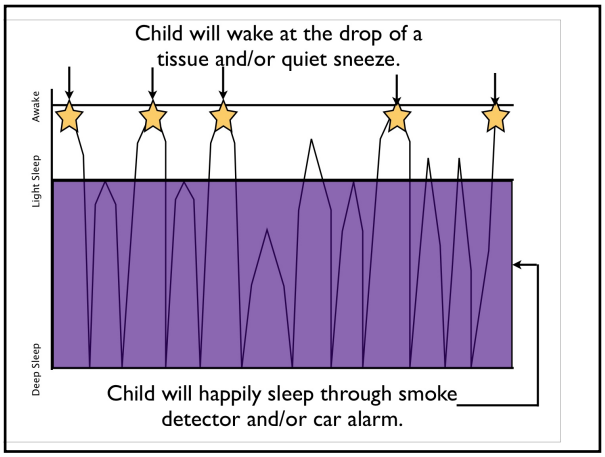

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'Self-settling'

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To routine, or not to routine?

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Routines?

- A rough routine or 'flow' is not the same as a strict schedule
- Helpful to introduce predictability but remember to be flexible
- Should be guided by baby's cues
- Encourage parents to LISTEN to their instincts, not fight them

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Infant Development, Temperament and Sleep

- What to expect
- Problems and challenges
- Tools and solutions
- Equipment which may help
- Sleep tips
- Resources
  - Individual personality
  - Getting to know the person
  - Getting to know the household
- 0-4 weeks
- 4-8 weeks
- 8-12 weeks
- 12+ weeks

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Sleeping Through The Night

- Some babies sleep through the night spontaneously and early on – may not last
- Most parents have unrealistic expectations about baby's sleep
- STTN is technically a FIVE hour stretch (Moore & Ukko 1957)
- Biologically speaking, babies should be feeding through the night until at least 6 months

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Initiating Sleep Patterns From Newborn

- Easier in the long run if parents want a routine
- May reduce evening irritability & crying
- Sets up a predictable rhythm
- Anchors the day
- Sets the internal body clock
- Babies may feed better if rested
- Babies may sleep better at night if napping well in the day
- Everyone calmer!

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Sleeping Through The Night

A recent study showed the following percentages of babies are waking regularly at night to feed: (i.e. while parents / carers are in bed)

- 46% at 3 months
- 39% at 6 months
- 58% at 9 months
- 55% at 12 months

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Sleep Associations

What does a baby need,
to fall asleep?

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Tiredness Signals

- Rubbing eyes
- Yawning
- Fussing
- Pale
- Crying
- Glazed look
- Averting gaze
- Been awake for longer than usual limit for baby

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Conditioning for Sleep

- Ensure awake time is peaceful (4th trimester)
- From c. 2 weeks introduce a predictable bedtime pattern (but don't worry about the clock!)
- Familiar smells
- Increase melatonin
  (curtains open in daytime, no screen time in evening, breastfeeding)
- Warm mattress if it's cold
- Cluster feed in evening
- White noise or household noise
- Calm baby down – massage, bathing, music
- Tummy pressure
- Settle in sleep room, use sleep cue words or songs
- Gentle rocking which slows down, patting on nappy, stroking
- May consider swaddling

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How old are these babies?
What are their needs?
How can we help them to develop to their full potential?


Edison is one week old here


Glen is one 10 days old here


Carter was 3 weeks old here

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0-4 weeks

- 'Fourth Trimester'
- Huge range of 'normal sleep'
  (9-19hrs – Iglowstein et al 2002)
- Rapid growth
- Sleep more automatic
- Establishing feeding
- Random length of sleep, most of which is AS
  ('active sleep' - at least 50%, which produces lower risk of SIDS and is very good for brain development – Siegel 2005)

*Maximus was 3 weeks old here

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Common Challenges


Alfie is 2 weeks old here

- Feeding yet to be established
- Jaundice
- Getting to know baby
- 'Great unknown'
- Erratic, unpredictable sleep/wake/feed patterns
- Frequent dirty nappies
- Colicky symptoms often present during this time
- Posset or reflux can begin here
- Skin rashes are common
- Neonatal myoclonic jerks are common

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Amelie is 6 days old

James is 3 weeks old

Things to try

- Establish feeding
- Encourage bonding: closeness & holding
- Encourage eye contact during feeding, this helps babies to focus (and initiates lifelong good eating habits)
- When the baby is alert encourage the parents to copy their baby's facial expressions: this is the earliest form of communication

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Evidence for 4th Trimester Influence on Sleep

- Foetal sleep is partly governed by maternal hormones – particularly melatonin (Torres Farfan et al 2006)
- Most infants take about 12 weeks to develop day-night rhythms in the production of melatonin
- Exposure to natural daylight and normal daily activities help an infant regulate their body clock
- Babies who are breastfed have the advantage of tryptophan in their milk, which is a precursor to melatonin & helps them adapt their circadian rhythm

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Some Swaddling Do & Don'ts

- Do swaddle from birth or not at all: do not start later
- Don't use thick or heavy blankets
- Do wrap legs loosely to avoid dysplasia of the hip
- Don't swaddle baby's head
- Do beware of overheating
- Do stop swaddling when baby can roll or by 12 weeks (whichever is soonest)
- Don't place a swaddled baby on their front or side
- Babies should not remain swaddled during feeding

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Swaddling

https://tinyurl.com/y7t4l77k

- If using a square cloth, fold back one corner creating a straight edge.
- Place the baby on the cloth so that the top of the fabric is at shoulder level. (If using a rectangular cloth, the baby's shoulders will be placed at the top of the long side.)
- Bring the left arm down. Wrap the cloth over the arm and chest. Tuck under the right side of the baby.
- Bring the right arm down and wrap the cloth over the baby's arm and chest.
- Tuck the cloth under the left side of the baby. The weight of the baby will hold the cloth firmly in place.
- Twist or fold the bottom end of the cloth and tuck behind the baby, *ensuring that both legs are bent up and out.*
- **It is important to leave room for the hips to move.**

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Other Ways to Assist With Sleep

- Set up a predictable pattern of behaviour when doing practical care of infant
  eg bathing, nappy changing, dressing, settling for sleep
- Make a note of when baby generally sleeps and feeds - to see if a pattern emerges you can work with
- Recreate a womb-like environment
- Start a bedtime routine but be flexible on timings
- Make day and night times distinctly different
- Do not minimise household noise
- Tank baby up before bedtime! Particularly between 9pm and midnight: cluster feeding is to be encouraged.
- **Ensure safe sleep**

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Safe Sleeping

- Back to sleep
- Firm sleep surface
- Feet to foot
- Keep loose bedding, soft toys out of the bed
- Do not smoke during pregnancy
- Same room as carer for every sleep
- Avoid overheating
- Breastfeeding
- Do not rely on a monitor or other home device
- Avoid development of 'flat head syndrome' (positional plagiocephaly)

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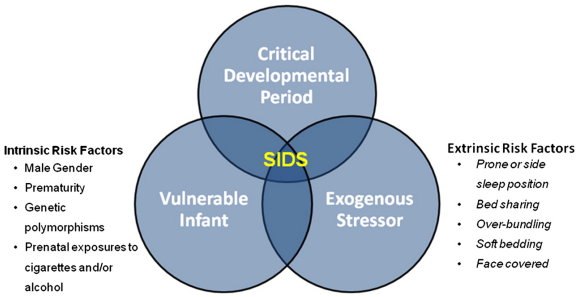
SIDS Triple Risk Model

0-12 Postnatal Months



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Evidence Base on Infant Sleep

Basis
Baby sleep info source

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Bedsharing

If a mother is:
1. Breastfeeding
2. A non-smoker
3. Sober

And her baby is:
4. Healthy
5. On their back
6. Lightly dressed and unswaddled

And they:
7. Share a safe sleep surface

The Safe Sleep Seven

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Video: Should Babies Sleep Through The Night?

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How Old Are These Babies?
What can they do now?

How does caring for these babies differ to the previous age group?
What is getting easier? What is getting harder?

Emilia is 6 weeks old here

Maximus is 7 weeks old here

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4-8 Weeks

- Sleep patterns becoming more predictable
- More alert in between feeds
- Growth spurts
- Cognitive changes and developmental milestones
- Able to connect objects and people with the sounds they make
- Develop a preference for bright colour around this age (rather than monochrome)

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4-8 Weeks

- Often a honeymoon period
- Colicky symptoms might still be affecting baby
- Dirty nappies may slow down drastically in frequency
- Often a time of rapid growth – cluster feeding is common
- Babies should be able to lift their head
- Most babies begin to make more deliberate noises

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Typical 6 Week Old's Day

... wake, feed, nap, wake, play, feed, nap, wake, play, feed, nap, wake, feed, nap, play, feed, nap, feed, feed, wake, play, feed, nap, feed, feed, feed, feed, sleep, feed, sleep...!

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Things To Try

- Encourage parents to smile at their baby lots and practice reciprocal talk
- Babies of this age may start to enjoy simple rattles and dangling toys
- Inform parents that the cluster feeding is normal and will end soon
- Try some baby massage
- Hand and foot temperature regulates core body temperature – so put socks on! (Taylor et al 2009) https://tinyurl.com/y78qcwy9

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From Best Beginnings:
Baby talk
Dad and seven and a half week old baby Joshua take turns in a cute gurgling conversation.
© Eileen Hayes. With thanks to Eileen for letting us use this clip.
Talking with your baby with words as well is really important - this is how she learns to talk!

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How Old Are These Babies?

Anais is 10 weeks old here

Charli is 12 weeks old here

HJ is 12 weeks old here

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8-12 Weeks

- Sleep changes – more distinct naps emerging
- Feeding patterns more predictable
- Developmental changes
- Immunisations start
- Improved muscle tone
- Already beginning to understand a small bank of words

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Common Challenges

- Distractibility during feeding
- More alert during the day – makes it harder to gauge hunger cues
- Developmental changes cause fussiness
- Colic may peak around this time
- Often parents beginning to feel very tired and need reassurance
- Babies should be making lots of vocalisations and deliberate attempts to engage people in 'conversation'

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Things To Try

- Try giving the baby lots of opportunity to build their neck and core body tone – tummy time helps
- Say the same soothing phrases when you are doing repetitive personal care such as nappy changes, dressing, bathing and feeding
- Try playing music to the baby around now, classical, nursery rhymes, or whatever baby seems to enjoy!

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Reasons for Night Waking (other than hunger)

- Teething pain
- Trapped wind
- Wet or dirty nappy
- Irritating sleepwear
- Stuffy nose
- Separation anxiety
- Temperament
- Baby sweaty or too cold (check clothing, sheets, air temp)
- Airborne irritants (smoke, animals, paint, air fresheners, sprays etc)
- Hidden medical causes (ear infection, allergies, UTI, threadworms, sensory processing disorder, GORD)

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How to Assist With Sleep

- Short cat naps are common at this age – try hovering nearby and very quietly start your settling tricks about 5 minutes before you think the baby will wake
- You could try to stretch out night feeds if they are still frequent and if weight gain has been good – make one feed a little earlier and one feed a little later thereby increasing the overall gap between feeds

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Sleep Theories

Mother led

- Drive for independence
- Schedule
- Objective, rules, data, facts, precision, no deviation

Baby led

- Understand need for dependence
- Routine
- Subjective, gut instinct, feelings, flexibility

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Different Approaches

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Different Approaches

- 'Babies should be seen and not heard' strategies (Dr Ferber, Marc Weissbluth)
- Prescriptive routine based strategies (Gina Ford, Baby Wise)
- 'Mother Knows Best' – everything is ok strategies (Baby Whisperer)
- Baby-centred strategies (Elizabeth Pantley)
- Attachment focussed strategies(Dr Sears, Sarah Ockwell-Smith)

NB: Level 4 Assignment Question!

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Group Work:

Discuss advantages and disadvantages of the different approaches - 5 minutes

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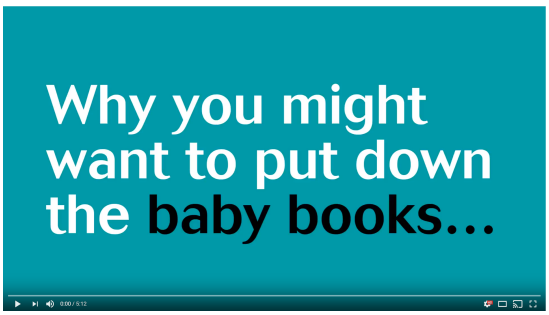
Finally, some thoughts on strict regimes:



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Colic, Reflux and Allergy

- Different conditions
- Parents and even some medical professionals often confuse the symptoms
- Very distressing for parents and carers
- Can be the cause of crying, fussy unsettled behaviour in infants
- Symptoms which cause crying can put infant in danger of harm

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What is Colic?

- Wessel Rule of 3 definition:
  'crying lasting 3 hours per day, on more than 3 days per week for at least 3 weeks'
- New definition:
  'spasmodic contraction of smooth muscle of intestine causing pain and discomfort'
- Symptoms described as high pitched, inconsolable crying accompanied by reddening of the face, drawing up of the legs, passing gas and difficulty in pooing.

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What is Colic?

The cause remains unclear, however, systematic review has suggested:

- problems within the gut where excessive crying is the predominant symptom, caused by CMPA, LI or excess wind
- a behavioural problem resulting from parental interaction (NB – not helpful to suggest this!)
- excessive crying is simply at the extreme end of normal (Also not helpful to parents at all!)
- it is a collection of aetiologically different entities difficult to determine clinically – perhaps microbiota

80

What is Colic?

- In most babies, symptoms resolve by 3-5 months of age but the period can be exhausting for parents who may be frantic to find a "cure" particularly as symptoms are often worse in the evenings.
- Incidence is up to 25% of babies, but seems more common in babies fed formula or less common in fully breastfed babies
- Babies of mothers who smoke are twice as likely to experience symptoms of colic

81

What is Reflux?

- non-forceful regurgitation of milk into the oesophagus
- 40-50% babies under 3 months regurgitate their feed at least once a day (Craig 2004)
- Incidence peaks around 4 months
- particularly common in preterm infants, younger babies and those with neurodevelopmental disorders or hernias - even if repaired (Patient.co.uk)
- predominant symptom is frequent regurgitation of feeds (posseting)

82

What is Reflux?

- GOR is **a normal physiological process** which usually happens after eating in healthy infants, children, young people and adults, so in babies who are often lying horizontal for feeding and sleeping, milk simply comes up and there is no retching as associated with a gastric infection.
- Diagnosis is usually made by clinical symptoms, including:
  - Irritability or excessive crying
  - Recurrent hiccups
  - Frequent night waking
  - Frequent coughing

83

Difference between GOR and GORD

GOR as in Gastro Oesophageal Reflux is distinct from GORD which is Gastro Oesophageal Reflux Disease.

If symptoms of (GOR) Reflux are associated with respiratory disorders or suspected oesophagitis, it is termed gastro-oesophageal reflux disease (GORD).

Diagnosis is made on clinical symptoms and there are no clear cluster of symptoms to guide prescribing.

Signs which may suggest a diagnosis of GORD:

- The baby is not gaining weight
- The baby vomits frequently and forcefully
- The baby spits up green or yellow fluid
- The baby spits up something which looks like coffee grounds
- The baby repeatedly refuses feeds
- The baby has blood in the bowel motions

84

Difference between GOR and GORD

GOR as in Gastro Oesophageal Reflux is distinct from GORD which is Gastro Oesophageal Reflux Disease.

NICE Guidance suggests that GOR is not routinely investigated or treated if an infant or child without overt regurgitation presents with only one of the following:

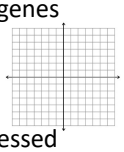
- unexplained feeding difficulties
- distressed behaviour
- faltering growth
- chronic cough
- hoarseness
- a single episode of pneumonia

85

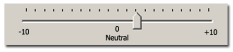
Genetic Links to Allergy

- Immune system most changeable in utero & first 2 years (called the '1000 days' – from conception)
- Environment, stress and nutrition either activates or silences certain genes

- Each gene has a 'spectrum'



- Particular genes can be expressed to a greater or lesser extent



86

Allergies

- Anything can be an allergen
- Adult guts often in a state of unbalance / 'dysbiosis'
- Food processing can be harmful as it alters the natural state of the substance
- We are producing compounds that humans were never designed to deal with
- Immune system recognises the outer protein layer of a foreign substance and produces an antibody – this may take 2-3 weeks
- Most likely allergens in infants are things they come into contact with
  (cows milk proteins, soy proteins, fish, eggs, nuts and pollen all v possible)

87

Variation in Gene Expression

Some genes can be expressed positively:

- Eye colour
- Hair colour
- Height
- Intelligence
- Physical prowess

Some genes can be expressed negatively:

- Poor eyesight
- Obesity
- Addiction
- Some cancers
- and of course, allergy!

Only 1-2% of diseases come directly from our genes; the rest are influenced by our environment, toxins, lifestyle, nutrition, stress and emotional state.

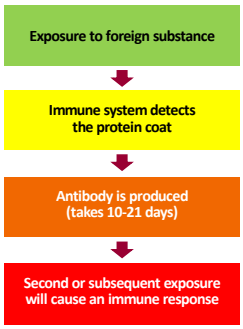
88

Milk and Genes

- Breastmilk contains up to **several million stem cells** per feed, which can help repair damaged tissue and organs in later life
- The infant gut is especially sensitive in first 6 months
- Formula changes the pH of the gut to an environment which allows for bacteria to grow and ferment and rot, which can damage the gut
- **Breastmilk switches reactive cells OFF; formula switches them ON**

89

How antibodies form in response to antigens / allergens



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Symptoms of Allergy

Cows' Milk Protein Allergy is the most common allergy in infants.

Symptoms can be seen in:

- **gastrointestinal tract** (inc diarrhoea, mucous, blood, colic, reflux, vomiting, posseting, constipation, stomach pain, wind, bloating, poor weight gain)
- **skin** (inc dry skin, eczema, cradle cap, spots, redness, itchiness, swelling, bruising)
- **respiratory tract** (inc colds, stuffiness, sneezing, coughing, nose rubbing, sniffling, snoring, hiccups, bronchitis, ear infections, bad breath)
- **circulation** (inc changes to temperature, changes in pulse rate, palpitations, changes in skin colour, anaemia)

Cows' Milk Protein Allergy is simply checked and managed either by excluding ALL dairy from maternal diet if baby is breastfed, or by swapping to Extensively Hydrolysed / Amino Acid formula if baby is formula fed

91

Management of Colic Symptoms

- Colief / LactAid
  (lactase enzyme drops to break down the milk sugars)
  TASTES SWEET!
- Infacol / Dentinox
  (Simeticone / Dimeticone which reduces surface tension of gas bubbles in liquid)
  TASTES SWEET!
  ACTUALLY CAUSES FORMATION OF MORE GAS BUBBLES!
- Gripe water
  (different ingredients depending on brand, but original Woodward's Gripe Water contained 3.6% alcohol, dill oil, sodium bicarbonate, sugar, and water, but today's recipe does not include the sugar or alcohol!)

92

Management of Colic Symptoms

- **Cranial Osteopathy** NO EVIDENCE OF EFFICACY
- **Chiropractic Treatment** NO EVIDENCE OF EFFICACY
- **Strategies to reduce parental stress**

ALL MAY INDUCE PLACEBO EFFECT

NO EVIDENCE OF EFFICACY IN REDUCING COLIC SYMPTOMS

93

Management of Colic Symptoms

Look for causes:

- Could infant be hungry?
- Could infant be over-full?
- Could it be the infant is uncomfortable? eg clothing
- Could it be trapped gas? (hold baby upright for a few mins after feeds, facing you with their head on your left shoulder, and their bottom in middle of your chest)
- Could it be sensory overload / overstimulation?
- Could it be lack of attention / understimulation?
- Could it be an upset tummy? (either a bacterial or viral infection, or 'microbial dysbiosis' from ineffective or harmful 'seeding')
- Could it be unresolved birth trauma?

94

Management of Reflux

- Alginate
  (e.g. Gaviscon or Carobel – these are added to milk or water and thicken the stomach content with the heat of the stomach)
- Special infant milks (e.g. Anti-Reflux or Staydown – these thicken the milk on contact with heat of stomach, so require 40°C water)
- Ranitidine
  (H2 Receptor Antagonist - reduces amount of acid secretion in stomach)
- Omeprazole
  (Proton Pump Inhibitor - reduces amount of acid secretion in stomach)
- Domperidone and Metoclopramide
  (no longer recommended)
- **Keeping baby upright after feeds and ensuring they are winded properly before laying them down ☺**

95

Group exercise on symptoms: figure out cause & management

1) Two week old bottle fed baby. Mum is tearful and appears exhausted. For the last week baby has had nightly episodes of inconsolable crying lasting hours at a time, during which the baby grimaces, clenches his fists, and draws up his legs. Parents have tried everything, yet they cannot get the baby to stop crying. This is their first baby, and they say they are "at their wits' end." They have called you to step in and help settle baby.

This is classic 'colic – so what do you do?
Teach calming and soothing techniques, look at over-stimulation, look at what parents have already tried, look at baby's need for comfort, look at sleeping patterns, look at winding technique and feeding technique, look at content of bottle & decide if there are any issues to be dealt with there.

96

Group exercise on symptoms: figure out cause & management

2) Four week old breastfed baby, being sick after every feed and is very distressed, sleeping in only short bursts. Rash on face and body. No temperature. Green frothy poo in nappy, sore bottom.

What does mum mean by 'sick after every feed? Is it posset or projectile? Laundry issue or medial issue? Is she laying baby down after feeding? Is baby asleep or awake when she does this? What do parents mean by 'sleeping in only short bursts '? Could this be normal for a four week old? Observe a feed – is baby taking in air? What is the rash? What do you do about the nappy rash? What is causing the poo to be green?
Could be that baby is taking in air and regurgitating feed with it, or could be an allergy. Green poo means speedy gut transit and bile salts not had time to be reabsorbed, so not sinister; sore bottom could be result of green poo, or connected with rash. Rash could be allergy to something in milk, or washing powder or mum's moisturiser! Ask mum about allergies, maybe cut dairy.

97

Group exercise on symptoms: figure out cause & management

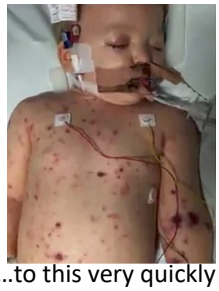
3) Three week old mix fed baby with faltering weight, vomits after every feed, sometimes during the feed, several outfit changes a day. Using Comfort milk in addition to breastfeeding as Mum finds it easier to supplement baby to try to get weight on him, but feels guilty not to be expressing. This 3rd 'sickie baby'.

Discussion:
Baby has faltering growth, so rule is
First feed the baby, then optimise the type of milk the baby gets, then protect mother's milk supply, then optimise the method baby gets the milk
She needs support with expressing
Baby may have trapped gas (so teach winding technique)
or 'reflux' (so teach winding technique and keep baby upright after feeds)
or cows milk protein allergy (so get rid of formula & dairy in mum's diet)

98

Recognising Serious Illness

Babies can go from this…



…to this very quickly

99

Recognising Serious Illness

- **Signs & Symptoms**
  - a high pitched, weak or continuous cry
  - lack of responsiveness, reduction in activity or increased floppiness
  - a bulging fontanelle (soft spot on top of head)
  - a temperature of over 38°C for a baby <3m or over 39°C for a baby 3-6m old
  - a high temperature but cold feet and hands

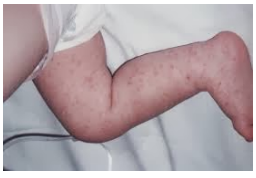
100

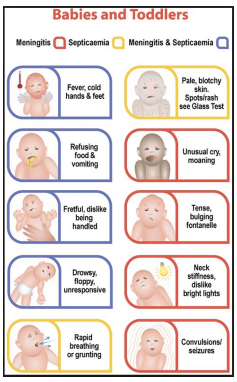
Recognising Serious Illness

- **Signs & Symptoms**
  - fits, convulsions or seizures
  - turning blue, very pale, mottled or ashen
  - difficulty breathing, fast breathing, grunting while breathing, or working hard to breathe, for example sucking their stomach in under their ribs
  - a baby who is unusually drowsy
  - spotty, purple-red rash anywhere on body
  - repeated vomiting or bile (green) vomit

101

Meninigitis





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First Aid information provided by BritishRedCross

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Serious Illness Case Studies

- 10 day old baby, slept 8 hour stretch last night, scant wet nappies, pale stool, at the breast today for over an hour at a time (at least every 2-3 hours), skin looks tanned.
- 3 week old healthy term baby, whilst changing nappy baby goes pale, floppy and unresponsive.
- 2 day old baby, not interested in feeding, feels hot, breathing fast, lying still or moving limbs slowly.

104

105

General Infant Care

- Room temperature 16-20ºC
- As a general rule of thumb, no more than one layer extra to what you are wearing
- Keep head uncovered when inside
- Always unwrap / undress baby when coming in from outside during the winter months
- Keep nails trimmed
- Encourage tummy time

106

General Infant Care

Skin Care

- Leave vernix caseosa to absorb into skin – do not rub off
- Only bath a baby who has been ill or preterm, when they are physiologically stable
- Delay 1st bath until 2nd /3rd day of life to assist w/ skin maturation
- Avoid bath toiletries until baby is at least a month old (use plain water to cleanse)
- Do not bathe infant more than 2-3 times per week ('top & tail' between bathing)
- Change soiled nappies frequently and cleanse area with plain water or unperfumed alcohol-free baby wipes

107

General Infant Care

Skin Care

- Generally babies under 1 month do not need any skin care products
- 'Overdue' babies may have dry, flaky – sometimes a plain mineral oil or a colloidal cream (eg Aveeno) can help
- Cradle Cap is common, and can be treated with shampoos, overnight olive oil treatments, or left. Consider also allergy as a base for longer term cradle cap.
- Expose nappy area as often as possible and consider using a thin layer of barrier ointment in nappy area to protect the stratum corneum: (ensure ointment is preservative-free and does not contain antiseptic, fragrance or colourings)

108

General Infant Care

Nappy Rash

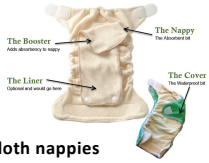
- Contact Dermatitis
  - found mostly on large exposed areas, not in creases
  - varies in severity
  - usually responds to zinc ointment or cream
- Candida (Thrush) Yeast Infection
  - begins in creases (thrush likes warm, dark, moist places)
  - can get satellite spots appearing
  - resistant to usual treatment

109

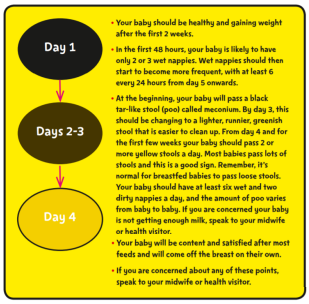
General Infant Care

Nappies

Disposable nappies



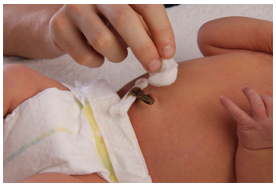
Cloth nappies



110

General Infant Care

Cord Care



- Separates at c. 10 days (between 3 & 30 days)
- Fold nappy down and secure so stump is exposed to air
- May smell a little
- The earlier the cord separates, the more the baby will bleed
- Keep area around the stump clean with cotton wool and water
- See GP if nasty smell develops, if there is discharge from the belly button, or if baby cries when it is touched (possible infection)

111

General Infant Care

Jaundice

Red flags:

- severe weight loss (more than 10%)
- pale stool
- no stool
- un-rousable
- jaundice appears within 24hrs of birth

- Affects 60% of babies
- Usually occurs 2-3 days postnatally
- Peaks day 5
- Usually normal and uncomplicated 'physiological jaundice' – requires no treatment
- Can make babies sleepy (beware the 'good' baby!)
- Treatment is normal feeding – may need to wake baby to feed
- Always leaves the sclera (whites of the eyes) last
- In darker skin it can be harder to spot, so check palms of hands and soles of feet, as well as sclera

112

General Infant Care

Bathing and changing

- Water 37°C – mix well, ensure room not cold
- Undress baby to nappy and wrap in towel
- Wash face with cooled boiled water & cotton wool (from inner corner of eyes, outwards)
- Use fresh cotton wool (never cotton buds!) for ears and rest of face and neck
- Wash hair over bath / bowl then pat head dry
- Remove nappy and lower baby into bath, legs and bottom first
- Hold baby under shoulders, grasping them under their arm, with other hand supporting their bottom
- Wash baby – especially in their creases

113

General Infant Care

Bathing and changing

- Let baby float and kick!
- Place a flannel on top of their body if they get upset, and keep scooping water over them
- Lift out and wrap in towel
- Allow baby some nappy off time
- Pat dry, pay attention to creases
- Massage baby if desired
- Clean bottom if needed
- Nappy on first
- Clothes on, and snuggle!

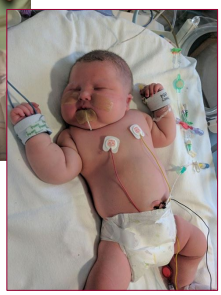
114

Group Work:

Baby's first bath is a momentous occasion: how would you talk it through with parents so they can do this?

115

Premature and Sick Babies



Babies who spend time in the neonatal unit might be premature, but they might also be born with problems or become unwell.
Not all babies coming home from a neonatal unit will have long term issues, but some do.

116

Premature and Sick Babies

- 1 in 10 babies admitted to the neonatal unit
- Not what any parents expects or wants
- Extremely traumatic
- Disempowering
- Puts strain on parents' relationship and on the parent-infant bond
- Q: What are the hormones?

A: Cortisol and Adrenaline

117

Premature and Sick Babies

- Remember that every baby is an individual
  (one size does not fit all, so adjust language & information-giving accordingly)
- Help to normalise their family life
- Build confidence
  (ALWAYS encourage their parenting, do not undermine)
- Be confident in CPR
- Key practical areas to think about:
  - temperature
  - sleep
  - SIDS
  - bathing and skin care

118

Films by Best Beginnings

small wonders

helping parents to be at the heart of their baby's care

119

Common Concerns Once Home

- Feeding
- Medications
- Oxygen
- Confidence
- Development
- Difficulty in getting out and about and doing normal things
- Illness and re-admission to hospital

120

How Maternity Nurses Can Help

- Try to remember where the family has come from
- Acknowledge the family as the experts on their baby
- Ask them specifically what they want your help with
- Offer to visit the family in hospital
- Be positive and encouraging
- Signpost the family to sources of support such as Bliss

121

Involving Family Members

- How many ways can you think of for other family members to be involved?

Group exercise – 5 minutes

122

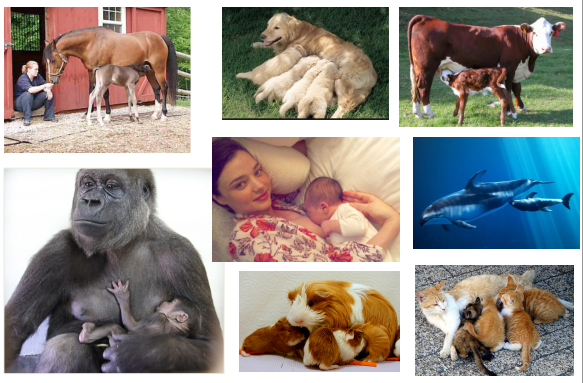
123

Feeding babies

☺

124

They're called mammaries because we're mammals!



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Healthy Newborn Feeding Behaviours

- Skin-to-skin contact as soon as possible after birth
- All mothers encouraged to offer first feed in skin contact when baby shows signs of readiness
- Babies may not feed much in first 12 hours, but should begin to feed frequently from 18 hours onward, at least every 3 hours in early days until feeding established
- Do not need much milk in early few days: healthy term babies have ketones in blood and glycogen stores in the liver and are expecting small amounts of breastmilk to help mobilise these reserves.
- Will display feeding cues which should be rewarded with feeding
- Will want to be held and comforted, and this is a good thing.

126

Skin-to-skin Contact ...

- Stimulates release of prolactin and oxytocin
- Calms and relaxes baby and mother
- Regulates baby's heart rate and breathing
- Regulates baby's temperature
- Stimulates breast-seeking behaviour and interest in feeding
- Stimulates endorphin release
- Protects baby from infection

127

Our cousins got it right

All mammals have a set sequence of behaviours that lead to initiation and maintenance of breastfeeding.

Human beings are no different

128

A history of infant formula feeding

Late 1700's: The industrial revolution saw more mothers in employment. A combination of wet nurses and 'pap' (bread, flour, sugar, water) used.

1835: evaporated milk patented

1845: first rubber teat patented

1860's: First commercial infant formula "Leibig's Perfect Infant Food" made from wheat flour, cows' milk, malt & potassium bicarb

1941: National Dried Milk (withdrawn in 1976) introduced – a dried, full fat modified cows milk powder fortified with vitamin D

1959: Iron fortified powdered formulas introduced

1981: International Code of Marketing of Breastmilk Substitutes published by World Health Organisation

1984: Taurine first added to formula to help fat absorption

1988: Follow on Formulas (FoF) first introduced to the UK market

1990's: Nucleotides added to enhance immune system development

1995: Infant Formula and Follow-on Formula Regulations made law

1993: Long chain polyunsaturated fatty acids introduced to aid growth

2004: Prebiotics (FOS and GOS) first added to help bacterial growth

2014: Goats' milk-based formula allowed in UK for the first time.

129

Composition of infant milks:

The advice from EFSA's Panel on Dietetic Products, Nutrition and Allergies rests on the principle that formulae must be safe, and suitable to meet the nutritional requirements and promote the growth and development of infants.

The Panel recommends minimum and maximum levels of energy for infants (up to one year old) of 60 kcal per 100 ml of formula and 70 kcal per 100 ml respectively. For macronutrients it proposes the following:

Proposed amounts of macronutrients in IF and FOF (g/100 kcal)

	IF and FOF with Milk protein		IF and FOF with ISP		IF and FOF with Hydrolysed protein	
	min	max	min	max	min	max
Protein	1.8	2.5	2.25	2.8	–	2.8
Fat	4.4	6.0	4.4	6.0	4.4	6.0
Carbohydrates	9	14	9	14	9	14

Key: IF = infant formula. FOF = follow-on formula. ISP= isolated soy protein.

Water, Protein, Fat, Essential fatty acids, Glycemic carbohydrates, Dietary fibre, Calcium, Sodium, Magnesium, Phosphorus, Chloride, Potassium, Iron, Copper, Chromium,Selenium, Iodine, Molybdenum, Manganese, Fluoride, Vitamin A, C, D, E, K, B1, B2, B6, B12, Niacin, Pantothenic acid, Biotin, Folate, Choline

Plus
Limits on levels of: arsenic, mercury, tin, lead, cadmium etc

130

BREASTMILK

What's in it for the baby?

- Transfer factors
- Enzymes
- Hormones
- Anti-inflammatory molecules
- Viral fragments
- Oligosaccharides
- Bifidus factor
- White cells
- Antibodies

AS WELL AS...

... the water, protein, fats, essential fatty acids, carbohydrates, dietary fibre, vitamins, minerals...

131

Special features of colostrum

- Packed with protective factors
- Concentrated nutrition
- Small volumes – intentionally
- Laxative effect – to clear meconium

132

Why breastfeeding matters for mothers and babies

133

Not breastfeeding increases the risk of:

- Breast cancer
- Ovarian cancer
- Hip fractures

For women

134

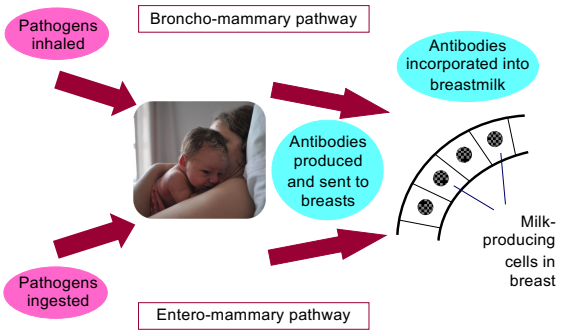
Formula feeding increases the risk of:

- Chest infections
- Gastroenteritis
- Ear infections
- Urinary infections
- Diabetes
- Allergies
- SIDS
- Childhood cancers
- Heart disease

For babies

135

'Instant' protection from infection



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A unique relationship

- Breastfeeding is much more than a method of feeding
- Breastfeeding is much more than food

137

How Milk is Made

- Breasts are built in teen and do not fully mature until late in first pregnancy
- Colostrum is able to be made from 16-18 weeks of any pregnancy but pregnancy hormones stop it being released too early
- Babies can access this colostrum as soon as they born, they don't need to wait for milk to 'come in'
- Copious milk begins to come in around 3-5 days after birth

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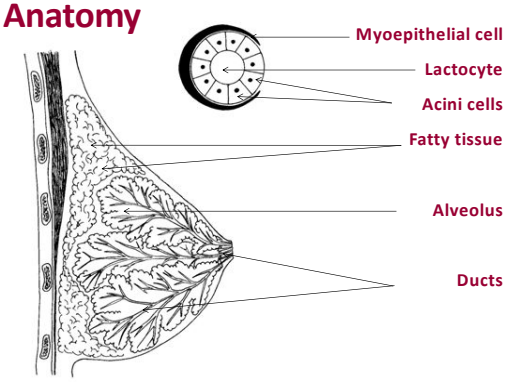
Anatomy



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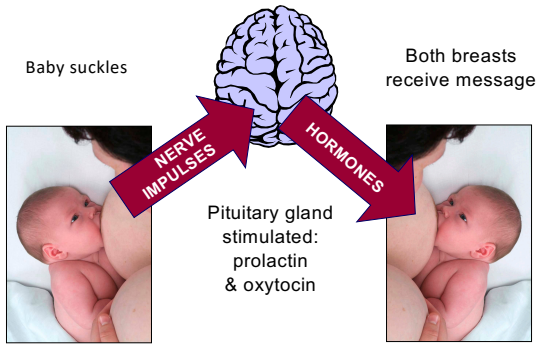
How it works



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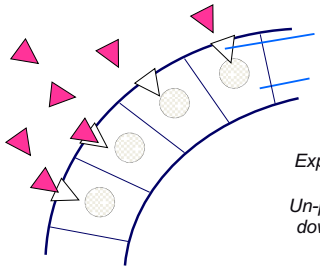
Prolactin

- Tells lactocytes to make milk
- More secreted at night
- Triggered through touch
- Stimulates mothering behaviour
- Produces calmness and reduces stress
- Suppresses ovulation
- Needs to be stimulated early and frequently to ensure long term production
- Level peaks after the feed, to produce milk for the next feed

141

The prolactin receptor theory

Surges of prolactin prime the receptor sites



Expulsion of placenta opens receptor sites;
Un-primed receptor sites shut down, reducing potential for milk production

Frequent feeding leads to frequent prolactin release which maximises long-term milk supply

142

Setting up Milk Production

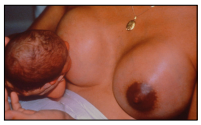
- Prolactin receptor sites open when placenta delivered
- Prolactin surges 'prime' sites to begin milk production
- Receptor sites start to close if not primed
- Skin contact and lots of feeds in early days increase potential for long-term milk production
- Expressing is useful if baby is sleepy or not feeding effectively.

143

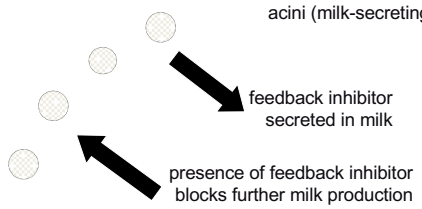
Oxytocin

- Works on muscle cells to expel milk
- Pulsatile action
- Induces feeling of love and well-being
- Levels are higher when baby is near
- Can be temporarily inhibited by stress, pain or doubt
- Creates a feeling of wellbeing
- Helped by sight, sound and smell of baby
- Becomes conditioned over time
- Works before or during the feed to make the milk flow

144



The Feedback Inhibitor of Lactation - FIL



Frequent milk removal ensures ongoing milk production

145

The Control of Lactation

Pituitary gland	**Feedback inhibitor of lactation**
Oxytocin	Build-up
Milk ejection (for this feed)	*Inhibits production*
Prolactin	Removal
Milk production (for next feed)	*Stimulates production*
SYSTEMIC *(both breasts)*	**LOCAL** *(one breast)*

146

Building Up Supply

- Under normal circumstances, milk steadily increases until about day 14, so quantity slowly increases in baby's tummy
- Breastmilk supply does NOT keep going up after first 2 weeks – this little known fact is incredibly important to understand
- Crucial to establish milk supply in first 2 weeks as to do so later is much much harder
- Breasts are individually controlled so ensure twins are swapped around at first to potentially accommodate for one with a weaker suck.
- One breast generally produces more than the other, so do not worry!

147

How long? How Much? How Often?

- Feeding times vary enormously, depending on mother's 'let down', storage capacity and flow, and baby's efficiency
- 8-12 feeds in 24 hours is normal, whether breast or bottle fed – can be more than this.
- Full breasts do not transfer milk as quickly as emptier breasts
- Full breasts are therefore not desirable and quickly lead to down-regulation of milk supply

148

Positioning and Attachment

POSITIONING – HOW THE MOTHER HOLDS HER BABY TO ENABLE THEM TO ATTACH EFFECTIVELY

BRINGING THE TWO TOGETHER

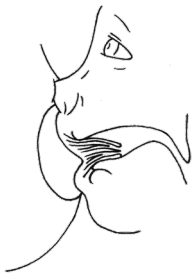
ATTACHMENT – HOW THE BABY TAKES THE BREAST INTO THEIR MOUTH TO ENABLE THEM TO FEED

149

LATCH

… is what is happening inside baby's mouth:
we cannot see it, but we can see signs of effective latch or ineffective latch.

The baby in this picture has an **ineffective** latch.



150

POSITIONING: SHEL'S TRIED 'N' TESTED WAY

Use the opposite hand, to the breast you're feeding from
Palm of hand on baby's shoulders
Heel of hand on baby's spine
2 fingers like a shelf for the head (middle finger pointing to jaw)
Thumb the other side to support (pointing to corner of jaw)
Baby held close to mum ('wrapped round ribs like a belt')
Baby held securely w/ forearm ('under elbow like bagpipes')
Baby comfortable ('spine in line' or 'nose navel & knees')
No arms in the way ('superman arms')
Move baby's face round from cleavage towards the breast

NB: full disclosure, there are other ways of achieving this, but this is what has worked for me with hundreds and hundreds of mums over almost 15 years

151

ATTACHMENT: SHEL'S TRIED 'N' TESTED WAY

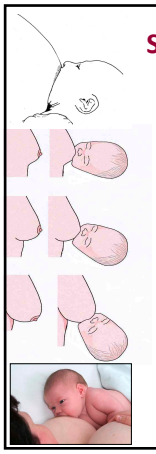
Nose to nipple (when mouth is closed)
Chin touching breast

Baby will reach up, mouth open wide

Wide open mouth, top lip just over nipple
Keep chin indenting breast

Move baby further on to breast using 'wrist to ribs', not moving chin at all
Nipple goes up into back of roof of mouth

152



Signs of Effective Attachment

Key points:
The external signs of effective attachment tell us about what is going on inside the baby's mouth.

- The baby's chin indents the breast
- The baby's mouth is wide open
- The nose is free of the breast
- There is a double chin
- The cheeks are full and rounded
- There is more areola visible above baby's top lip

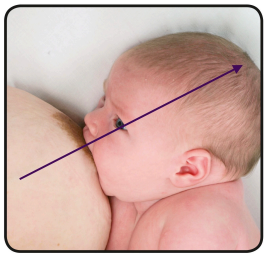
Eye contact between mother and baby is *not* a sign of effective attachment, but may be a feature of certain breastfeeding positions.

IDEA: watch video at:
www.globalhealthmedia.org/portfolio-items/attaching-your-baby-at-the-breast

153

If you imagine a straight line going through the breast from the ribs, and going out of the nipple in the direction that that nipple points, then that line would come out of the pointy bit at the top / back of baby's head. As in the pic.

Normally when position and attachment are not brilliant that line would come out behind baby's ears - but in fact of course the nipple will still be following the line up to the roof of the baby's mouth, hence the pain and nipple damage that some mothers report, the trapped wind in baby, and the poor milk transfer.



154

'C.H.I.N.'

- **C**lose to mother
- **H**ead free
- **I**n line
- **N**ose to nipple

This acronym helps some people remember!

Useful acronym for positioning baby at the breast

(©Lynette Hartland, University of Teeside)

155

Recognising Feeding Cues

Babies 'ask' for feeds by:

- moving their eyes
- wriggling, waving
- rooting
- sucking fists, blanket, etc.
- making murmuring noises

Crying is the baby's last resort!

156

Will this baby attach effectively?

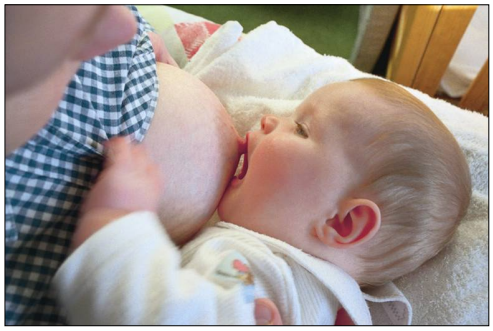


Image © Health Education Board for Scotland 2001

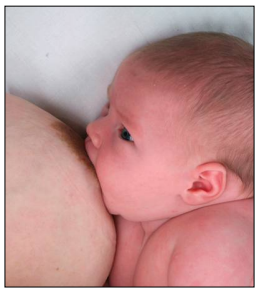
157

What about this one?

Central positioning - so not effective – needs to be 'lower'

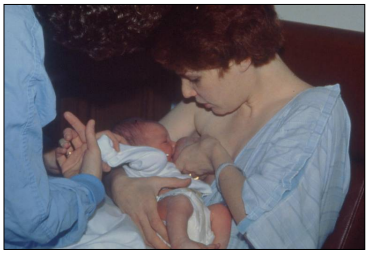
158

What about these?



159

Principles in place?



This baby's **head and body are not in line**: the head is facing the breast but the body is not.
- The baby is **unable to tilt his head back** because of the position of the mother's arm.
- The mother's hand is **preventing the baby from being close** to the mother's body.
- The use of a pillow means that the baby is **too high** (i.e. not 'nose to nipple').
- The mother is distorting her breast to get it to the baby's mouth. This, plus the way she is gripping it, will pre-dispose to poor milk drainage and to problems such as blocked duct and mastitis.
- The 'helper' is making things worse by further twisting baby's body and pulling baby away from mum

160

What about here?

- **Baby is too far up the mother's body – did not start 'nose to nipple'.**
- **The mother's arm is preventing the baby from tilting their head back.**

161

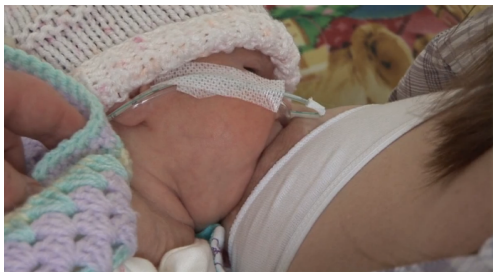
Or here?

Image © Health Education Board for Scotland 2001

- It is easy to see that all the principles were place as this baby was brought to the breast and that the breast itself was (and is) lying naturally.
- It can be useful to point out that, in order for him to feed comfortably from the right breast, most of the baby's body is being held towards the *left* side of his mother's body. This is not what most women imagine will be the case.

162

Or here?



Illustrates the 'mother's eye view' of a baby who IS positioned in a way which has made it easy for him to attach at the breast.

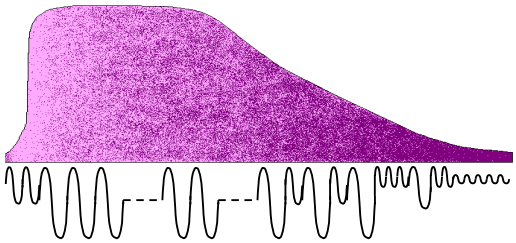
163

Principles in place?

Older baby and unconventional position, but principles are in place. This shows the joy of breastfeeding and the special bond between the mother and baby. Big sister developing her cultural norms around how babies are meant to be fed!

164

'Seeing' what the baby is getting



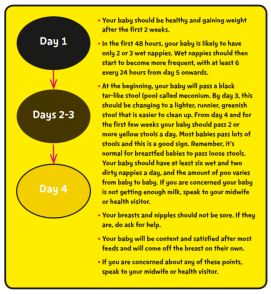
Beginning of feed - short, rapid sucks	Active feeding - long, slow, rhythmic sucking and swallowing, with pauses (1:1 or 1:2 swallowing)	End of feed - 'flutter sucking' with occasional swallows

165

How To Tell If It's A Good Feed

- No pain
- Baby sucking rhythmically
- Chin indenting breast
- Cheeks rounded
- Baby comes off on their own
- Nipple looks the same as when it went into the mouth – maybe longer, but not flattened or pointy
- Baby settles and is content, except during times of cluster feeding, when it is normal to need comfort then more feeding…!

166



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Neonatal Jaundice

- Remember, most neonatal jaundice is part of normal physiology, but:
  - it can linger or worsen if the baby is not feeding
  - jaundiced babies tend to be sleepy and reluctant to feed
- 'Breastmilk jaundice' develops later and is rarely a cause for concern

169

What If Baby Is Not Feeding Well?

- Check positioning (ask mum about sensations, look at baby's mouth and posture)
- Get mum to hug baby in closer
- If baby is happy in her arms but not feeding, get mum to talk to and caress the baby or blow on their face, maybe walk your fingers up and down baby's spine, tickle baby's feet; if baby is too hot then maybe try to undress them a little.
- Breast compressions
- If all these fail and baby is still not feeding well, mum can express by hand or with a pump and offer the milk by spoon, cup or bottle. Sometimes this is enough to perk sleepy babies up!

170

Problems getting breastfeeding established

Examples:

- Flat nipples
- Sleepy baby
- Big breasts
- Reluctant feeder
- Mum unwell
- Difficulties from the birth
- Baby on NNU

PLEASE REMEMBER!

Artificial supplementation is not the first solution to a reluctant feeder, and may cause later problems with breastfeeding and trigger allergies / illness for that baby

171

Problems getting breastfeeding established

Examples:

- Flat nipples
- Sleepy baby
- Big breasts
- Reluctant feeder
- Mum unwell
- Difficulties from the birth
- Baby on NNU

Solution:

Back to basics: skin to skin, hand expressing, 'laid back' breastfeeding

172

Skin contact and a laid-back position…

… enhances all baby's natural reflexes

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Resolving Breastfeeding Problems

• Cracked nipples	✓ Improve latch, ensure nipples kept moist & clean
• Engorgement	✓ Improve latch, drain breasts, prevent blockages forming
• Mastitis	✓ Drain breasts, massage, hand express, take meds
• Thrush	✓ See GP, swab nipples & treat with anti-fungals if nec
• Worries about supply	✓ Assess concerns & improve confidence, express if necessary
• Worries about feeding in public	✓ Practice at home then accompany mother in public, boost confidence
• Baby not gaining weight as expected	✓ Optimise attachment, increase frequency of feeds, express too

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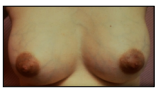
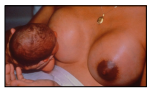
Full or engorged?



Full breasts

- are warm
- are firm
- are tender
- are heavy
- may show marbling
- have readily flowing milk
- and, the mother feels well



Engorged breasts

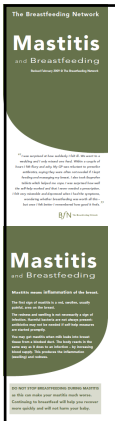
- are hot
- are hard/tight
- are painful
- are shiny
- may be inflamed
- do not flow milk well
- and, the mother may have a fever

175

Mastitis (inflammation of the breast)

- Caused by stasis of milk
- Begins with a blocked duct
- Affects one or two lobes of one breast
- May or may not be infected
- Can produce flu-like symptoms (with or without infection)

176



Mastitis – treatment

- Effective breast drainage: check attachment
- Hand expression
- Anti-inflammatory therapy
- Analgesics
- Fluids
- Rest
- Antibiotics: suspect infection requiring antibiotic medication if measures to drain the breast do not improve the situation

177

Expressing Milk

- Mum can begin expressing whenever she wishes, but be mindful that in the first few weeks the body is working out how much is needed, so expressing more than baby needs will create a potential oversupply.
- Start with hand expression or pump expression – hand expression is far more effective with colostrum
- Options for timing are:
  1) to express a little after a number of feeds during the day rather at one sitting
  2) to express first thing in the morning, effectively adding in an extra feed
  3) Expressing instead of a feed being given by bottle

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Breastmilk Expression Technique

- Massage and hand expression technique can be found here sw4.bestbeginnings.org.uk
- Hand or electric pumps available
- Single and double pumps available
- Single user and 'hospital grade' pumps
- To buy or to rent
- Follow manufacturer's instructions, but do not turn up pressure or speed so that breasts are sore

179

Storing and Using EBM

- Fresh expressed breast milk can be stored for up to 6 hours at room temp, 6 days in the back of a good fridge, or 6 months in a deep freeze
- Do not heat breastmilk in a microwave as it can destroy the live factors and also create hot spots which may scald baby
- Milk will separate on standing, either forming a creamy layer on the top, of flecks or chunks of cream floating in paler milk.
- Gently swirl to re-distribute the cream – avoid shaking as this can incorporate air bubbles
- Milk can be all pastel colours – watery, blueish, creamy white, pale yellow, pinky, slightly green etc- all are normal!

180

Mothers who wish to exclusively express

- Skin to skin post-partum
- Discuss initiating breast feeding
- Explain supply management
- Explain evidence base:
  8-10x in 24hrs;
  massage then pump then hand express;
  pint a day by 10 days / 750ml at 2 weeks;
- Explain possible consequences:
  baby may not go to breast later if she changes her mind;
  harder to maintain supply;
  time consuming - washing / sterilising / pumping / feeding
  not socially acceptable to pump in public

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Attaching Your Baby at the Breast

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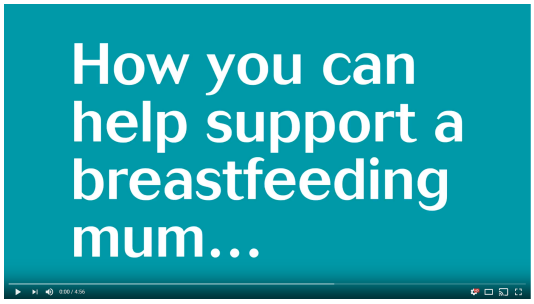
Video:



183

Bottle Feeding

Conventional bottle feeding:
- Baby almost flat on back
- Bottle held almost vertically downwards
- Rapid flow of milk
- No control of milk
- 'Drink or Drown'
- Signs of stress – gaze aversion, eye widening, flailing limbs, dribbling milk, facial colour change, choking, spluttering

Responsive bottle feeding:
- Baby more upright
- Bottle held more horizontally
- Slower flow of milk
- Baby partly in control of milk
- Pausing and stopping to slow the feed down and prevent over feeding or reduce risk of subsequent frustrating breastfeeds
- Watch the baby

184

Reasons to Supplement

- Low blood sugar
- Clinical evidence of significant dehydration
- Clinical evidence of large neonatal weight loss
- Maternal or infant illness resulting in separation of mother and infant
- Infants with some metabolic disorders
- Infants who are unable to feed at the breast, (eg cleft palate, poor muscle tone, illness)
- Maternal medications which are confirmed as contraindicated in breastfeeding
- Maternal choice

185

Supplementation of Breastfed Babies

The 'rules':

1. FIRST FEED THE BABY!
2. Optimise the type of milk baby receives
3. Maximise the amount of milk Mum makes
4. Minimise baby's nipple / teat confusion
5. Maximise the time spent feeding at the breast

186

Implications of Mixed Feeding

- Babies immune systems are not complete until 6 months or beyond
- Most of the immune system is in the gut
- Babies are born with a very immature gut
- Exposure to breastmilk colonises the gut with useful and expected bacteria
- Infant gut is 'leaky' meaning it allows more things to leak out into the bloodstream
- Breastmilk 'paints' the lining of the gut with antibodies
- Breastmilk completes the development of the infant immune system

187

Implications of Formula Feeding

- Baby's gut matures more slowly
- No protective coating
- Altered ph
- Different bacteria
- No antibody response
- No white cells or lysozymes
- No anti-inflammatory response
- No lactoferrin to 'mop up' excess iron
- Harmful bacteria thrive on excess iron unchecked
- Gastroenteritis
- Secondary lactose intolerance
- Food allergies

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Minimising the risks of formula feeding

The vessel:

- bottle, teat, cup, tube etc
- materials used in manufacture
- potential for contamination

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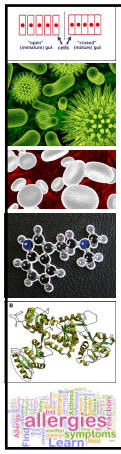


Minimising the risks of formula feeding

- Making up milk safely
- Water first or powder first?
- Water temperature
- Type of milk – powder or RTF
- Brand of milk
- Stage of milk
- How to feed

190

191

Jenny

Jenny is expecting her first baby. She lives with her husband who has two teenaged sons from a previous marriage, who stay with them some weekends and most holidays. Jenny is planning on returning to work full time in the city when baby is quite young. Jenny's husband's first wife tried breastfeeding the boys but experienced problems, so did not continue.

How can you help Jenny to make an informed decision about feeding her baby?

192

Jenny

- Evidence suggests mums returning to work early less likely to breastfeed
- Expressing at work protected by law, but hard work and takes planning
- Jenny's husband's influence is important.
- Explore how Jenny feels and establish what the worries & concerns are.
- Consider how Jenny feels about breastfeeding with the teens present.
- It will be important to try to find out the nature of the problems Jenny's husband's first wife experienced. This will enable relevant information to be given about how Jenny might avoid the same problems and may enable her husband to be provide more supportive support.
- For Jenny to maximise her options she will need to get breastfeeding established effectively. This will allow her to express her milk to leave with whoever is caring for her baby if she does decide to return to work quite early.

193

Annie

Annie has just had her second baby. She has a two-year-old daughter at home. Annie wants to breastfeed like she did last time but is thinking about using a dummy to allow her to spend more time with her toddler.

How can you help Annie to make an informed decision about using a dummy?

194

Annie

- Accept Annie's concerns and why she could think a dummy would help
- Annie needs to know about the potential Impact of dummy use on the establishment of breastfeeding ('nipple / teat confusion') and 'on demand' feeding, and the implications of this for breastfeeding.
- Options for Annie may include the use of a sling to enable her to be active with her toddler whilst comforting and/or feeding her baby.
- However if Annie wants to use a dummy ensuring that she does so without replacing feeds or missing feeding cues will help her maintain her milk supply.

195

Nadine

You are working with Nadine and her two-week-old baby boy. One morning she says he has been crying 'all night' and that she is exhausted. She tells you she has ordered some formula and that she wants you to stay and give bottles overnight to help her baby settle better at night. She will continue to breastfeed during the day.

How can you help Nadine to make an informed decision about using formula?

196

Nadine

- Acknowledge Nadine's concerns and why she might think that giving a bottle at night would help.
- Nadine needs to know about the importance of night-time feeds for milk production, as well as the appetite-reducing impact of giving other foods.
- Nadine needs information and support to ensure she can feed her baby lying down, with accompanying information about the safety issues related to bed sharing.
- It may be useful to discuss skin contact as a way of calming a fractious baby.
- At only two weeks it is unlikely that breastfeeding is established, so there is the potential for the use of a teat to interfere with the baby's learning.
- It may be that all Nadine needs is help with positioning and attachment, to enable her baby to feed effectively (and so be more settled).
- If Nadine is adamant that she wants to give formula discuss the importance of continuing to give breastmilk. Consider giving the feed in the day rather than in the evening.

197

Susie

Susie wants to do what is best for her new baby but she has struggled with breastfeeding and her nipples are now very sore. She wants to continue giving her baby breastmilk by expressing her milk and having you give it by bottle.

How can you help Susie to make an informed decision about using a bottle?

198

Susie

- Acknowledge and accept Susie's concerns
- Susie needs information about what causes sore nipples and help with positioning and attachment to remedy this.
- If Susie is struggling with positioning and attachment, the introduction of a teat is unlikely to help. This needs to be explained to her.
- Susie needs to know that expressing is not as effective at removing milk as a baby feeding (effectively), so her planned course of action may make it difficult for her to maintain production in the long term.

199

Care of New Mothers

- Bleeding – change pads regularly, see HCP if large clots, foul smell, loss suddenly incr, flu-like symptoms, fever or abdo pain
- Constipation – hydration, prunes etc, laxatives
- Hemorrhoids (piles) – get some STs in the fridge!
- Sweating – keep cool, hydration, cotton pyjamas
- High energy (adrenaline) followed by fatigue – pace herself!
- Pain (stitches, grazes, breasts) – pain relief, reassurance, good support
- Urine leakage – pelvic floor exercises
- Pelvic prolapse – see GP, pelvic floor exercises if indicated
- Saggy tum/ post-baby weight – realistic expectations, reassurance

200

JULIEBHOSALE.CO.NZ

- a nutritionist and blogger who documented her journey through pregnancy and beyond, and produced these great post partum tummy images so we can see it takes time!

201

202

Perinatal Mood Disorders

Good for MNs to consider & understand:

- Pre-existing mental health issues
- Antenatal depression
- Puerpual psychosis
- Baby blues
- Postnatal depression
- Anxiety
- Obsessive compulsive disorder
- Post traumatic stress disorder

203

Postnatal Mood Disorders

- **Baby blues** – affects 85% of new mothers, usually starting day 3-10. symptoms include tearfulness, a feeling of being overwhelmed and emotional
- **Postnatal depression** – affects 10% of new mums, usually occurs in the first 6 weeks but can start anytime in the first year
- **Post traumatic stress disorder (PTSD)** – some women who have long, difficult, painful or unplanned deliveries experience PTSD: they may feel disappointed with their birth experience, have difficulty forming a bond with their baby, and feel angry with health care professionals. They may experience troubling flashbacks and anxiety.
- **Puerpual psychosis** – rare condition which manifests similarly to bi-polar disorder, affecting less than 0.01% of women. Symptoms include mania, severe depression, delusions, confusion, hallucination, and suicidal thoughts

204

Group Work

- Symptoms / statements
  - baby blues
  - postnatal depression
  - puerperal psychosis

205

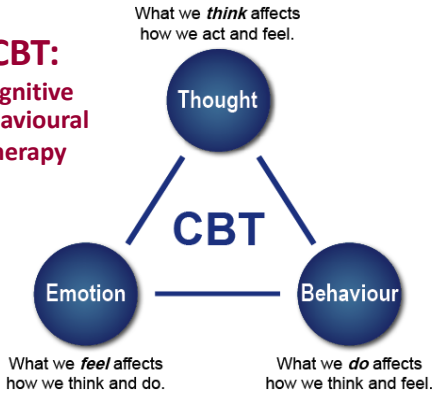
PND – Post Natal Depression

How to support a mother with postnatal depression:

- Get her to talk about it
- It's usually best if she also tells her partner
- Provide non-judgmental support
- Help her to care for herself, with eating, drinking, resting, dressing, taking an interest in things she used to enjoy, getting out of the house, exercising
- Direct her to good information and support
- Encourage her to access help

206

CBT: cognitive behavioural therapy



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Communication

- Body language
- Open questions
- Empathy
- Suggest choices
- Offer support and information, not advice
- Praise and encourage

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Good Mood Food

- **Trytophan (building block for serotonin)** – spinach, egg, free range poultry, oily fish, (salmon, mackerel, sardines etc), crab meat, watercress
- **B6 and B12 (lifts mood and improves sleep)** – B12 and B6 can be found in fish, poultry, meat, eggs, dairy, fortified breakfast cereals and enriched soy or rice milk; B6 might be found in wholegrain cereals – such as oatmeal, wheatgerm and brown rice, vegetables, bananas and soy beans
- **Tyrosine** (enhances production of dopamine) – amino acid found in spinach, eggs, cottage cheese and soy.

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Minimising Effect on Child

- Increased stress (adrenaline and cortisol) – sleep, eating and immune system issues
- Insecure attachment – avoidance, resistance, mum's reluctance to be alone with child
- Less emotional regulation, ie loving touch, eye contact, verbal communication
- Some evidence to indicate lower verbal vocab scores aged 5 (Brennan et al 2000) and increased likelihood of neurotic symptoms, bed wetting, phobias and obsessions, anger issues, etc.

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Safeguarding

- Child's welfare is paramount
- Communicate with parents
- If you are still worried speak to agency and follow appropriate policies
- May involve contacting HV or GP, to discuss concerns
- If the child has been harmed or you believe there is a risk of serious harm then you may contact the local Children's Services Department (within Social Services) – you will need to give the child's name, date of birth, and address. You can remain anonymous if you wish, either to Social Services or just to the family.

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Free Online Resources

www.nomorepanic.co.uk/articles/depression

online CBT: www.llttf.com

online help for anxiety and depression: https://ecouch.anu.edu.au/welcome

Good all-round website for info: www.mind.org.uk/mental_health_a-z/7980 _depression

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Case Studies

In groups of four, identify:

- Key issues
- Main areas of work
- Plan of action to help the family
- Any areas of concern / challenge

Feed back to the group

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Next Steps

- Find a baby to bathe
- Arrange to visit a local breastfeeding drop-in clinic and sit in
- Do at least one placement through BabyEm
- Check your Paediatric First Aid and DBS are up to date
- Look at local Facebook groups and be a silent spectator

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Assignments

- You have 7 weeks to complete your coursework
- Course deadline is ……
- Send completed work to Emma via info@babyem.co.uk
- We cannot mark any assignments received late
- If you do not reach the assessment criteria of one or more of your assessments you will be allowed to re-do these ONCE before re-submitting
- Please read the 'What Next' section at the back of your pack and contact BabyEm on 0208 986 9008 if you have any queries.

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Assignment Do and Don'ts

- Do spell and grammar check your work
- Do find and use reputable sources of information to back up your work ie do NOT cite 'babycenter'!
- Do save your work as a Word document, not PDF
- Do answer all the questions, incl sub-questions
- **Don't copy and paste text from websites** – we can see when this is done and it's easy to check, it also does not further your learning in the same way.

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