

Feeding problems, excessive weight loss, and management of hypernatraemia in newborn infants

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Publication date: April 2020

Review date: April 2022

See also: [Faltering growth](#) and [Neonatal jaundice](#) guidelines and the [Hospital Infant Feeding Network](#) for further breast feeding resources.

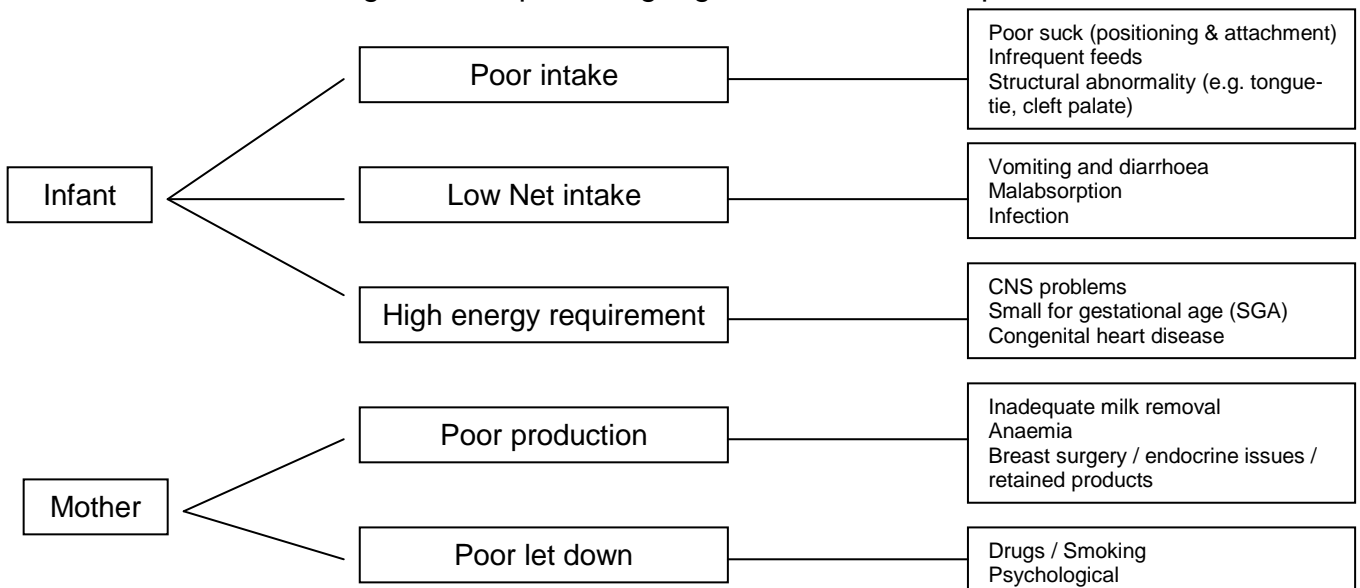
Background

- Breast feeding is recognised as the preferred method of feeding.
- Newborns have a varying pattern of feeding, but in order to thrive should have **at least 8 and ideally 12 feeds in 24 hours**.
- Milk production relies on breast emptying and is therefore related to demand.
- Normal postnatal weight loss is < 10% of birth weight in term babies.
- Birth weight is usually regained by days 10–14.

Breast feeding has to be learned, and many women encounter difficulties at the start.

- Pain and fear that there is not enough milk to sustain the baby are common causes for women to stop breast feeding.
- “Cluster feeding” can lead women to think they are not providing enough milk.
 - Babies have periods where they feed frequently for hours at a time, or even constantly, and are typically irritable and “needy”.
 - Usually occurs in the evening but can be any time.
 - It is a normal process related to growth spurts, and helps to regulate milk supply.
 - It usually stops after the first month but can recur.

Causes of excessive weight loss or poor weight gain in the newborn period include:



Assessment

Adequacy of intake can be assessed by:

1. a) Frequency and duration of breast feeding

- At least 8 and ideally 12 times in 24 hours, 6–30 minutes

b) Volume of milk by artificial feeding

- At least 150 ml/kg/day by day 3

2. Stool and urine output

- Dirty nappies: should be at least 2 yellow by day 5
- Wet nappies: should be at least 2 on day 2, 3 on day 3, 4 on day 4, and at least 6 thereafter.
- Urates (orange or brown pigments) visible in the urine or on the nappies after three days are a sign of inadequate intake.

3. Weight gain / loss

- No more than 10% of birth weight lost, regaining weight by 10-14 days, then gaining approximately 30 g / 1 oz a day “An ounce a day except on Sunday” is a good reminder
- Weight loss usually stops after about 3-4 days of life.

Examination:

Colour, tone and level of alertness of baby:

- normal skin colour, alert and good tone **vs.** jaundice worsening or not improving, baby lethargic, not waking to feed, poor tone.

Assess the baby for signs of dehydration.

Examine mum's nipples if breastfeeding – cracked, bleeding, evidence of thrush.

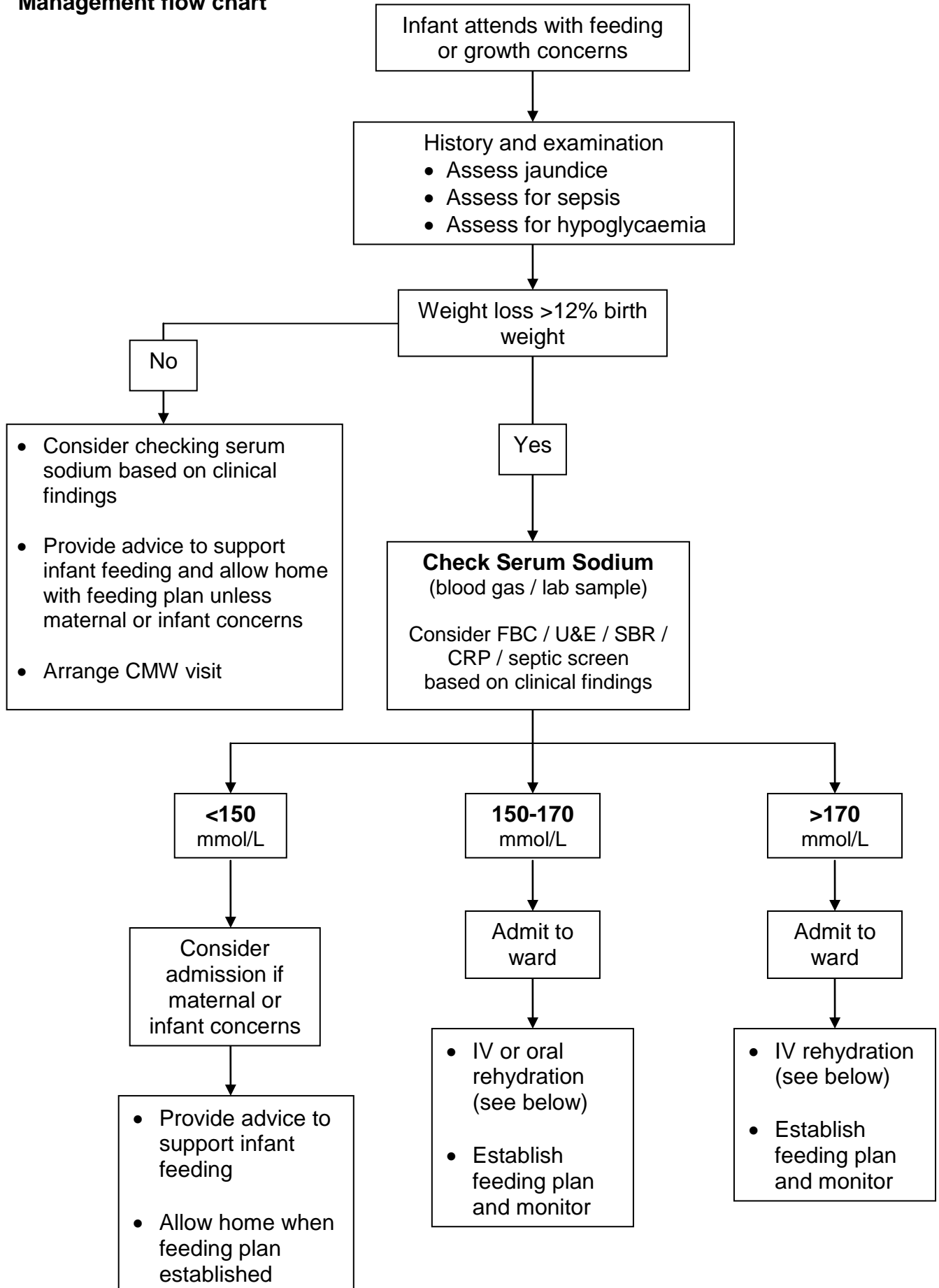
Observe a breast feed

- Baby calm vs. comes on and off breast / refuses to feed.
- Rapid sucking at beginning of feed, most of the sucking longer, slower and deeper with visible swallowing vs. mostly rapid sucking, noisy feeding
- Feeds 6-30 minutes most feeds vs. feeds < 6 minutes or > 40 minutes
- At end of feed
 - baby detaches vs. mother detaches
 - Second side offered according to baby's appetite
 - Baby content after feed vs. always unsettled

Management

See flow chart on page 3

Management flow chart



Establishing a feeding plan

Consider and support maternal physical and mental health

- Does she require review with post natal ward (L12 ext 4369) or GP?

Breast feeding babies

Encourage and support women to continue to breastfeed

- If the baby is still under the care of their Community Midwife, help may be accessed through a maternity support worker / midwife contactable in hours on ext 4794, or if out of hours, the 24 hour homebirth midwife contactable on ext 4373 (central delivery suite). Please note changes to the service during the COVID-19 pandemic. Information available in the paediatric T drive COVID folder and BSUH maternity breast feeding support page [here](#).

Whilst we support the mother's choice for switching to artificial feeding, the **choice should be informed**: mothers should be made aware that **artificial feeding may have an impact on breast feeding**, *affecting both the baby's ability to perform normal breastfeeding behaviours and the establishment of lactation.*

1. **Feeding should be responsive** to baby's feeding cues, but **at least 3 hourly** (wake baby if has not woken to feed) and **at least 8 and ideally 12 feeds in 24 hours**
 - Advise mother to look for feeding cues; don't wait for baby to cry
 - Advise mother on how to wake a sleepy baby to feed
2. **Express breast milk** after each feed *to increase the amount of milk available at the next feed*
 - Both breasts, at least eight times in 24 hours, and at least one during night.
3. **Supplementation** may be necessary where there is 'insufficient breast milk supply'.
 - Use mothers own expressed breast milk, and then formula milk if necessary.
 - Start with a minimum supplement that represents a partial intake e.g. 50 – 100 ml/kg/day, up to 150 ml/kg/day.
 - Depending on clinical assessment, give as one feed (preferably in the evening) or top-ups after each feed.
 - Supplement by syringe, cup, spoon, or offer nasogastric tube if baby is admitted.

Formula feeding babies

1. Feeding should be **responsive** to baby's feeding cues, but at least 3 hourly (wake baby has not woken to feed) and at least 150 ml/kg/day
 - Advise mother to look for feeding cues; don't wait for baby to cry
 - Advise mother on how to wake a sleepy baby to feed

Babies who are admitted:

- The feeding plan, and quality and volumes of each feed should be documented on a feed chart
- Re-weigh baby at 24hrs post re-admittance (+/- recheck sodium)

Babies who are discharged home

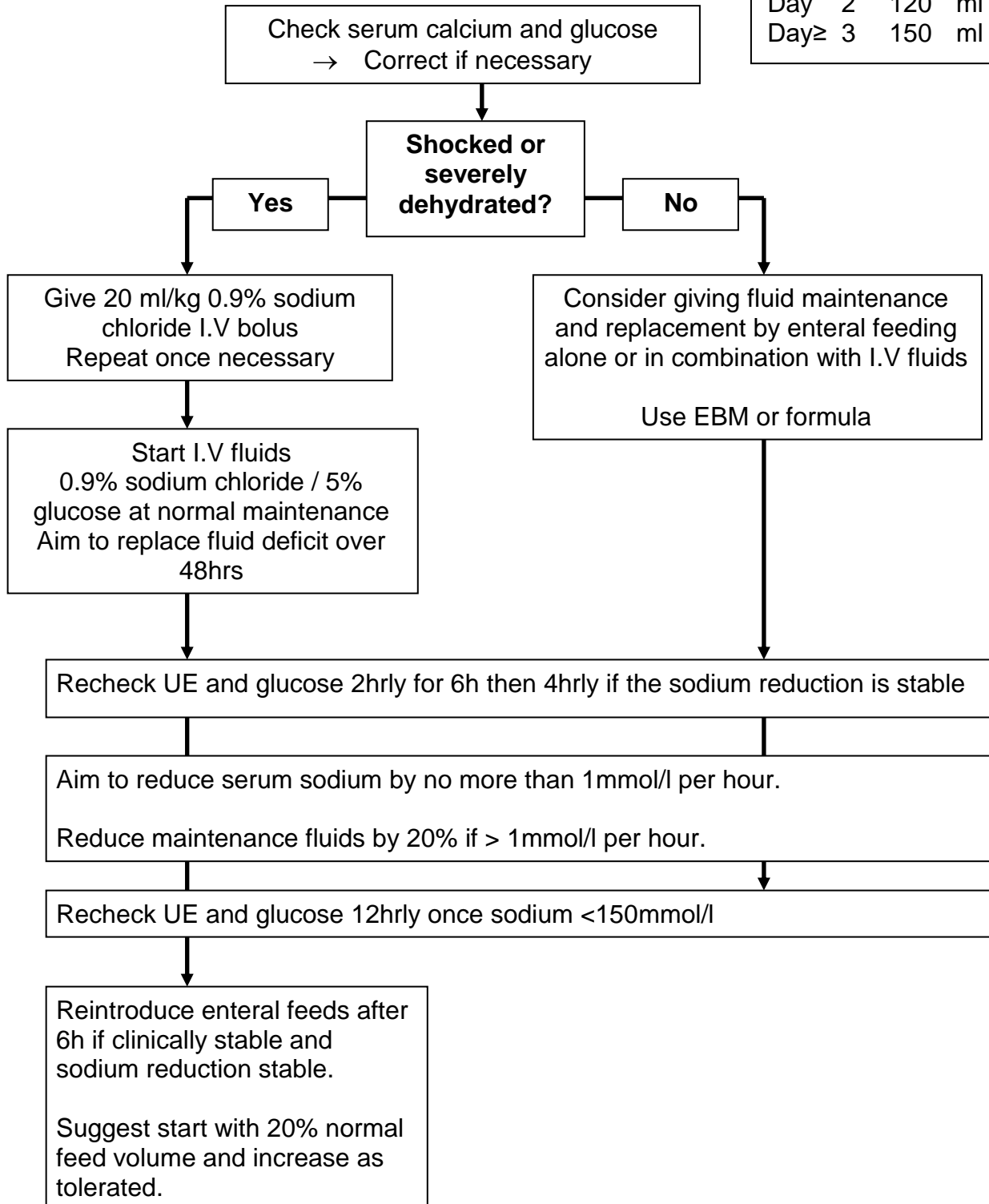
- Ensure follow up arranged with CMW or HV – parents may have the number in red book or Obstetric paperwork.
- Provide safety-netting (minimum feeds, weight gain, abnormal infant behaviour)
- Ensure mother knows how to access support / information 24 hours a day
 - **provide breastfeeding drop in clinics leaflet** (available on the Child Health intranet guidelines website) on discharge. The NCT and National Breastfeeding helpline numbers are both 24 hours.
 - **During COVID-19** period use leaflet 'Infant feeding support and resources for parents during COVID-19' available on the BSUH maternity breast feeding support page [here](#).

Management of neonatal hypernatraemia:

Serum Sodium 150-170mmol/L

Normal maintenance fluid requirements

Day 0	60	ml / kg / day
Day 1	90	ml / kg / day
Day 2	120	ml / kg / day
Day ≥ 3	150	ml / kg / day



Serum Sodium >170mmol/L

Discuss with Evelina renal team if sodium >180mmol/l and consider dialysis

