RESUSCITATION OF NEWBORN AT BIRTH

Based on latest guidelines 2000

BIRTH

30 Seconds

- Clear of meconium ?
- Breathing or crying ?
- Good muscle tone ?
- Color pink ?
- Term gestation ?

Yes → **ROUTINE CARE**

- **Warmth** (skin-to-skin contact)
- **Wipe secretions** (mouth & nose)
- **Dry** (cover with dry linen)
- **Ongoing observation**

No → **INITIAL STEPS**

- Provide warmth
- Position, clear airway suction mouth,then nose
- Dry, stimulate, reposition
- Give O2 (as necessary)

Meconium present

SUCTION mouth,nose & posterior pharynx before delivery of shoulders

Baby vigorous → INITIAL STEPS

Baby depressed → **SUCTION MOUTH & TRACHEA**

HR > 100 → Repeat as necessary till no meconium

HR < 100 → Do once only

Put orogastric tube & leave it open if BMV is continued for more than several minutes.

30 Seconds

EVALUATE

Breathing

- Spontaneous
- None → BMV

Heart rate

- Above 100
- Below 100 → BMV

Colour

- Pink → Observe → SUPPORTIVE CARE
- Blue → **Give O_2**

BAG & MASK VENTILATION

Room air can also be used if 100% oxygen unavailable

BMV is the single most important step in resuscitation. Check equipment and oxygen delivery. Ensure adequate chest rise.

30 sec.

Evaluate H.R.

- **Above 100** → Watch for breathing, If spontaneous, discontinue BMV → ONGOING CARE
- **60-100** → Continue BMV till H.R.> 100. Consider intubation
- **Below 60** → **CHEST COMPRESSION**

*Continue compression till H.R. > 60.
*Continue BMV *Consider intubation

30 sec.

HR<60 after coordinated BMV & chest compression

ADMINISTER EPINEPHRINE (1 in 10,000)

May be repeated every 3-5 minutes

Endotracheal intubation may be considered at several steps

SUPPORTIVE CARE

Evaluate & manage under radiant warmer. Evaluate frequently in immediate neonatal period.

ONGOING CARE

Close monitoring, documentation & anticipatory care. Monitoring of temp, HR, RR, O_2 conc, blood gases, BP, glucose, calcium & HCT. Treatment of hypotension, infection, seizures, apnea, hypoglycemia, pulmonary hypertension & feeding problems.

IF NO CHEST RISE : Perform the following in sequence

(1) Reapply the mask (2) Reposition the head (3) Suck out secretions if present (4) Increase pressure slightly (5) Ventilate with mouth slightly open

PREMATURITY POINTERS: *Take all steps to reduce heat loss.

* More often requires INITIAL STEPS * Don't stimulate too vigorously * More likely to require Bag & Mask Ventilation & Intubation * May require higher inflation pressure.

ENDOTRACHEAL INTUBATION

INDICATION : If bag & mask is ineffective/ meconium/ prolonged ventilation/ when chest compression is done/ E.T. drug delivery. **LIMIT ATTEMPT TO 20 SECONDS.**

SIZE: **Size 2.5mm** (< 1kg, <28wk) - **Size 3 mm** (1-2kg, 28-34 wk) - **Size 3.5 mm** (2-3kg,34-38 wk) - **Size 3.5/4 mm** (>3 kg, >38 wk).

TIP TO LIP DISTANCE : <1kg (**6.5-7cm**), 1-2kg (**7-8cm**),2-3kg (**8-9cm**)

	EPINEPHRINE	FLUID BOLUS	NALOXONE	SODABICARB
INDICATION	If H.R. is <60 after 30 sec of effective ventilation and chest compressions.	Poor respone to resuscitation & drugs / pallor / faint pulse with good heart rate.	It is to be given only after restoration of adequate Oxygenation.	Use it only if aspyxia is prolonged & not responding to ventilation, drugs & fluids bolus.
DOSE & ROUTE	**I.V 0.1-0.3ml/k of 1 in 10,000** **E.T** 0.1 ml/k of 1 in 10,000. **Don't give high dose.**	Give **10ml/k** of **Normal saline,** Ringer lactate. **Push in 5-10 min.** Introsseous access can also be used.	**0.1mg/k (0.25ml/k)** It can be given repeatedly. **I.V, I.M, S.C or E.T. route**	**2meq/k (4ml/k of diluted solution).** Mix with equal amount of distill water. **4- 12 ml.**

SPECIAL CONSIDERATION (Babies who do not improve after resuscitation)

Choanal atresia (insert oral airway), **Pharyngeal malformation Robin Syndrome** (turn baby prone & insert nasopharyngeal tube), **Pneumothorax & pleural effusion**(needle thoracostomy),**Dia hernia** (Intubate & put NG tube), **Pulmonary hypoplasia, Extreme immaturity & congenital pneumonia.**

UNRESPONSIVE

Recheck effectiveness of

- Ventilation
- Chest compression
- E.T. Intubation
- Epinephrine delivery

Consider possibility of

- Hypovolemia
- Severe metabolic acidosis

Prolonged arrest Not responding → **Give sodabicarb**

If signs of Hypovolemia → **Give volume expander**

UNRESPONSIVE

- Depressed resp neuromuscular drive • Airway malformations • Lung problems : pneumothorax, diaphragmatic hernia • Congenital heart disease

Discontinue after 15 minutes of absent heart rate inspite of complete and adequate resuscitative efforts.

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