RESUSCITATION COUNCIL OF SOUTHERN AFRICA

2021

# Newborn Resuscitation Algorithm

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GOLDEN MINUTE (BIRTH – 60 sec)

MAINTAIN NORMOTHERMIA

Term gestation?
Breathing? Good tone?

Yes → Routine care with mother

No ↓

Provide warmth
Clear airway if necessary
Dry and stimulate
(Don't dry if < 30 weeks – wrap preterm baby's torso in plastic bag)
Note the time

↓

Access breathing/crying and/or heart rate → If ongoing respiratory distress - consider CPAP

Yes ↓ Gasping, apnoeic or heart rate < 100?

Start ventilating with room air (Rate: 30-40/min)
Use oxygen if preterm starting at 30-40%
Connect to pulse oximeter if available, avoid hyperoxia
Ensure chest rise with each breath

↓

Assess breathing, heart rate and stats/colour every 30-60s

Yes ↓ Heart rate < 100?

Ventilate with supplemental oxygen as required

↓

Assess breathing, heart rate and stats/colour every 30-60 seconds

Yes ↓ Heart rate < 60?

Continue ventilating with supplemental oxygen as required
Consider intubation
Start chest compressions with coordinated ventilation
(3 compressions: 1 breath)
Each cycle should take 2 seconds

↓

Assess breathing, heart rate and stats/colour every 30-60 seconds

Yes ↓ Heart rate < 60?

Continue compressions and ventilation
Give 0.1-0.3ml/kg Adrenaline IV (1:10 000 dilution)
(1ml/kg Adrenaline ETT (1:10 000 dilution) only if no IV access)
May repeat Adrenaline IV after 3-5 minutes
Correct hypovolaemia if necessary
(10ml/kg normal saline over 5-10 minutes)
Consider pneumothorax/Check glucose

### Oxygen administration

Use blended oxygen if available to achieve targeted pre-ductal sats

Alternatively:
Bag with no $O_2$ = 21%
Bag with $O_2$ = 40%
Bag with $O_2$ + reservoir bag ≈ 100%

### Normal pre-ductal sats after birth

(right hand or ear)
1 min: > 60%
2 min: > 65%
3 min: > 70%
4 min: > 75%
5 min: > 80%
> 10 min: 90-95%

### Post-resuscitation care

Maintain normothermia: 36.5-37.5° C

Consider induced hypothermia where available according to protocol

If ongoing respiratory distress consider nasal CPAP and surfactant as required according to protocol

Maintain sats 90-95%