**Neonatal infection: determining the need for antibiotic treatment of babies within 72 hours of birth (pg 1 of 2)**

**Before birth:** for women in labour, identify and assess risk factors for early-onset neonatal infection (see *box 1*). Throughout labour, monitor for any new risk factors.

For guidance on managing prelabour rupture of membranes at term, see the [NICE guideline on intrapartum care](#).

- If there are any risk factors for early-onset neonatal infection (see *box 1*) or if there are clinical indicators of possible early-onset neonatal infection (see *box 2*), perform an **immediate clinical assessment**.
- Review the maternal and neonatal history and carry out a physical examination of the baby, including assessment of vital signs.

**If group B streptococcus is first identified in the mother within 72 hours of baby’s birth:**
- ask those directly involved in the baby’s care if they have any concerns in relation to clinical indicators (see *box 2*)
- identify any other risk factors present, and look for clinical indicators of infection.

Any red flag **OR** 2 or more non-red-flag risk factors or clinical indicators

- **Perform investigations and start antibiotic treatment.**
- **Do not wait for test results before starting antibiotics.**

**No red flags, but 1 non-red-flag risk factor OR No red flags, but 1 non-red-flag clinical indicator**

- **Use clinical judgement:**
  - Is it safe to withhold antibiotics?
  - Do the baby’s vital signs and clinical condition need to be monitored?

If monitoring, continue for at least 12 hours using a newborn early warning system.

**Any clinical concerns during monitoring?**

- **YES**  
  Consider performing investigations and starting antibiotic treatment.

- **NO**  
  Reassure family. When the baby is discharged, give advice to parents or carers.

**Note:** The [Kaiser Permanente neonatal sepsis calculator](#) can be used as an alternative to the NICE red flag framework.
### Box 1: Risk factors for early-onset neonatal infection

**Red flag risk factor:**
- Suspected or confirmed infection in another baby in the case of a multiple pregnancy.

**Other risk factors (non-red-flag):**
- Invasive group B streptococcal infection in a previous baby or maternal group B streptococcal colonisation, bacteriuria or infection in the current pregnancy.
- Preterm birth following spontaneous labour before 37 weeks’ gestation.
- Confirmed rupture of membranes for more than 18 hours before a preterm birth.
- Confirmed prelabour rupture of membranes at term for more than 24 hours before the onset of labour.
- Intrapartum fever higher than 38°C, if there is suspected or confirmed bacterial infection.
- Clinical diagnosis of chorioamnionitis.

### Box 2: Clinical indicators of possible early-onset neonatal infection

**Red flag clinical indicators:**
- Apnoea (temporary stopping of breathing)
- Seizures
- Need for cardiopulmonary resuscitation
- Need for mechanical ventilation
- Signs of shock

**Other clinical indicators (non-red-flag):**
- Altered behaviour or responsiveness
- Altered muscle tone (for example, floppiness)
- Feeding difficulties (for example, feed refusal)
- Feed intolerance, including vomiting, excessive gastric aspirates and abdominal distension
- Abnormal heart rate (bradycardia or tachycardia)
- Signs of respiratory distress (including grunting, recession, tachypnoea)
- Hypoxia (for example, central cyanosis or reduced oxygen saturation level)
- Persistent pulmonary hypertension of newborns
- Jaundice within 24 hours of birth
- Signs of neonatal encephalopathy
- Temperature abnormality (lower than 36°C or higher than 38°C) unexplained by environmental factors
- Unexplained excessive bleeding, thrombocytopenia, or abnormal coagulation
- Altered glucose homeostasis (hypoglycaemia or hyperglycaemia)
- Metabolic acidosis (base deficit of 10 mmol/litre or greater)

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