

Sepsis in Children

**consider sepsis in any unwell child
it is a time critical emergency**

CLINICAL FEATURES

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varies with age:

Neonates and infants

- often poorly localised infections
- **non-specific features**
- sx may include **bradycardia**, **apnoea** or **poor feeding**

Older infants and children

- Usually presents with SIRS – **fever is very common**

In severe cases where there is **septic shock** there are 2 types:

Cold shock

More common in infants and young children

Body shuts down [low cardiac output] →

1. vasoconstriction
2. Cold peripheries
3. prolonged CRT
4. tachycardia

Warm shock

More common in older children (and adults)

Low vascular resistance → expanded circulation + difficulty in maintaining cardiac output

→ Brisk CRT, bounding pulses, tachycardic

- **usually impaired neurologically as well**

- Blood pressure is usually normal until very late stages therefore
- **LOW BP COULD BE A TERMINAL SIGN**

Paediatric Normal Values

(from Advanced Paediatric Life Support)

Age (years)	Heart rate (/min)	Respiratory rate (/min)	Systolic BP
<1	110 – 160	30 – 40	70 – 90
1 - 2	100 – 150	5 – 35	80 – 95
2 - 5	95 – 140	25 – 30	80 – 100
5 - 12	80 – 120	20 – 25	90 – 110
>12	60 – 100	15 – 20	100 – 120

DIAGNOSIS OF SEPSIS IN CHILDREN

Consider sepsis if

suspected /proven infection and **2 of the following:**

- temperature <36 or >38.5
- tachycardia
- Altered mental state (e.g. drowsy, lethargic, floppy)
- Reduced peripheral perfusion or raised CRT
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Sepsis = SIRS + infection

SIRS = 2 or more of:

- temperature <36 or >38.5
- HR (>2 SD above normal for age)
- RR (>2 SD above normal for age)
- Abnormal white cell count

MANAGEMENT

this is a time critical emergency → immediate transfer to hospital

No primary care-orientated recommendations for children with sepsis

Advice for adults probably useful:

- 999, oxygen and inform hospital [paediatric team]

No recommendations re primary care administration of **antibiotics** except in suspected meningitis, Early antibiotics are known to be beneficial.

[BUT WHAT ABOUT BLOOD CULTURES?]

Should we give IV antibiotics in primary care?

Consider time to hospital as an important factor [e.g. remote GPs]

SEPSIS

- major cause of death
- a time critical condition
- Prompt diagnosis and management in primary care will save lives
- Assess patients for SIRS, sepsis and red flag sepsis
- manage as appropriate.
- SIRS → ensure good safety netting
- Red flag sepsis → high flow oxygen and 'blue light' transfer to hospital