



# The Febrile Child & The Septic Child part 1

[RCH Febrile child](#)

[RCH sepsis](#)

# Part 1: The Febrile Child

# The febrile child - temp > 38 degrees

Which of the following are good predictors of serious  
illness?

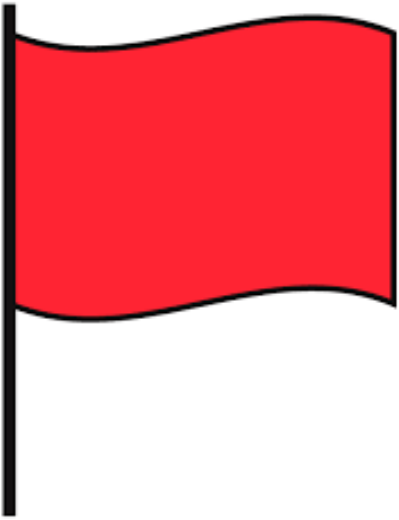
- Degree of the fever?
- Its rapidity of onset?
- Its response to antipyretics?
- Febrile convulsions?



NONE OF THE THEM ARE  
GOOD PREDICTORS!

# Fever in children

- Aim to not miss a bacteraemia
  - Ensure symptomatic management eg pain, dehydration
  - TREAT underlying cause (including HSV if viral)
- 
- The rate of occult bacteraemia has fallen to <1% in healthy, immunised infants.
  - E.coli and Staphylococcus aureus are now frequently isolated organisms.
  - See [Thermometers](#) (RCH guideline) about the differences



- Teething will not cause fever  $> 38.5^{\circ}\text{C}$
- Babies under 3 months of age hypothermia or temperature instability can be signs of serious illness/ sepsis

What do you ask about and examine for in a child presenting with a fever?

# History

- Localising symptoms
  - Respiratory
    - Cough/ coryza..
  - GI
    - D&V
  - Neuro
    - Headache, photophobia, lethargy, irritability..
  - Rash
    - Blanching/ non...
  - Joints
    - Swelling/ pain
- Pain
- Duration/ Frequency
- Infectious contacts
- Travel history
- Immunisation history



# Examination

- ABCDE
- Vitals
- Full systems review – including ENT and documenting presence/ absence of signs involving skin and joints and neurological systems

## Screening tool for young children presenting with acute febrile illness.

Underlying chronic respiratory, cardiac, neurological, or other illness:    yes     no

	Low risk (Green)	Intermediate risk (Amber)	High risk (Red)
<b>Colour</b>	<input type="checkbox"/> Normal colour of skin, lips and tongue	<input type="checkbox"/> Pallor reported by parent/carer	<input type="checkbox"/> Pale/mottled/ashen/blue
<b>Activity</b>	<input type="checkbox"/> Responds normally to social cues <input type="checkbox"/> Content/smiles <input type="checkbox"/> Stays awake or awakens quickly <input type="checkbox"/> Strong normal cry/not crying	<input type="checkbox"/> Not responding normally to social cues <input type="checkbox"/> Wakes only with prolonged stimulation <input type="checkbox"/> Decreased activity <input type="checkbox"/> No smile	<input type="checkbox"/> No response to social cues <input type="checkbox"/> Appears ill to a healthcare professional <input type="checkbox"/> Does not wake or if roused does not stay awake <input type="checkbox"/> Weak, high-pitched or continuous cry
<b>Respiratory</b>	<input type="checkbox"/> None of the amber or red symptoms or signs	<input type="checkbox"/> Nasal flaring <input type="checkbox"/> Tachypnoea: RR > 50 breaths/minute, age 6–12 months RR > 40 breaths/minutes, age > 12 months <input type="checkbox"/> Oxygen saturation $\leq$ 95% in air <input type="checkbox"/> Crackles	<input type="checkbox"/> Grunting <input type="checkbox"/> Tachypnoea: RR > 60 breaths/minute <input type="checkbox"/> Moderate or severe chest indrawing
<b>Hydration</b>	<input type="checkbox"/> Normal skin and eyes <input type="checkbox"/> Moist mucous membranes	<input type="checkbox"/> Dry mucous membranes <input type="checkbox"/> Poor feeding in infants <input type="checkbox"/> CRT $\geq$ 3 seconds <input type="checkbox"/> Reduced urine output	<input type="checkbox"/> Reduced skin turgor
<b>Other</b>	<input type="checkbox"/> None of the amber or red symptoms or signs	<input type="checkbox"/> Fever for $\geq$ 5 days  <input type="checkbox"/> Swelling of a limb or joint <input type="checkbox"/> Non-weight bearing/not using an extremity <input type="checkbox"/> A new lump > 2 cm	<input type="checkbox"/> Age 0–3 months, temperature $\geq$ 38 °C <input type="checkbox"/> Age 3–6 months, temperature $\geq$ 39 °C  <input type="checkbox"/> Non-blanching rash <input type="checkbox"/> Bulging fontanelle <input type="checkbox"/> Neck stiffness <input type="checkbox"/> Status epilepticus <input type="checkbox"/> Focal neurological signs <input type="checkbox"/> Focal seizures <input type="checkbox"/> Bile-stained vomiting

# IMPORTANT QUESTIONS TO ASK WHEN ASSESSING PATIENTS:

How unwell is this child?

Do you have a clear focus of infection?

What investigations should you  
do for a child

<1 month?

1-3 months of age?

Age	Description	Management
<1 month corrected age (or < 3.5 kg in an older child)	Rectal temperature > 38oC	<ul style="list-style-type: none"> <li>• Discuss with registrar/consultant</li> <li>• Full sepsis work-up: FBE/film, blood culture, urine culture (SPA), LP ± CXR</li> <li>• Admit for empirical antibiotics</li> </ul>
1-3 months corrected age	Rectal temperature > 38oC	<ul style="list-style-type: none"> <li>• Discuss with registrar/consultant</li> <li>• Full sepsis workup: FBE/film, blood culture, urine culture (SPA) ± CXR (only if respiratory symptoms or signs) ± LP</li> <li>• Discharge home with review within 12 hours if the child is: <ul style="list-style-type: none"> <li>• Previously healthy</li> <li>• Looks well</li> <li>• WCC 5,000 - 15,000</li> <li>• Urine microscopy clear</li> <li>• CXR (if taken) clear</li> <li>• CSF (if taken) negative</li> </ul> </li> <li>• If the child is unwell or above criteria are not all satisfied, admit to hospital for observation +/- empiric i.v. antibiotics</li> </ul>

What investigations should you  
do for a child

>3 months of age?

Age	Description	Management	
> 3 months	Temperature >38oC and clear focus of infection	child looks well	<ul style="list-style-type: none"> <li>• Treat as clinically indicated</li> </ul>
		child looks unwell	<ul style="list-style-type: none"> <li>• Discuss with registrar/consultant</li> <li>• Investigate as appropriate for clinical focus</li> <li>• Admit for treatment</li> </ul>
> 3 months	Temperature >38oC and <b>no clear focus</b> of infection	child looks well	<ul style="list-style-type: none"> <li>• If &lt; 12 months boys or &lt;2 yrs girls -urine, can do <u>SPA</u> up to 12 months of age</li> <li>• If &gt; 12 months - Consider Urine m,c,s</li> <li>• Discharge home on symptomatic treatment</li> <li>• Arrange medical review within 24 hr, or sooner if deteriorates</li> </ul>
		child looks miserable but is still relatively alert, interactive and responsive	<ul style="list-style-type: none"> <li>• If &lt; 12 months boys or &lt;2 yrs girls -urine, can do <u>SPA</u> up to 12 months of age</li> <li>• If &gt; 12 months - Consider Urine m,c,s</li> <li>• Discuss with registrar or consultant prior to any investigations</li> </ul>
		child looks unwell	<ul style="list-style-type: none"> <li>• Full sepsis workup: FBE, blood culture, urine culture ± CXR (if respiratory symptoms or signs) ± LP</li> <li>• Admit to hospital for observation +/- i.v. antibiotics</li> </ul>

How do you collect a urine sample in children pre toilet training?



# URINE

- Bag urine specimens should never be sent for culture.
  - If the bag specimen is positive for nitrites &/or leukocytes on reagent strip testing, then an SPA or catheter urine should be performed and the sample sent for culture
- Children with a NEGATIVE urine strip test can still have a UTI - so if a UTI is clinically suspected - send for culture
- Best to obtain sample via:
  - Clean catch
  - SPA
  - catheter

# Clean Catch Urine

- Wait ideally after a feed (cold or wet sensation to the groin may help)
- Either – wait for urine to be produced and “catch” into a clean container
- OR
- *A variation of the Finger Tap method is to alternative tapping on the pubic symphysis with a gentle tap / rub over the back while the baby is held in the air.*
- <http://www.bmj.com/rapid-response/2011/10/28/finger-tap-method-collection>

The **finger tap method** may be tried. Once nappy area clean and dry and container lid is off:

- tap with two fingers just above the bottom of the tummy (the pubic symphysis)
- give one tap every second for one minute
  - then stop for one minute
  - the tap for one minute and so on until urine appears or **10 mins** has passed
- do not allow your attention to wander as the urine stream may be very short and may come when you are not looking

What are the contraindications  
for undertaking an LP?

# LP - contraindications

- Patient too unstable eg CVS/ shock
- Neurological compromise
  - impaired conscious state
  - focal neurological signs
- Bleeding problem/ coagulopathy
  
- *In this scenario – treat empirically and delay LP until clinically stable*

When is it appropriate to discharge a febrile child?

# Discharge

- Infants less than 1 month of age with fever should be admitted
- Infants 1 to 3 months of age:
  - The child is well
  - All investigations are normal
  - The child has been reviewed by a senior registrar/consultant
  - Follow up in 12 hours has been arranged
- Children older than 3 months:
  - The child is well
  - Follow up has been arranged

# Fever v Sepsis v Fever & Sepsis

Continue to part 2