

# Winter Ills: Bronchiolitis

## Assessment of severity

**Table 1: Assessment of severity of bronchiolitis**

	Mild	Moderate	Severe
<b>Respiratory rate</b> <i>breaths/minute</i>	Under 2 months >60/min 2–12 months >50/min	>60/min	>70/min
<b>Chest wall indrawing</b>	None/mild	Moderate	Severe
<b>Nasal flare</b>	None/mild	Present	Present
<b>Grunting</b>	Absent	Absent	Present
<b>Feeding</b>	Normal	Less than usual Frequently stops Quantity >1/2 normal	Not interested Choking Quantity <1/2 normal
<b>History of behaviour</b>	Normal	Irritable	Lethargic

**Any criterion in the severe category designates the child as severely ill**

## When to refer with acute bronchiolitis

As a general rule **refer infants earlier rather than later**: if in doubt get specialist advice.

**Refer all infants immediately with**; severe illness (see Table 1), progressive dehydration, where there is clinical concern about hypoxia or a history of apnoea.

### Refer early

- If less than 8-weeks-old or if birth was significantly premature (<32 weeks gestation)
- If there has been apnoea or significant comorbidity (heart and lung disorders, immune-compromise)
- If illness is getting worse after 72 hours or home care is uncertain

### Management of bronchiolitis at home

Most infants with bronchiolitis can be safely managed at home. Supportive care plus careful observation for signs of deterioration are the keys.

Supportive care may include:

- Keeping the child's environment smokefree
- Keeping the child well hydrated
- Small frequent feeds
- Minimal handling
- Normal saline nasal drops before feeds
- Caregiver hand washing to prevent spread to other children

**Written instructions will help caregivers to keep an eye on feeding patterns and behaviour and to monitor for:**

- Respiratory rate
- Indrawing
- Grunting
- Nasal flare
- Sleepiness
- Colour

Infants with a moderate episode of bronchiolitis need to be reviewed within 24 hours and a firm appointment (time, place, person) helps to ensure the child is seen.

## Winter Ills: Fever in children

Table 3: High risk of serious pathology

High risk features	
<b>Colour</b>	Pale, mottled, ashen or blue
<b>Activity</b>	Weak, high-pitched continuous cry Diminished level of consciousness Appears ill Unable to rouse or if roused does not stay awake
<b>Respirations</b>	Grunting RR >70 breaths/min Moderate to severe chest indrawing
<b>Hydration</b>	Reduced skin turgor Capillary refill time $\geq 3$ secs
<b>Other</b>	Non blanching rash Bulging fontanelle Neck stiffness Focal neurological signs Focal seizure Bile stained vomiting Swelling of limb or joint, non-weight bearing, not using an extremity <b>High temperatures</b> need to be interpreted with regard to other signs and symptoms, however T >39°C should be regarded as a high risk feature

**Any of the above features place a child in a high-risk category for serious pathology. The child needs immediate admission to hospital.**

Table 4: Intermediate risk for serious pathology

Intermediate risk features	
<b>Colour</b>	Normal
<b>Activity</b>	Not responding normally to social cues Wakes only with prolonged stimulation Decreased activity No smile
<b>Respirations</b>	Nasal flaring: age over 12 months Age 0–2 months, RR >60 breaths/min Age 2–12 months, RR >50 breaths/min Age >12 months, RR >40 breaths/min Crepitations
<b>Hydration</b>	Dry mucous membrane Poor feeding in infants Reduced urine output
<b>Other</b>	Fever for $\geq 5$ days

In the absence of high-risk features, any of the above features places a child at intermediate risk of serious pathology.

**Depending on the findings and circumstances, one or more of the following may be appropriate:**

- Referral for urgent paediatric assessment
- Telephone consultation with a paediatric specialist
- Firm arrangements, time/place/person, made for a further review
- Written and verbal instructions on warning symptoms that may occur and how to respond to them

Table 6: Features of some of the serious causes of fever in children

Diagnosis to be considered	Signs in conjunction with fever
<b>Meningococcal disease</b>	Non blanching rash PLUS <b>one</b> of: An ill looking child, petechiae or purpura, capillary refill time >3 secs, meningism
<b>Meningitis</b>	Neck stiffness, bulging fontanelle, decreased level of consciousness, limpness (NB Neck stiffness and bulging fontanelle are relatively insensitive signs of meningitis)
<b>Herpes simplex encephalitis</b>	Focal neurological signs, focal or generalised seizures, decreased level of consciousness
<b>Pneumonia</b> If wheeze is present the diagnosis of pneumonia is less likely	Tachypnoea: Age 0–2 months, RR >60 breaths/min Age 2–12 months, RR >50 breaths/min Age >12 months, RR >40 breaths/min Crepitations, nasal flaring under 12 months, chest indrawing, cyanosis
<b>Urinary tract infection</b>	Vomiting, poor feeding, lethargy, irritability, abdominal pain or tenderness, dysuria or increased frequency, offensive urine or haematuria
<b>Septic arthritis</b>	Swelling of a limb or joint, not using an extremity, non-weight bearing
<b>Kawasaki disease</b> (very rare)	Fever >5 days WITH at least <b>four</b> of the following: Rash, conjunctivitis, lymphadenopathy, cracked lips, skin peeling