



Infants and Children with Bronchiolitis

GP Summary



Bronchiolitis is commonly caused by respiratory syncytial virus (RSV) but may also be caused by parainfluenza, adenovirus and influenza. Most bronchiolitis occurs in autumn and winter, however because some types of parainfluenza virus are present in other months, bronchiolitis can be seen year round.

How do I know it's bronchiolitis?

If an infant <18 months presents with initial signs and symptoms of an upper respiratory tract infection, followed by

- cough
- tachypnoea
- inspiratory crepitations
- wheeze

they are likely to have bronchiolitis.



Should I do any routine investigations?

No, the diagnosis of bronchiolitis is clinical; no diagnostic test confirms the disease.

Chest x-rays should not be used to diagnose bronchiolitis but may occasionally be warranted in infants and children where the diagnosis is uncertain or those with severe respiratory distress, or who are at high risk of severe illness.

What other things might it be?

In an infant or child with bronchiolitis-like symptoms who has:	Consider:
Recurrent wheezing, particularly without symptoms of a viral infection or at an older age	Asthma
Cough as the predominant symptom and does not have wheeze, fever or crackles	Pertussis, particularly if the infant or child is unimmunised, or partially immunised
Persistent, or repeated and prolonged, respiratory symptoms and failure to thrive	Cystic fibrosis
Sudden onset of symptoms, history of a coughing or choking episode, expiratory wheeze, loss of voice, or differential air entry	An inhaled foreign body
A cardiac murmur, failure to thrive, oedema or a history of slow onset of symptoms	Congestive heart failure
Localising signs or more severe symptoms	Bacterial pneumonia.

An infant or child with bronchiolitis may also have viral pneumonia. Differentiating between bronchiolitis and viral pneumonia is difficult and largely unnecessary as treatment in either case is supportive.

Should all infants with bronchiolitis be given a trial of β_2 agonist bronchodilators?

Consider a trial of a single dose of β_2 agonist bronchodilators **in patients older than 9 months**, particularly those with recurrent wheezing.

An infant or child with bronchiolitis-like symptoms who responds to treatment with a bronchodilator, such as salbutamol, is likely to have asthma and should be treated according to asthma management guidelines.

How long will the symptoms last?

Median duration of illness is 2 weeks.

Approximately 20% of patients have symptoms longer than 3 weeks



How do I assess severity?

Mild	Moderate	Severe	Life threatening
<ul style="list-style-type: none"> • Normal respiratory rate • Subtle or no accessory muscle use 	<ul style="list-style-type: none"> • Increased respiratory rate • Minor accessory muscle use 	<ul style="list-style-type: none"> • Markedly increased respiratory rate • Moderate/marked accessory muscle use • Nasal flare or grunting 	<ul style="list-style-type: none"> • Maximal accessory muscle use/exhaustion • Poor respiratory effort • Apnoeas
<ul style="list-style-type: none"> • Normal heart rate 	<ul style="list-style-type: none"> • Increased heart rate 	<ul style="list-style-type: none"> • Markedly increased heart rate 	
<ul style="list-style-type: none"> • Able to feed 	<ul style="list-style-type: none"> • Minor dehydration • Some limitation of ability to feed 	<ul style="list-style-type: none"> • Marked dehydration • Unable to feed 	
	<ul style="list-style-type: none"> • Crepitations 	<ul style="list-style-type: none"> • Toxic appearance • Sweaty • Irritable 	<ul style="list-style-type: none"> • Cyanosis



Infants with symptoms across categories should be treated according to their most severe features

Infants who are <3 months old or who were born at <36 weeks gestation, and those with an underlying cardio-respiratory condition are at higher risk of more severe disease.

Infants not tolerating oral feeds may need nasogastric or intravenous fluids. Those with increased work of breathing or decreased oxygenation during feeds require oxygen.

What should I do?

In mild or moderate cases tolerating feeds and not requiring O ₂	In moderate cases not tolerating feeds and/or requiring O ₂	In severe or life threatening cases
<ul style="list-style-type: none"> • Suggest small, frequent feeds • Provide parent information • Offer review 	<ul style="list-style-type: none"> • Provide parent information • Send to hospital 	<ul style="list-style-type: none"> • Give oxygen • Call an ambulance

What is the evidence for the different management strategies?

Strategy	Recommendation	Level of Evidence
Oxygen	Use in the hospital setting in moderate-severe bronchiolitis	Consensus
Oral feeding	Can be continued in mild-moderate bronchiolitis unless it increases respiratory distress	Consensus
Position	Infants should be allowed to adopt the most comfortable position	Non-RCT
Apnoea monitoring	In those with increased risk of apnoea i.e. age <3 months, premature birth or previous apnoea	Consensus
Saline nose drops	Consider a trial before feeds in infants with nasal congestion	Consensus
Nasal suctioning	Consider a trial before feeds in infants with nasal congestion	Consensus
Analgesics/antipyretics	Can be used to reduce irritability and decrease temperature	Consensus
Chest physiotherapy	Not for routine use	RCTs
Mist steam	Not for routine use	RCTs
Adrenaline	Not for routine use	RCTs
β-agonists	Not for routine use	RCTs
	Consider a single dose trial in infants and children aged >9 months	Consensus
Atrovent	Not for routine use	RCTs
Antibiotics	Not for routine use	RCTs
Steroids	Not for routine use	RCTs
Ribavirin (antiviral)	Not for routine use	RCTs
Immunoglobulins	Not for routine use	RCTs

Take Home Messages

- In infants >9 months a trial of β₂agonists is warranted
- Bronchiolitis can recur but GPs should think of other possible diagnoses
- There is no evidence to support the efficacy of mist or steam in reducing respiratory distress
- Encourage rest and small frequent feeds
- Median duration of bronchiolitis is two weeks

