Evidence based guideline for the management of bronchiolitis

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Bronchiolitis in infants and children is a common presentation in both the general practice and emergency department settings. This resource provides an evidence based guideline for the management of bronchiolitis in infants and children which is endorsed by The Royal Australian College of General Practitioners.

Bronchiolitis is a viral infection of the respiratory tract[1] commonly caused by respiratory syncytial virus (RSV). It may also be caused by parainfluenza, adenovirus and influenza.[2] Most cases of bronchiolitis occur during autumn and winter. However, because some types of the parainfluenza virus are present during other months, bronchiolitis can be seen throughout the year.

Bronchiolitis is characterised by:
- acute inflammation, oedema, and necrosis of epithelial cells lining the bronchioles
- increased mucus production, and
- bronchospasm

all of which contribute to obstruction of the small airways.

Infants and children with bronchiolitis often present with features of both upper and lower respiratory tract infection including rhinitis, rapid breathing (tachypnoea), wheezing, cough, crackles, use of accessory muscles, and nasal flaring.

Duration of illness is approximately 2 weeks, with approximately 20% of patients having symptoms lasting longer than 3 weeks.[3,4]

Why was this guideline developed?

Bronchiolitis is the most common lower respiratory tract infection in infants. In Australasia, Europe and North America up to 3% of all children in their first year of life are hospitalised with bronchiolitis.[5] Most infants and young children experience only a mild form of bronchiolitis and are managed on an outpatient basis. In Australia, approximately 13 500 children are admitted to hospital with bronchiolitis each year. More than 80% of Australian children admitted with bronchiolitis are less than 1 year of age.[6]

The scope of this guideline

This guideline refers to a child presenting to either a hospital emergency department or a general practice with bronchiolitis. It does not apply to:
- children over 18 months of age
- infants or children with pre-existing airway abnormalities including cystic fibrosis
- infants or children with cyanotic cardiac anomalies
- infants or children admitted to an intensive care unit.

Clinicians should also take extra caution and consult with appropriate specialist clinicians when caring for:
- very young infants
- infants or children born prematurely
- infants or children with significant relevant comorbidities including chronic lung disease
- infants or children with chronic illnesses

and take special care to exclude other diagnoses in infants and children presenting with recurrent wheezing.

This guideline covers diagnosis, natural history and management, infection control issues and indications for hospital admission and discharge. The full guideline can be found at www.mihsr.monash.org/hfk/pdf/hfkbronchiolitisguideline.pdf.

Recommendations

Diagnosis

The diagnosis of bronchiolitis is clinical – no diagnostic test confirms the disease. There is very little research evidence on which to establish evidence based recommendations for the diagnosis of bronchiolitis. However, there is a consensus of opinion in the medical literature that an infant presenting with initial symptoms and signs of upper respiratory tract infection followed by cough, tachypnoea, inspiratory crepitations and wheeze is likely to have bronchiolitis.

✓ An infant or child less than 18 months of age presenting with initial symptoms and signs of upper respiratory tract infection followed by cough, tachypnoea, inspiratory crepitations and wheeze is likely to have bronchiolitis

Fever, hypoxia, and accessory muscle use may also be present in an infant or child with bronchiolitis. Chest examination may be clear, but a prolonged expiratory phase with wheeze, rhonchi and crepitations may be found. Infants and children with bronchiolitis may also have dehydration resulting from the combination of difficulty feeding and increased insensible water loss due to tachypnoea.

Differential diagnoses

There is very little research evidence on which to establish evidence based recommendations for alternate diagnoses for infants and children with suspected bronchiolitis. The Guideline Development Group (GDG) agreed that in an infant or child with bronchiolitis-like symptoms and signs, conditions including asthma, pneumonia, whooping cough, cystic fibrosis, congestive heart failure, and an inhaled foreign body should be excluded (*Table 1*).

D Consider other diagnoses in infants or children with recurrent bouts of bronchiolitis-like symptoms

The GDG agreed that bronchiolitis should also be distinguished from transient wheezing of childhood – a condition characterised by recurrent bouts of wheezing in the absence of an underlying structural abnormality – in an otherwise well infant or child. In most infants and children with transient wheezing, the symptoms do not cause significant respiratory distress and resolve in the first 3–5 years of life as the airways mature.[1,2]

An infant or child with recurrent wheezing, particularly in the absence of symptoms of a viral infection, or an older aged child, may have asthma.

It is often difficult to distinguish between the infant or child who is wheezing as a result of a viral infection of the bronchioles (bronchiolitis), and the infant or child who is wheezing because a viral infection has caused an acute exacerbation of asthma. Consider a trial of a single dose of β_2 bronchodilators in patients over 9 months of age, particularly 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.

D An infant or child with bronchiolitis-like symptoms who responds to treatment with a bronchodilator should be treated according to asthma management guidelines

Investigations

Chest X-rays

No studies were identified which investigated the accuracy of chest X-rays in diagnosing bronchiolitis. While many infants or children with bronchiolitis have abnormalities on chest X-ray, there is conflicting evidence concerning whether chest X-ray findings correlate well with disease severity.[7,8] Studies suggest that in most cases of bronchiolitis, chest X-rays offer no information that is likely to improve treatment and may lead to inappropriate use of antibiotics.[9,10]

D The diagnosis of bronchiolitis is clinical. Chest X-rays should not be used to diagnose bronchiolitis

✓ Chest X-rays may occasionally be warranted in infants and children where the diagnosis is uncertain

D Chest X-rays should not be routinely performed in infants and children with bronchiolitis

D Consider a chest X-ray in infants and children who have severe respiratory distress, or who are at high risk of severe illness

Virologic tests

Bronchiolitis can be caused by a number of different viruses and identification of the viral aetiology is not necessary for diagnosis. Respiratory syncytial virus testing may be justified for assessment or management of an infant or child with bronchiolitis:

- in a young, febrile infant to support a clinician's diagnosis and aid ongoing management
- where RSV specific therapies are being evaluated for effectiveness
- for surveillance of lower respiratory tract infections in infants.

D The diagnosis of bronchiolitis is clinical. Virologic tests should not be used to diagnose bronchiolitis

D Consider virologic testing in infants and children with suspected bronchiolitis if the diagnosis is unclear or in young febrile infants with bronchiolitis

D If polymerase chain reaction (PCR) testing is available, use nasopharyngeal or nasal swabs to collect specimens for virological testing. If PCR testing is not available, use nasopharyngeal aspirates to collect specimens for virological testing

Blood counts

Concurrent bacteraemia is rare in infants or children with bronchiolitis and routine blood cultures are not required.

D Blood cultures should not be routinely performed in infants or children with bronchiolitis

Table 1. Algorithm for the management of a child with bronchiolitis in general practice

Diagnosis			
Bronchiolitis is likely if a child aged less than 18 months of age presents with: • initial signs and symptoms of an upper respiratory tract infection • cough • tachypnoea • inspiratory crepitations • wheeze The diagnosis of bronchiolitis is clinical. Chest X-rays and virologic tests should NOT be used to diagnose bronchiolitis		Consider alternate diagnoses in a child who presents with: • recurrent wheezing • cough as the predominant symptom • persistent, or repeated and prolonged, respiratory symptoms • failure to thrive • cardiac murmur, oedema or a history of slow onset of symptoms • sudden onset of symptoms, history of coughing/choking followed by expiratory wheeze, loss of voice, or differential air entry	
Trial of bronchodilator therapy			
A child with bronchiolitis-like symptoms who responds to treatment with a bronchodilator is likely to have asthma Consider a trial of a single dose of β_2 agonist bronchodilators in patients over 9 months of age, particularly with recurrent wheezing			
Assessment of severity of disease*			
Mild	**Moderate**	**Severe**	**Life threatening**
• Normal respiratory rate	• Increased respiratory rate	• Markedly increased respiratory rate	• Cyanosis • Poor respiratory effort
• No or subtle accessory muscle use	• Minor accessory muscle use	• Moderate/marked accessory muscle use • Nasal flare and/or grunting	• Maximal accessory muscle use/ exhaustion • Apnoeas
• Normal heart rate	• Increased heart rate	• Markedly increased heart rate	
• Able to feed	• Difficulty feeding • Minor dehydration	• Unable to feed • Marked dehydration	
	• Crepitations	• Toxic appearance • Sweaty • Irritable	
• Oxygen saturation >95%*	• Oxygen saturation 90–95%*	• Oxygen saturation <90%*	
Take special care with children <3 months of age or born at <36 weeks gestation, and those who have underlying cardiorespiratory disease as they have an increased risk of more severe disease and apnoea. Consider virologic testing to guide management in young febrile infants			
Initial treatment			
	• Send to hospital if requiring oxygen • Consider sending to hospital if not tolerating oral feeds	• Send to hospital by ambulance	• Send to hospital by ambulance
	• Consider oxygen if child is less than 3 months of age, has increased work of breathing, decreased oxygenation during feeds or saturation 90–92%	• Provide oxygen	• Provide oxygen
• Encourage small frequent feeds	• Encourage small frequent feeds		
• If nasal congestion, trial saline nasal drops	• If nasal congestion, trial saline nasal drops		
• Provide patient information, including reasons to return • Arrange review in next 2 days • Send home if stable	• Provide patient information, including reasons to return • Arrange review in next 2 days • Send home if stable	• Stay with the patient until the ambulance arrives • Send written assessment and referral details	• Stay with the patient until the ambulance arrives • Send written assessment and referral details
Note: If the patient has signs or symptoms across categories, always treat according to the most severe features * Oxygen saturation is an indicator of severity, however, it is recognised that this form of assessment will not be available to most GPs. Treatment should not be based on a child's oxygen saturation alone			

Urine culture

Routine urine culture is unlikely to be helpful in infants or children with bronchiolitis in whom sepsis is not suspected.

D Urine cultures should not be routinely performed in infants or children with bronchiolitis

Blood gas analysis

No studies were identified which examined the impact of arterial blood gas analysis on the management of infants or children with bronchiolitis.

In the absence of evidence about the role of arterial blood gas analysis, the GDG agreed to the following recommendations:

D Blood gas analysis should not be routinely performed in infants or children with bronchiolitis

D Blood gas analysis should be performed in infants or children with life threatening or severe disease

D Consider blood gas analysis in infants or children with moderate disease

Assessment

Assessment of bronchiolitis is focused on classification of severity of disease as either:

- mild
- moderate
- severe, or
- life threatening.

Seven studies were found which examined the relationship between severity of bronchiolitis and clinical indicators.[11–17] The studies used a number of different methods to assess the underlying severity of disease. These included:

- oxygen saturation on presentation (measured by pulse oximetry or arterial blood gas analysis), and the need for:
  - oxygen supplementation
  - mechanical ventilation
  - hospital admission
  - intensive care unit admission.

Clinical signs and symptoms listed in *Table 2* are based on the above described evidence and the consensus opinion of the GDG.

Patients at high risk

✓ Infants less than 3 months of age or born at less than 36 weeks gestation, and infants or children who have underlying cardiorespiratory disease, are at higher risk of more severe disease

Nonpharmacological management

Oxygen

There is little research investigating the effectiveness of oxygen in infants and children with bronchiolitis. However, the rationale for its use is clear. It is a mainstay of therapy in the hospital setting.

Feeding and hydration

Infants and children with bronchiolitis are prone to becoming dehydrated as a result of the combined effects of poor oral intake and increased water loss due to increased respiratory rate and work of breathing.

There is no evidence to determine whether infants or children with bronchiolitis should continue oral feeding while acutely unwell. Oral feeding is important in infants and children with

Table 2. Assessment of severity of disease

Mild	Moderate	Severe	Life threatening
Any one or more of these features			
• SpO_2 >95%	SpO_2 92–95%	SpO_2 <92%	
• Normal respiratory rate	• Increased respiratory rate	• Markedly increased respiratory rate	
• Subtle or no accessory muscle use	• Minor accessory muscle use	• Moderate/marked accessory muscle use • Nasal flare or grunting	• Maximal accessory muscle use/exhaustion • Poor respiratory effort • Apnoeas
• Normal heart rate	• Increased heart rate	• Markedly increased heart rate	
• Able to feed	• Minor dehydration • Some limitation of ability to feed	• Marked dehydration • Unable to feed	
	• Crackles	• Toxic appearance • Sweaty • Irritable	• Cyanosis
Note: Infants or children with symptoms across categories should be treated according to the most severe features			

bronchiolitis as it helps to avoid dehydration. However, it may also increase respiratory distress, particularly in infants and children with severe or life threatening bronchiolitis. In the absence of evidence, the GDG made the following consensus recommendations:

D Infants or children with mild or moderate bronchiolitis may continue oral feeding unless it increases their respiratory distress

In children with signs of severe dehydration or those with increasing respiratory distress and inability to feed, infants and children with bronchiolitis may need intravenous or nasogastric fluids.

Chest physiotherapy

A Cochrane systematic review[12] found no evidence for the effectiveness of chest physiotherapy on clinical outcomes in bronchiolitis.

A Chest physiotherapy should not be routinely used for the treatment of bronchiolitis

Mist, steam or nebulised saline

No studies were identified which investigated the effectiveness of mist, steam or nebulised saline in the treatment of infants and children with bronchiolitis. In the absence of evidence for effectiveness the GDG agreed that:

D Mist, steam and nebulised saline should not be routinely used for the treatment of bronchiolitis

Saline drops

It has been suggested that saline nasal drops might ease congestion in infants and children with bronchiolitis. However, there is no evidence to determine whether they are effective. In the absence of evidence the GDG agreed that:

D Saline nasal drops should be trialled in infants with bronchiolitis who have nasal congestion, particularly before feeds

Suctioning

It has been suggested that nasal suctioning might help ease congestion in infants and children with bronchiolitis. However, there is no evidence to determine whether it is effective. In the absence of evidence, the GDG made the following consensus recommendation:

D Nasal suctioning may be trialled in infants or children with bronchiolitis

Apnoea management

There is little evidence to guide the management of infants and children with apnoea secondary to bronchiolitis. In light of the minimal evidence available the GDG made the following consensus recommendation:

D Infants and children with bronchiolitis who are at increased risk of apnoea as a result of age less than 3 months, premature birth or previous apnoea, should be closely monitored

Positioning

In the absence of clear evidence the GDG agreed that:

D Infants and children with bronchiolitis should be allowed to adopt the position they find most comfortable. Infants unable to position themselves may be placed in either a prone or supine position, with head slightly elevated
Because of the risk of SIDS, infants and children with bronchiolitis who are placed in a prone position should have continuous pulse oximetry monitoring, and the reasons for positioning the child this way should be explained to the parent

Pharmacological management

Nebulised adrenaline

A Cochrane systematic review[13] has investigated the effectiveness of nebulised adrenaline in the treatment of bronchiolitis and found no impact on hospital admission rates or length of stay. In addition, adrenaline has little impact on the clinical condition of infants and children with bronchiolitis.

A Adrenaline should not be routinely used for the treatment of bronchiolitis

β_2 agonist bronchodilators

A systematic review[14] investigated the effectiveness of β_2 agonist bronchodilators (salbutamol or albuterol) in the treatment of bronchiolitis and found that β_2 agonist bronchodilators have no impact on hospital admission rates or length of stay, have little impact on clinical condition, and may potentially cause harm.

A β_2 agonist bronchodilators should not be routinely used for the treatment of bronchiolitis

Bronchiolitis and asthma can however, be difficult to distinguish, particularly in older infants and young children. There is no evidence to determine at what particular age it is appropriate to consider asthma as an alternative diagnosis. Thresholds of between 8 and 12 months have been suggested. In light of this, the consensus recommendation of the GDG was to:

D Consider a trial of a single dose of β_2 agonist bronchodilators in patients over 9 months of age, particularly those with recurrent wheezing

Infants and children who respond to a trial with β_2 agonist bronchodilators should be managed according to asthma guidelines. Further to this, the GDG agreed to recommend that:

D β_2 agonist bronchodilators should not be continued if an infant or child does not respond to an initial trial

Ipratropium bromide

A systematic review[14] concluded that there was little evidence to support a routine role for ipratropium bromide in treating patients with bronchiolitis as it has no effect on length of hospital stay or clinical outcomes. In view of this the GDG agreed that:

A Ipratropium bromide should not be routinely used for the treatment of bronchiolitis

Antibiotics

In light of the evidence[15] that antibiotics do not affect length of hospital stay or clinical outcomes in bronchiolitis, the GDG agreed that:

A Antibiotics should not be routinely used for the treatment of bronchiolitis

The GDG noted that a small number of infants and children with bronchiolitis will also have a secondary bacterial infection, which would be suitable for antibiotic treatment.

D Consider antibiotics in infants and children with bronchiolitis who have clinical signs or symptoms of a secondary bacterial infection

Corticosteroids

Two systematic reviews[16,17] and two subsequent randomised controlled trials[18,19] looked at the effectiveness of corticosteroids in bronchiolitis. They conclude that corticosteroids have no effect on clinical outcomes in bronchiolitis, and have minimal, if any, impact on length of hospital stay. In view of this the GDG agreed that:

A Corticosteroids should not be routinely used for the treatment of bronchiolitis

Ribavirin

Ribavirin is an antiviral medication administered as a continuous aerosol for a number of hours per day. The authors of a systematic review[20] of its efficacy in the management of RSV bronchiolitis concluded that they 'did not find evidence that ribavirin use led to consistent or more than transient improvements in clinical outcomes'. Clinical use of ribavirin is also likely to be constrained by its high cost and the potential risk to health care personnel, as ribavirin is known to be teratogenic and embyrolethal.

In the absence of conclusive evidence for effectiveness of ribavirin in bronchiolitis and in light of its high cost and serious potential health risks, the GDG agreed that:

A Ribavirin should not be routinely used for the treatment of bronchiolitis

Immunoglobulin

Two studies[21,22] found immunoglobulin to be ineffective in the treatment of bronchiolitis. In view of this the GDG agreed that:

A Immunoglobulin should not be routinely used for the treatment of bronchiolitis

Analgesics and antipyretics

No studies were identified which examined the effectiveness of analgesics or antipyretics in infants or children with bronchiolitis.

The GDG noted that some clinicians are concerned that analgesics and antipyretics may potentially mask clinically important symptoms, or that reducing fever may not be appropriate as it may be a physiologically important response to infection. Equally, other clinicians believe that reducing fever can lead to increased appetite, decreased irritability and, therefore, potentially better outcomes.

The GDG noted that analgesics and antipyretics are not treatments for bronchiolitis as such, but may be useful adjuncts to treatment, by decreasing fever and irritability. In the absence of evidence, the GDG agreed that paracetamol or ibuprofen may be useful in infants or children with bronchiolitis, but that clinicians must carefully consider and exclude other potential causes of fever, irritability and pain before giving these medications.

D Infants and children with bronchiolitis and fever may be treated with paracetamol or ibuprofen to bring their temperature down and reduce irritability
Carefully consider and exclude other potential causes of fever, irritability and pain

Oral antitussives, expectorants or decongestants

No studies were identified which examined the safety or effectiveness of oral antitussives, expectorants or decongestants in infants or children with bronchiolitis. In the absence of evidence the GDG agreed that:

D Oral antitussives, expectorants or decongestants should not be routinely used for the treatment of bronchiolitis

Level of care

There is no evidence to determine when infants and children with bronchiolitis should be referred to particular levels of medical care. In the absence of evidence, the GDG agreed to the following recommendations:

D Infants and children with mild bronchiolitis may be managed by a GP and sent home for observation if the GP is confident the parent/carer can adequately manage the infant/child's illness

D Infants and children with moderate bronchiolitis who do not require oxygen or fluid therapy may be managed by a GP, otherwise the infant or child should be sent to a hospital

D If a GP is not available, infants and children with moderate bronchiolitis should be taken to a hospital emergency department

When should an ambulance be called?

There is no evidence to determine when infants and children with bronchiolitis should be taken to hospital by ambulance. The main reason to call an ambulance to take an infant or child to hospital, rather than to take the child by car, is concern that the degree of airway obstruction may suddenly increase and the child's condition may therefore rapidly deteriorate.

D All infants or children with severe or life threatening bronchiolitis should be sent by ambulance to a hospital emergency department

Most infants and children with bronchiolitis will have mild or moderate bronchiolitis and will be observed in a hospital emergency department and then sent home. A small number of infants or children with bronchiolitis may require a short hospital admission.

Summary of important points

- If an infant less than 18 months of age presents with initial signs and symptoms of an upper respiratory tract infection followed by the following symptoms they are likely to have bronchiolitis:
  - cough
  - tachypnoea
  - inspiratory crepitations, and
  - wheeze.
- 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 in those with severe respiratory distress or at high risk of severe illness.
- 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.
- Consider a trial of a single dose of β_2 agonist bronchodilators in patients over 9 months of age, 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.
- Median duration of illness is 2 weeks, approximately 20% of patients have symptoms longer than 3 weeks.
- In mild or moderate cases tolerating feeds and not requiring oxyen:
  - suggest small, frequent feeds
  - provide parent information
  - offer review.
- In moderate cases not tolerating feeds and/or requiring oxygen:
  - provide parent information
  - send to hospital.
- In severe or life threatening cases:
  - give oxygen
  - call an ambulance.

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Resource. Parent information

Medical & nursing care for your child

If your child is distressed and having trouble breathing and feeding, they may need to be admitted to hospital.

Staff may need to:

- Watch your child closely so that they do not get more unwell
- Give your child oxygen
- Give your child some fluids through a tube in their nose (nasogastric tube) or a drip into a vein (intravenous/IV therapy)

Important points to remember

- Bronchiolitis is common in children under 18 months of age.
- Children with bronchiolitis need to rest and drink small amounts more often.
- Bronchiolitis is infectious in the first few days of the illness.
- Children are usually sick for 3-5 days, and then recover over the next 7-10 days. The cough may continue for up to 4 weeks.
- Smoking in the home increases the chance of children having respiratory illness and can make it worse.
- Antibiotics are not given because bronchiolitis is caused by a virus. Antibiotics don't cure viruses.

Did you know?
If you don't already have a GP you can find a child friendly GP on the web: www.healthforkids.net.au

Southern Health Emergency Departments

Monash Medical Centre
246 Clayton Road, Clayton

Dandenong Hospital
David Street, Dandenong

Casey Hospital
52 Kangan Drive, Berwick

These websites have more information on bronchiolitis and other illnesses:
http://www.betterhealth.vic.gov.au/
www.rch.org.au/kidsinfo/

The information provided in this brochure is adapted from the Royal Children's Hospital Parent Information Sheet on Bronchiolitis available at http://www.rch.org.au/kidsinfo/

Southern Health

Disclaimer: This health information is for general education purposes only. It should not be used in place of medical advice. Please consult with your doctor and or other health care professionals to ensure individualised and appropriate health care is tailored for your child.

Information for Parents of Children with Bronchiolitis

What is bronchiolitis?

Bronchiolitis is a common chest infection in infants and young children. It usually occurs in children under 18 months, but can occur in older children as well.

A virus in the lungs causes children with bronchiolitis to have difficulty breathing.

Children with bronchiolitis need to rest and have small feeds more often, so they don't get too tired when feeding.

What are the symptoms of bronchiolitis?

The illness begins as a cold. After a day or so your child begins to cough, and their breathing may become fast and sound wheezy. This fast wheezy breathing can make it difficult for your child to drink. Some children may need to be admitted to hospital because of these problems.

The first symptoms your child may have are the same as a common cold. These symptoms usually last for 1-2 days:

- A stuffy or runny nose
- Sneezing
- Cough

These symptoms can be followed by breathing problems, such as:

- Very fast breathing
- Noisy breathing (wheezing)
- Drawing in of the chest wall with each breath
- Poor feeding
- Fever

Children with bronchiolitis are usually worse on the 2nd or 3rd day of the illness and are often sick for 7-10 days. The cough may continue for up to 4 weeks.

What care should I give at home?

Did you know?
Rest and regular fluids are best for a child with bronchiolitis.

- Encourage rest.
- Give more frequent breast feeds or smaller amounts of fluid more often. This way your child does not get too tired when feeding. If your child does not get enough drinks they can become dehydrated.
- You can give paracetamol (e.g. Panadol, Dymadon) in the recommended dose if your child is irritable.
- Avoid contact with other babies in the first few days of the illness, as bronchiolitis is an infectious disease.
- Ensure a smoke free environment. Always try not to smoke in the home or around your child. This is especially important for children with any respiratory illness.

Did you know?
Mist, steam or humidified air have not been shown to help symptoms of bronchiolitis.

When should I take my child to a doctor?

Make an appointment to see your doctor if:

- your child's cough is getting worse
- your child is having less than half their normal feeds or are refusing drinks
- your child seems very tired or is more sleepy than usual
- you are worried in any way

When should I take my child to the hospital?

You should go to your nearest hospital if your child:

- has difficulty breathing (very fast or not regular breaths)
- cannot feed properly because of coughing or wheezing
- is changing colour in the face when they cough
- has skin that is pale and sweaty

When should I call an ambulance?

If you are concerned about your child's breathing, call 000 for an ambulance.

Call 000 for an ambulance if your child:

- has great difficulty breathing
- becomes floppy, agitated or collapses
- becomes blue or very pale in the lips or face