

Memo:

Pediatric Emergency Department (Pronto Soccorso) tel. 0498213515



Salus Pueri Foundation has been active since 1992 and its main goal is to raise funds to support the activities of the Pediatric Hospital of Padua. Every day we work to make our hospital a welcoming and child and family friendly place, and to promote a culture where humanization is at the heart of care.


These parents information guides of the Pediatric Emergency Department of Padua have been created to facilitate the provision of clear and complete information to parents whose kids are experiencing acute health issues.

The parents information guides are not intended to replace the recommendations and tailored advice provided by your pediatrician.

Support the Pediatric Hospital of Padua!

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Dipartimento per la Salute
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Acute asthma/ wheezing

Parents
information
guides



Acute asthma/wheezing

What is acute asthma/wheezing?

Acute asthma/wheezing is an episode of bronchial obstruction, which manifests as cough, respiratory distress and whistle-like respiratory sounds.

These symptoms are due to inflammation of the bronchial wall that obstructs the bronchi, narrowing the small air passages in the lungs and making it difficult for air to get in and out of the lungs. As a consequence, breathing becomes faster and more difficult, leading to intercostal and jugular retractions, movements of the abdomen during breathing and, in the most serious cases, to difficulty in speaking, and deterioration of child's general appearance.

Background information

Acute asthma/wheezing is associated with different conditions:

- **In children up to 5-6 years of age**, it is often expression of bronchial inflammation during infections, most frequently viral. It is a frequent problem that can interest up to 40% of children in this age group. These children usually present several episodes (recurrent bronchospasm) over time, which gradually disappear as the child grows older.
- **In children from 6 years of age** acute wheezing is more frequently an acute asthmatic exacerbation. Asthma is an airway chronic inflammatory disease that interests one out of 8-10 children. In children with asthma bronchospasm can be triggered by different conditions such as viral respiratory infections (the most frequent), but also exposure to pollen, dust mites, other allergens like animal fur or hair, environmental irritants, cigarette smoke, exposure to cold, and physical exercise.

Knowing these factors helps avoiding them, if possible.

In asthmatic children anti-flu vaccination is recommended.

When to urgently seek medical advice or go to the Hospital Emergency Department (Pronto Soccorso)

If the child presents:

- Worsening respiratory distress (very fast/irregular breathing, important jugular or intercostal retractions, use of abdominal muscles to breathe) or worsening of the respiratory effort compared to prior medical evaluation
- Difficulty in speaking
- Worsening of child's general condition
- Lack of improvement after usual treatment at home

Care at home

Most episodes of acute asthma/wheezing can be treated at home.

It is important that every child who suffers from asthma has a clear action plan prescribed by the pediatrician or by the respiratory medicine specialist, to be followed in case of acute exacerbations. The action plan should be kept in a place where you can find it easily.

! Chronic and daily use of medications such as salbutamol (Broncovaleas or Ventolin) for extended periods of time indicates a poor asthma control and can be dangerous.

Treatment

Two classes of medications are used to treat acute asthma/wheezing:

Short-acting **bronchodilators** (salbutamol - Broncovaleas or Ventolin) are the first-choice treatment.

They act by rapidly dilating the bronchi, making it easy for the air to pass through them and alleviating the respiratory effort and distress.

The preferred route for administration is the inhalation route, with a pre-dosed spray and spacer, or with a nebulizer.

At home, the bronchodilator can be administered multiple times (maximum once every 4 hours).

Only in severe forms and only in the first hour, salbutamol can be administered every 20 minutes.

! If the child continues to breathe poorly despite the administration of salbutamol as advised by your child's action plan, s/he must be taken to the Hospital Emergency Department immediately.

Steroids (anti-inflammatory) act by reducing inflammation and facilitating bronchodilators action.

They can be used:

- In the acute phase (when necessary) systemically, preferably by mouth, usually for 3-5 days (in children hospitalized for severe respiratory distress and wheezing, they can be administered intravenously)
- In the maintenance phase or for prevention (when necessary) by pre-dosed inhaler and spacer (dose and duration of the therapy can change case by case depending on the pattern of symptoms).