Asthma, allergy and the school environment: Supporting children and young people

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Asthma is a long term condition caused by inflammation of the airways leading to wheeze, cough, breathlessness and chest tightness. It is the most common chronic condition in childhood, affecting around 1.1 million children in the UK,[1] equivalent to three children in every classroom. Many children with asthma also have atopy, meaning they are more likely to develop allergic conditions such as eczema or allergic rhinitis.

The link between asthma and allergy in children and young people

Asthma and allergy frequently occur together. Around 80–90% of children with asthma are sensitive to at least one allergen,[2] making allergic asthma the most common type in childhood. When allergies are poorly controlled, asthma symptoms often worsen. For this reason, it is essential that children, young people and their families understand the connection between asthma and allergy, and that both conditions are managed together.

In school, unrecognised or unmanaged allergies can lead to increased symptoms, reduced participation in activities and more time away from learning.[3] Supporting children through an annual asthma review to identify and avoid their triggers is a simple cost effective way to improve asthma control and may reduce the need for additional medication.

Common allergens and symptoms

Frequent allergy triggers in children:

- Tree and grass pollen
- House dust mites
- Pet dander (cats, dogs, small animals)

Typical allergy symptoms:

- Wheezing or coughing
- Sneezing
- Blocked or runny nose
- Swelling
- Itchy eyes, lips, throat or mouth
- Rashes or hives
- Sinus pain or pressure

These symptoms can significantly affect a child's comfort, sleep, concentration and confidence – especially during the school day.

Allergic rhinitis in the school setting

Allergic rhinitis (hay fever) affects 10–15% of children and young people in the UK and is closely linked with asthma.[4] Symptoms may be:

- **Perennial** – triggered by indoor allergens such as dust mites, pets or mould; often worse in winter when children spend more time indoors.
- **Seasonal** – triggered by grass, tree or weed pollen; symptoms peak in spring and summer, often affecting outdoor play, physical education (PE) lessons and exam performance.

Poorly controlled rhinitis can lead to fatigue, poor concentration, irritability and reduced academic performance. Recognising symptoms and supporting management can greatly improve the quality of life of the child or young person.

Managing asthma and allergy together

Following the principle of 'one airway, one disease',[5] allergy management should be included in every asthma review. Before new treatments are considered, healthcare professionals should check:

- Adherence to current medication
- Inhaler and nasal spray technique
- Exposure to known triggers

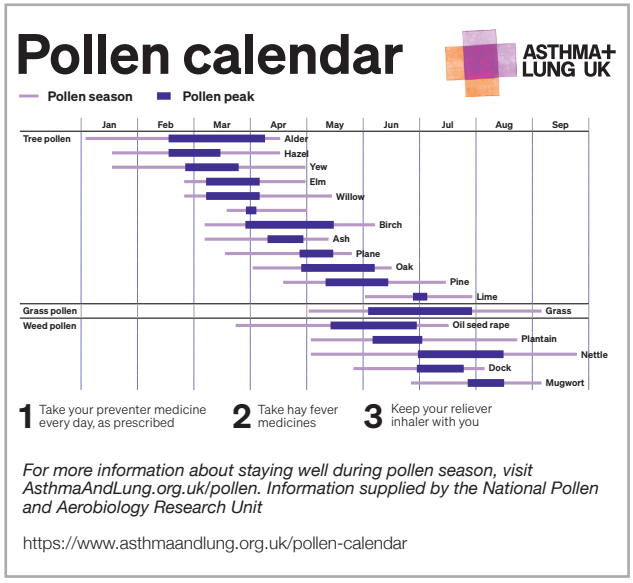
Schools can reinforce these messages by ensuring children use their inhalers correctly and have access to their medication when needed.

Non pharmacological management in children and schools

Reducing exposure to allergens could prevent up to 45% of asthma related hospital admissions. Helpful strategies include:[6]

- Keeping windows closed during high pollen periods
- Minimising exposure to classroom pets
- Wearing sunglasses outdoors
- Applying a barrier ointment around the nostrils during the pollen season
- Damping dusting surfaces
- Replacing carpets with hard flooring where possible or vacuuming regularly
- Reducing soft furnishings that trap dust

Schools can support by monitoring pollen forecasts, adjusting outdoor activities during peak times and ensuring classrooms are well ventilated and clean. The Pollen calendar[7] (below) can help support when to initiate treatment as this should be before symptoms start. Patients should be encouraged to start antihistamines **before** symptoms; most take 4–6 hours to have optimum efficacy. Providing information can prevent a delay in starting treatments.



Pharmacological management

Many children self manage allergic rhinitis with over the counter treatments, but professional guidance can improve outcomes. Nasal saline rinsing is a simple low cost option that may reduce symptoms and the need for medication.

- **Antihistamines**: These are the first line treatment for allergic rhinitis. Oral, intranasal or ocular antihistamines may be used. Daily treatment is often most effective, especially when started before symptoms begin—for example, ahead of the pollen season.
- **Intranasal corticosteroids**: These reduce inflammation and congestion and are safe for children when used as directed. Mometasone and fluticasone have the lowest systemic absorption, which is important for children already using steroid treatments for asthma or eczema. Parents may need reassurance about safety and correct technique.

A combination of antihistamines and intranasal steroids may be needed for optimal control (see the Primary Care Respiratory Society (PCRS) allergic rhinitis article for more information: https://www.pcrs-uk.org/resource/current/allergic-rhinitis-common-problem-not-be-sneezed).

Technique matters

Correct nasal spray technique is as important as correct inhaler technique. Children, families and school staff benefit from clear demonstrations and trusted resources such as Asthma & Lung UK (https://www.asthmaandlung.org.uk/living-with/inhaler-videos/nasal-spray).

Classification of allergic disease

Intermittent disease	Persistent disease
Symptoms less than 4 times a week *or* Periods of less than 4 weeks at a time	Symptoms 4 or more times a week *or* Periods of more than 4 weeks at a time
Mild symptoms	**Moderate/severe symptoms**
No impact on sleep No impact on daily activities No impact on school life No troublesome symptoms	Disturbed sleep Negative impact on daily activities Negative impact on school life Troublesome symptoms

When to refer

Access to allergy specialists varies greatly across regions and there are often long wating lists. It is estimated that 11% of referrals to secondary care for allergic rhinitis are rejected due to all treatment options not being tried in primary care.[8]

Patients who have not achieved optimum control with a combination fixed dose intranasal corticosteroid and intranasal antihistamine or combined intranasal corticosteroid and oral antihistamines should be considered for referral to secondary care.

Personalised asthma action plans in schools

The National Review of Asthma Deaths (NRAD)[9] highlighted that only 51% of patients had triggers documented, despite the known impact of atopy on asthma control.

Every child with asthma should have a written personalised asthma action plan (PAAP), with a copy also provided for school, that includes:

- Current medication
- Known triggers
- Steps to take if symptoms worsen
- Emergency procedures

Steroid use and safety

Children may also use steroids for asthma, eczema or allergic rhinitis. When used long term, some children may require a Steroid Treatment Card to record doses and treatment duration. Regular review helps ensure the lowest effective dose is used and reduces the risk of adrenal suppression.[10]

Anaphylaxis and asthma risk

Anaphylaxis is a severe allergic reaction that can be life threatening. Children with both asthma and food allergies are at higher risk of severe reactions and are more likely to have severe asthma.[11]

Children at risk should have:

- An epinephrine auto injector available at all times
- A paediatric allergy action plan issued by the child or young person's healthcare practitioner (an example can be found at https://www.bsaci.org/resources/resources/paediatric-allergy-action-plans/)
- A personalised asthma action plan that clearly outlines emergency steps (an example can be found at https://www.asthmaandlung.org.uk/healthcare-professionals/adult-asthma/AAPs)

Schools must ensure staff are trained to recognise symptoms and act quickly. Benedict's Law is a set of national protections designed to improve allergy safety in schools. Currently, these protections are agreed to come into force in England. More information can be found at https://benedictblythe.com/benedicts-law/

Supporting schools, families and young people

Improving awareness of allergy and asthma links, ensuring early treatment and reducing exposure to triggers can significantly improve quality of life and educational outcomes for children and young people. Annual asthma reviews provide an opportunity to have conversations with young people and families around school attendance and asthma-related absences and offer support by signposting to their local school nursing team.

Participation in local Asthma Friendly Schools programmes is an excellent opportunity for health and education to work together

to improve outcomes for children and young people with asthma. An Asthma Friendly School is one where children with asthma are safe and can fully participate in all elements of school life. By signing up, schools are committing to ensuring that all school staff know what to do if a child has an asthma attack.

References
1. Royal College of Paediatrics and Child Health (RCPCH). State of Child Health in the UK: Asthma. 2020. Available at: https://stateofchildhealth.rcpch.ac.uk (Accessed 24 March 2026)
2. Sheehan WJ, Phipatanakul W. Indoor allergen exposure and asthma outcomes. Curr Opin Pediatr 2016;28(6):772–7. https://doi.org/10.1097/MOP.0000000000000421
3. Marsh V. Managing allergic rhinitis in children and young people. Practice Nursing 2022;33:190–4. Available at: https://www.practicenursing.com/content/clinical/managing-allergic-rhinitis-in-children-and-young-people
4. Scadding GK, Durham SR, Mirakian R, et al; British Society for Allergy and Clinical Immunology. BSACI guidelines for the management of allergic and non-allergic rhinitis. Clin Exp Allergy 2008;38(1):19–42. https://doi.org/10.1111/j.1365-2222.2007.02888.x
5. Giavina-Bianchi P, Aun M, Takejima P, Kalil J, Agondi R. United airway disease: current perspectives. J Asthma Allergy 2016;9:93–100. https://doi.org/10.2147/JAA.S81541
6. Murray CS, Foden P, Sumner H, et al. Preventing severe asthma exacerbations in children. A randomized trial of mite-impermeable bedcovers. Am J Respir Crit Care Med 2017;196:150–8. https://doi.org/10.1164/rccm.201609-1966OC
7. Asthma UK. Pollen calendar. 2024. Available at: https://www.asthmaandlung.org.uk/pollen-calendar/ (accessed 10 March 2026)
8. Allergy UK. Meeting the challenges of the National Allergy Crisis: A report from the All Party Parliamentary Group for Allergy and the National Allergy Strategy Group. 2021. Available at: https://www.allergyuk.org/wp-content/uploads/2021/10/Meeting-the-challenges-of-the-national-allergy-crisis-2021.pdf
9. Royal College of Physicians. Why asthma still kills. The National Review of Asthma Deaths (NRAD). 2014. Available at: https://www.rcp.ac.uk/media/i2jjkbmc/why-asthma-still-kills-full-report.pdf
10. Ahmet A, Kim H, Spier S. Adrenal suppression: A practical guide to the screening and management of this under-recognized complication of inhaled corticosteroid therapy. Allergy Asthma Clin Immunol 2011;7:13. https://doi.org/10.1186/1710-1492-7-13
11. Wang J, Liu AH. Food allergies and asthma. Curr Opin Allergy Clin Immunol 2011;11(3):249–54. https://doi.10.1097/ACI.0b013e3283464c8e