Asthma Pack for Primary Schools

What is Asthma?  What Causes It?

What to do if a Child has an Asthma Attack

Medication
This document has been compiled by the members of the Bolton School Nursing Asthma Special Interest Group

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The parents of two children with asthma who both felt that this document would prove to be a valuable aid in the management of asthma in primary schools.

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INTRODUCTION AND BACKGROUND

Dr Clive Tovey carried out a Survey over a period of one week in June 1999 in 75 Bolton primary schools, his aim being to see what children use to treat acute asthma in the community. A school audit would provide a ‘snapshot’. Tovey concluded that a large number of children with asthma were not taking appropriate medication to school. His conclusions are borne out by Asthma UK (2004), in which the number of children having asthma symptoms requiring treatment is estimated at 1 in 8.

The Asthma Exemplar (Department of Health 2004) describes what children can expect in school:

- Easy access to the appropriate medication
- A school asthma policy.

The aim of effective management must be to:

- Increase awareness of the needs of children with asthma
- Improve their quality of life
- Improve school attendance
- Reduce hospital admissions.

This strategy should be the result of teamwork and good communication.

Children with asthma must receive the appropriate support and understanding of all those with the responsibility of caring for them, yet studies have shown that teachers often lack understanding of asthma and what to do in an emergency.

This document has been produced with that in mind. It explains what asthma is, how it affects children, and how it should be appropriately and effectively managed in Bolton Primary Schools.
WHAT IS ASTHMA?

Asthma is a chronic condition in which the airways have a tendency to narrow. The airways are the small tubes that carry air in and out of the lungs. Asthma symptoms include coughing, wheezing, a tight chest and getting short of breath – but not every child will get all of these symptoms.

Children with asthma have airways that are almost always red and sensitive (inflamed). These airways can react badly when someone with asthma has a cold or other viral infection or comes into contact with an asthma trigger.

ASTHMA – A VARIABLE CONDITION

Asthma varies in severity. Some children will experience an occasional cough or wheeze, whereas for others the symptoms will be more severe. Avoiding known triggers where appropriate and taking the correct medication can usually control asthma effectively. However, some children with asthma will have to take time off school or have disturbed sleep due to asthma symptoms.

WHAT IS A TRIGGER?

A trigger is anything that irritates the airways and causes the symptoms of asthma to appear. There are many asthma triggers. Common ones include colds, viral infections, house dust mites, pollen, cigarette smoke, furry or feathery pets, exercise, air pollution, laughter and stress. Everybody's asthma is different and everyone will have his or her own triggers. Most people have several. It is important that children with asthma get to know their own triggers and try to avoid them or take precautions.

WHAT HAPPENS TO THE AIRWAYS?

When someone with asthma comes into contact with a trigger that affects their asthma, the airways do three things. The airway lining starts to swell, it secretes mucus, and the muscles that surround the airway start to get tighter. These three effects combine to make the tubes very narrow, which makes it hard to breathe in and out normally. When this happens asthma symptoms appear (cough, wheeze, a tight chest and shortness of breath). This is called an asthma attack. It is at this point that the person with asthma will need to take their reliever medication.
Within the school environment, asthma medication is usually given by inhalers.

**Reliever inhalers**

Relievers are blue in colour. This is the inhaler that children need to take immediately when asthma symptoms appear. Relievers work quickly to relax the muscles around the airways. As these muscles relax, the airways open wider and it gets easier to breathe again.

Children with asthma need to keep their relievers with them, or close at hand at all times. You never know when they might need it.

Some children’s asthma is so mild that they only get asthma symptoms once or twice a week (usually after exercise). The rest of the time their asthma causes them no problems whatsoever. They will probably just have a reliever inhaler. However, if they are using it more than once or twice a day or three to four times a week, then they should tell their doctor or nurse as their asthma is not under control and they will probably need a preventer as well.

Usually only reliever inhalers need to be kept in school.

Spacer devices for use with inhalers can be helpful.

**Preventer inhalers**

Preventers are usually brown, purple or orange.

These inhalers are either steroid or cromoglycate based. The steroid based preventers are very low dose and extremely safe and are different to the anabolic steroids such as body builders may use.

The preventer is the inhaler that should be taken every day (usually first thing in the morning and last thing at night) even when asthma seems well controlled. That is because preventer inhalers work over a period of time to help the airways calm down and stop them being so twitchy. This means they are less likely to react badly when someone with asthma has a cold or chest infection or encounters one of their triggers.

Normally preventer inhalers should not be needed by children in school hours. If they are needed, children may have to be reminded to take them.
PREVENTION OF EXACERBATIONS

Many children with asthma have symptoms that are provoked by exercise and therefore require their reliever inhaler to be available if they are taking part in any form of physical exertion. This includes routine PE lessons, swimming, sports days and exercise undertaken in playtime situations. In many instances, pupils who are affected in such a way may have been instructed to take their reliever medication approximately ten minutes prior to exercise. This should not be prevented.
ASTHMA AND YOUR LUNGS
HOW COMMON IS ASTHMA?

- 1 in 10 schoolchildren have asthma in the UK
- 1.1 million schoolchildren
- Approximately 3 children in a class
- 60 – 90 children in a school of 600
- 75% of these children will take their inhalers to school
- 30% of these children do not have immediate access to their inhalers at school
- 37,425 children were admitted to hospital in 2001 due to their asthma
- Every 16 minutes a child is admitted to hospital in the UK because of their asthma
- 25 children died in 2001 due to asthma.

(Asthma UK 2008)

WHAT DOES IT FEEL LIKE?

The following are quotes from a few Bolton children who have asthma:

- “It feels like someone is standing on my lungs”
- “It feels like I am being squashed”
- “When I’m having an attack it feels like a rope is being slowly tightened around my chest”

FAMOUS PEOPLE WITH ASTHMA

There is nothing to stop children with asthma achieving their full potential. Many famous and successful people have asthma including gold medal-winning athlete Paula Ratcliffe, footballer Paul Scholes, ‘Buffy’ star Sarah Michelle Gellar and pop star Tim Wheeler from Ash.
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Guidelines for the Positive Management of Asthma within Bolton Primary Schools

1. A letter and form to be completed will be sent home with all children to identify pupils with asthma. The form will allow for written permission to be given for school staff to administer asthma medication as appropriate.
   See example in this document.

2. A designated member of the school staff will compile a comprehensive register of children in school who have asthma.

3. All classroom staff should be made aware of the register. Information regarding children with asthma must also be made available to class teachers as children move up through school, and to any new teachers to the school.

4. Information regarding children with asthma should be shared with the named school nurse.

5. Children with asthma must have immediate access to their reliever inhalers when they need them.

6. Children over 7 years should be encouraged to carry their inhaler with them, but assistance given to administer if required.

7. For children under 7 years (or too immature to take personal responsibility for their inhaler/have special needs) staff should make sure that the inhaler is stored in a safe but readily accessible place in the classroom, and assistance given to administer if required.

8. All inhalers must be clearly labelled and marked with the pupil’s name and its expiry date.

9. Reliever inhalers must be available during PE, sports activities and school trips. The asthma register should be checked to ensure that pupils with asthma have their correct medication with them.

10. Parents are responsible for providing in-date inhalers and spacers (if necessary) clearly labelled.

11. If you wish to formulate an individual school asthma policy, please discuss this with your named school nurse.
   See example in this document.
MANAGEMENT OF ASTHMA SYMPTOMS

If child is having symptoms of wheeze, cough or breathlessness which are above normal for the child –

- Be calm and reassuring – this will make the child feel reassured.
- Give or allow the child to take 2 – 4 puffs (one after the other) of their regular blue inhaler, via a spacer, if available.
- If the child responds allow to carry on with normal activities.
- If no response within 10 minutes, or symptoms re-occur within 3 hours, repeat dose of blue inhaler and contact the child’s parents.

EMERGENCY ASTHMA TREATMENT

If child is speechless or fighting for breath:-

- Give 10 puffs (one after another) of blue inhaler immediately.
- Dial 999
- Contact parents

Remember! Too much blue inhaler is far better than too little.
FOR FURTHER INFORMATION OR ADVICE

The National Asthma Campaign’s web site contains accurate information about asthma.

All their booklets can be downloaded from the internet, as are their factsheets. An e-mail support service can also be accessed through their website:

www.asthma.org.uk

The National Asthma Campaign Helpline, staffed by asthma trained nurses offers support, but will only provide general information about asthma and not specific information relating to individuals:
Tel: 08457 010203

Kickasthma.org.uk

www.medicalconditionsatschool.org.uk

NHS Direct:
Tel: 0845 4647
www.nhsdirect.nhs.uk

Your named school nurse or a member of her team.

Children’s Community Nurses
Tel: 01204 390667

Amanda Jones,
Children’s Respiratory Nurse
Tel: 01204 390667

Your family Doctor, Practice Nurse or family Health Visitor.
Appendix
Dear Parents

We are compiling a register in school of children with asthma.

If you child has asthma, I would be grateful if you could complete the attached form and return it to your child's class teacher as soon as possible.

To help your child, we need to know what medication they are taking, when it needs to be taken and the possible triggers. All information will be confidential and only disclosed to certain staff and the school nurse.

Please remember:

Children who use reliever inhalers should keep one in school at all times. In infant classes, inhalers will be kept by the teacher in a place which can easily be identified and accessed.

The name and expiry date should be clearly marked on all equipment, ie inhaler and spacer.

Only reliever inhalers should be taken into school, ie blue inhaler. Do not take a preventer inhaler into school except on medical advice and with the agreement of the headteacher.

Every parent of a child who requires an inhaler is responsible for checking that it is working correctly, within expiry date and not empty.
ASTHMA MEDICATION FORM

Child’s full name .................................................................

Date of birth ........................................................................

Name of medication & device used ......................................

When to be taken? .............................................................

Possible triggers? ..............................................................

Consent for staff to administer medication Yes/No

I agree to this information being shared with the School Nurse

Signature ............................................................................

Parent/guardian

Date .....................................................................................
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Specimen School Asthma Policy

Introduction:

................................. School acknowledges that asthma is the most prevalent disease of childhood and recognises that many pupils on role in this school will have the disease.

Asthma sufferers should not be isolated by their disease, therefore asthma awareness should involve ALL members of the school community.

Explanation of disease:

● People with asthma have sensitive air passages which are quick to respond to anything that irritates them (triggers).

● This results in the air passages of the lungs becoming narrow, making it difficult to breathe in and out.

● Narrowing of air passages produces ONE or ALL of the following: coughing, breathlessness, wheezing, which may result in an asthma attack.

Identification of pupils affected:

● It is the responsibility of parents or guardians to notify school if their child has asthma.

● Treatment details should be given to school and accessible by staff at all times.

Prevention:

It is important to be aware that many factors provoke narrowing of the air and passages. Some of these factors are avoidable within the school environment, therefore appropriate steps should be taken. Trigger factors include: coughs and colds, cigarette smoke, furry animals, cold weather, chemical paints (sprays and vapours), grass and tree pollen and spores, extremes of emotion and exercise.

Treatment: Consists of two main forms

● Reliever inhalers (usually blue)

● Preventer inhalers (usually brown, purple or orange).

Only blue inhalers should be in school.

● Children should have access to their relief inhalers at all times.
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Treating symptoms of asthma:
If a child is complaining of/observed having symptoms of cough, wheeze or breathlessness which are above normal for the child -

- Be calm and reassuring - this will make the child feel reassured.
- Give or allow the child to take 2 - 4 puffs (one after the other) of their regular blue inhaler, via a spacer, if available.
- If the child responds allow to carry on with normal activities.
- If no response within 10 minutes, or symptoms recur within 3 hours, repeat dose of blue inhaler and contact child's parents.

Emergency asthma treatment:

If the child is speechless or fighting for breath:

- Give 10 puffs (one after another) of blue inhaler immediately.
- Dial 999
- Contact parents.

Remember!
Too much blue inhaler is far better than too little

- Asthma attacks are treatable
- Stay calm
- Sit the child comfortably – do not let the child lie down
- Do not crowd the child
- Speak quietly and calmly to the child – encourage slow deep breaths
- Do not put your arms around the child’s shoulders – this restricts breathing.

POLICY REVIEW

This policy will be reviewed at the end of each academic year.
HOW TO USE THE NEBUHALER

Multiple breath technique

1. Remove the cap, shake the inhaler and insert into the device.

2. Place the mouthpiece in the child's mouth making sure they seal their lips around it. Ensure the child's lips are behind the slightly higher plastic ring.

3. Encourage the child to breathe in and out slowly and gently. This will make a 'clicking' sound as the valve opens and closes.

4. Once the breathing pattern is well established, depress the canister with the free hand and leave the device in the same position as the child continues to breathe several more times. The child should take approx 4-5 breaths for each puff of medication.

5. Remove the device from the child's mouth.

6. For a second dose wait a few seconds and repeat sections 1-5.

7. This device can also be used with the single breath technique in teenagers and adults.

ALWAYS DEMONSTRATE TO THE PATIENT HOW TO USE THE SPACER DEVICE

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HOW TO USE THE AEROCHAMBER

Method for patient who can use the device without help

1. Remove the cap.
2. Shake the inhaler and insert in the back of the Aerochamber.
3. Place the mouthpiece in the mouth (or the mask over mouth and nose).
4. Press the canister once to release a dose of the drug.
5. Take a deep, slow breath in. (If you hear a whistling sound, you are breathing in too quickly).
6. Hold the breath for about ten seconds, then breathe out through the mouthpiece.
7. Breathe in again but do not press the canister.
8. Remove the mouthpiece from the mouth and breathe out.
9. Wait a few seconds before a second dose is taken, and repeat steps 2-8.

Method particularly useful for young children

1. Remove the cap.
2. Shake the inhaler and insert in the back of the Aerochamber.
3. Place the mouthpiece in the mouth (or the mask over mouth and nose).
4. Encourage the child to breathe gently. (If you hear a whistling sound the child is breathing in too quickly*).
5. Once the breathing pattern is well established, depress the canister with the free hand and leave the canister in the same position as the child continues to breathe in and out slowly five more times.
6. Remove the Aerochamber from the child's mouth.
7. For a second dose wait a few seconds and repeat steps 2-6.

* NB. The child Aerochamber device with mask and infant Aerochamber device with mask do not whistle.
HOW TO USE THE AEROCHAMBER WITH INFANT OR CHILD MASK

1. Remove the protective cap from the inhaler.

2. Check the Aerochamber for any foreign objects and the mask is fitting snugly on the mask adaptor.

3. Insert the MDI mouthpiece into the MDI adaptor of the Aerochamber.

4. Holding the Aerochamber and the MDI shake the unit 3 or 4 times.

5. Place the mask over the nose and mouth creating a good seal between the face and mask.

6. Keeping the Aerochamber level, press the MDI making sure only one dose is sprayed at a time.

7. Hold the mask firmly to the child’s face for 5-6 breaths or for as long as the child will tolerate it.

8. Repeat steps 4-7 if necessary.

9. Remove the MDI from the Aerochamber and replace the protective cap.

10. Remember to wipe the face after the administration of inhaled steroids.

ALWAYS DEMONSTRATE HOW TO USE THE AEROCHAMBER AND MASK

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HOW TO USE THE NEBUCHAMBER

1. Remove the protective cap from the aerosol inhaler.

2. Shake the inhaler so the contents are well mixed.

3. Place the mouthpiece of the aerosol inhaler into the small oval opening of the spacer.

4. Keeping the spacer level, place the mouthpiece between your teeth and close your lips around it.

5. Press (activate) the inhaler canister once and breathe in slowly and deeply through your mouth.

6. For each additional dose of inhaler medication, remove the inhaler from the spacer and repeat steps 2-5.

7. Remove the inhaler from the spacer and replace the protective inhaler cap.

8. Replace spacer in storage bag.

NB. It may be preferable and easier for the younger age group child to take five breaths in and out (tidal breathing) to each actuation. The elderly may find it easier too.
HOW TO USE A NEBUCHAMBER AND MASK

1. Push the Nalato mask on to the mouthpiece of the Nebuchamber

2. Remove the mouthpiece cover from the inhaler

3. Shake the inhaler device and insert it into the small oval opening of the spacer

4. Apply the mask to the child’s face covering the nose and mouth with as tight a seal as possible

5. Press the inhaler canister once to release a dose of medication. Keep the mask on the child’s face for 5 or 6 breaths or for as long as they will tolerate it

6. If further doses of medication are required, shake the inhaler canister gently between actuations. This can be done with the canister still inserted in the spacer device. Repeat steps 4-5

7. When using this method to administer inhaled steroids, remember to wash the child’s face after each treatment

ALWAYS DEMONSTRATE HOW TO USE THE NEBUCHAMBER

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HOW TO USE A LARGE VOLUME SPACER AND MASK

1. Remove the mouthpiece cover from the inhaler.

2. Attach the facemask to the spacer mouthpiece. The Laerdal mask attaches to the Volumatic and the Nalato mask to the Nebuhaler.

3. Shake the inhaler and insert into the spacer device.

4. Tip the spacer to an angle of about 45° to enable the valve to remain open.

5. Apply the mask to the child’s face covering nose and mouth with as tight a seal as possible.

6. Press the inhaler canister once to release a dose of the medication. Keep the mask on the child’s face for 5 or 6 breaths or for as long as they will tolerate it.

7. Wait for 30 seconds before repeating steps 3-6.

8. When using this method to administer inhaled steroids, remember to wash the child’s face after each treatment.

ALWAYS DEMONSTRATE HOW TO USE THE LARGE VOLUME SPACER AND MASK

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HOW TO USE A VOLUMATIC SPACER DEVICE

Multiple breath technique

1. Remove the cap.

2. Shake the inhaler and insert into the device.

3. Place the mouthpiece in the mouth.

4. Start breathing in and out slowly and gently. (This will make a ‘clicking’ sound as the valve opens and closes).

5. Once the breathing pattern is well established, depress the canister leaving the device in the same position and continue to breath (tidal breathing) several more times.

6. Remove the device from the mouth.

7. Wait about 30 seconds before repeating steps 2-6.

ALWAYS DEMONSTRATE TO THE PATIENT HOW TO USE THE SPACER DEVICE
HOW TO USE A METERED DOSE INHALER

1. Remove the cap.

2. Shake the inhaler.

3. Breathe out gently.

4. Put the mouthpiece in the mouth and at the start of inspiration, which should be slow and deep, press the canister down and continue to inhale deeply.

5. Hold the breath for 10 seconds, or as long as possible, then breathe out slowly.

6. Wait for a few seconds before repeating steps 2-5.

7. Replace cap.

ALWAYS DEMONSTRATE TO THE PATIENT HOW TO USE THE METERED DOSE INHALER

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HOW TO USE THE AUTOHALER DEVICE

1. Remove protective mouthpiece.

2. Shake the inhaler.

3. Hold the inhaler upright and push the lever right up.

4. Breathe out gently. Keep the inhaler upright and put the mouthpiece in the mouth and close lips round it. (The air holes must not be blocked by the hand).

5. Breathe in steadily through the mouth. DON'T stop breathing when the inhaler 'clicks' and continue taking a really deep breath.

6. Hold the breath for about 10 seconds. Breathe out gently.

7. Wait several seconds before repeating steps 2-6 for a second dose.

8. N.B. The lever must be pushed up ('on') before each dose, and pushed down again ('off') afterwards, otherwise it will not operate.

9. Replace cap.

10. If using the device for the first time, it should be primed by lifting the lever on the top, and then pushing the white slide on the bottom of the device to release the medication. Repeat this action once more.

ALWAYS DEMONSTRATE TO THE PATIENT HOW TO USE THE AUTOHALER DEVICE
HOW TO USE THE EASI-BREATHE

1. Shake the inhaler.

2. Hold the inhaler upright. Open the cap.

3. Breathe out gently. Keep the inhaler upright, put the mouthpiece in the mouth and close lips and teeth around it (the airholes on the top must not be blocked by the hand).

4. Breathe in steadily through the mouthpiece. DON’T stop breathing when the inhaler ‘puffs’ and continue taking a really deep breath.

5. Hold the breath for about 10 seconds.

6. After use, hold the inhaler upright and immediately close the cap.

7. For a second dose, wait a few seconds before repeating steps 1-6.

ALWAYS DEMONSTRATE TO THE PATIENT HOW TO USE THE EASI-BREATHE

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HOW TO USE THE ACCUHALER

1. Open the Accuhaler by holding outer casing of the Accuhaler in one hand whilst pushing the thumbgrip away until a click is heard.

2. Hold the Accuhaler with the mouthpiece towards you, slide the lever away until it clicks. This makes the dose available for inhalation and moves the dose counter on.

3. Holding the Accuhaler level, breathe out gently away from the device, put mouthpiece in mouth and take a breath in steadily and deeply.

4. Remove the Accuhaler from mouth and hold breath for about 10 seconds.

5. To close, slide the thumbgrip back towards you as far as it will go until it clicks.

6. For a second dose repeat steps 1-5.

7. The dose counter counts down from 60 to 0.

ALWAYS DEMONSTRATE TO THE PATIENT HOW TO USE THE ACCUHALER
HOW TO USE THE TURBOHALER

1. Unscrew and lift off white cover.

2. Hold Turbohaler upright and twist the grip then twist it back again as far as it will go. You should hear a click.

3. Breathe out gently, put the mouthpiece between the lips and teeth and breathe in as deeply as possible. Even when a full dose is taken there may be no taste.

4. Do not breathe out into Turbohaler.

5. Remove the Turbohaler from the mouth and hold breath for about 10 seconds.

6. For a second dose repeat steps 2-4.

7. Replace white cover.

8. A red line appears in the window on the side of the Turbohaler when there are 20 doses left. When the whole window is red the inhaler is empty.

ALWAYS DEMONSTRATE TO THE PATIENT HOW TO USE THE TURBOHALER