ThinkAskLearn
Health Professional Education

Asthma Management

David Corkill
Emergency Nurse Educator
MEmergN, MAdvPrac (Hth Prof Edu), BN, Dip App Sc

www.thinkasklearn.com.au

Asthma in Australia

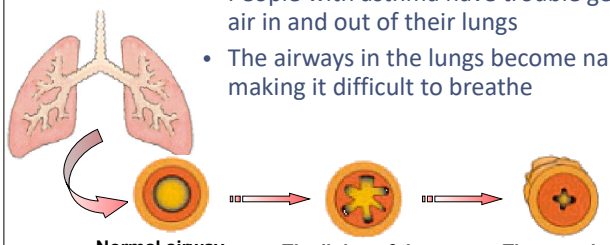
- 1 in 6 children
- 1 in 8 adolescents
- 1 in 9 adults
- Affects over 2 million people
- Australian average 11%
- 14% – 16% Australian Children
- Exercise is a trigger for 80% of people with asthma

Types of Asthma

- **Infrequent Intermittent 75%**
- **Frequent Intermittent 20%**
- **Persistent 5%**

What is asthma?

- People with asthma have trouble getting air in and out of their lungs
- The airways in the lungs become narrow, making it difficult to breathe



Recognizing the signs

- **Cough** - the body's attempt to open up and clear the narrowed airways
- **Shortness of breath** - difficulty in moving air in and out of the narrowed airways
- **Wheeze** - the whistling sound made as the air is pushed out through narrowed airways
- **Chest tightness** - the feeling when the muscles have tightened around the airways

Medications

Reliever

USE WHEN NEEDED

Use to relax airway muscle

Preventer

USE DAILY

Use to stop inflammation

Medication

Short Acting Relievers

Blue colours
Quickly relieves symptoms
- Works within **4** minutes

Often used before exercise
Safe and non-addictive
Common names:
- Airomir, Asmol, Bricanyl, Ventolin

Use in **Asthma First Aid**

Longer Acting Relievers

Green colours
•"Longer acting" relief of symptoms
•10 hours but peak - 1 to 2 hours
Not for **Asthma First Aid**

Preventers

Many **different** colours

Reduce frequency and severity of attacks

Taken regularly every day at home

Not for **Asthma First Aid**

Combination

Purple or **red/white** colour

Combined preventer and longer acting reliever

Taken regularly every day at home

Not for **Asthma First Aid**

Delivery Devices

Puffer & Spacer	
Puffer	
Accuhaler	
Turbuhaler	

Autohaler	
Nebuliser	

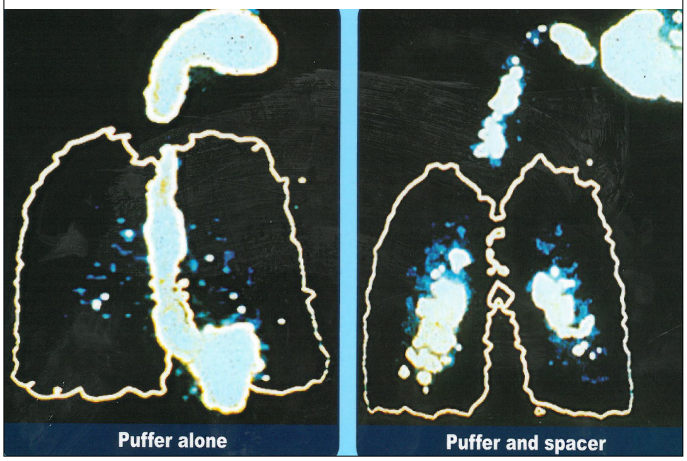
Evidence

Holding Chambers v's Nebulisers

Cochrane Review 2013

- 1897 children and 729 adults in 39 trials
- LOS in ED – 33 mins vs 103 mins
- Pulse Rate – 6.3% lower
- No outcome difference

Medication – With and Without a Spacer



Assessing an asthma attack

Mild Attack

- Cough
- Soft wheeze
- Minor trouble breathing
- No problem speaking in sentences

Moderate Attack

- Persistent cough
- Loud wheeze
- Clear difficulty breathing
- Able to speak in short sentences only

Severe Attack

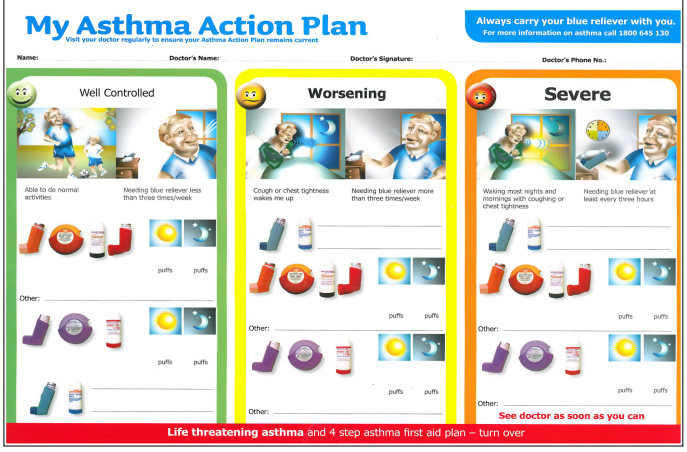
- **(Dial 000 for an ambulance)**
- Very stressed and anxious
- Gasping for breath
- Unable to speak more than a few words in one breath
- Pale and sweaty
- May have blue lips

DISCHARGE CRITERIA

- O2 saturation > 95% on room air – NOT IN Isolation!
- No tachypnoea
- No accessary muscle use
- Good air entry with minimal or no wheeze
- Adequate social circumstances
- Good spacer technique
- Asthma Control Pack
- **Asthma Action Plan**

ASTHMA ACTION PLANS

Asthma Action Plans for children



My Asthma Action Plan

When my asthma is WELL CONTROLLED

- No regular wheeze, or cough or chest tightness at night time, on waking or during the day
- Able to take part in normal physical activity without wheeze, cough or chest tightness
- Need reliever medication less than three times a week (except if it is used before exercise)
- Peak Flow* above ____

What should I do?

Continue my usual treatment as follows:

Preventer

Reliever

Symptom Controller

Combination Medication

Always carry my reliever puffer

When my asthma is GETTING WORSE

- At the first sign of a cold
- Waking from sleep due to coughing, wheezing or chest tightness
- Using reliever puffer more than 3 times a week (not including before exercise)
- Peak Flow* between ____ and ____

What should I do?

Increase my usual treatment as follows:

See my doctor to talk about my asthma getting worse

When my asthma is SEVERE

- Need reliever puffer every 3 hours or more often
- Increasing wheezing, coughing, chest tightness
- Difficulty with normal activity
- Waking each night and most mornings with wheezing, coughing or chest tightness
- Feel that asthma is out of control
- Peak Flow* between ____ and ____

What should I do?

Start oral prednisolone (or other steroid) and increase my usual treatment as follows:

See my doctor for advice

Dr name:.....Ph.....Signature.....

Parent/Carer.....Ph.....

How to recognise LIFE-THREATENING ASTHMA

Dial 000 for an ambulance and/or 112 from a mobile phone if you have any of the following danger signs:

- extreme difficulty breathing
- little or no improvement from reliever puffer
- lips turn blue

and follow the Asthma First Aid Plan below while waiting for ambulance to arrive.

A serious asthma attack is also indicated by:

- symptoms getting worse quickly
- severe shortness of breath or difficulty in speaking
- you are feeling frightened or panicked
- Peak Flow* below ____

Should any of these occur, follow the Asthma First Aid Plan below.

Asthma First Aid Plan

1. Sit upright and stay calm.
2. Take 4 separate puffs of a reliever puffer (one puff at a time) via a spacer device. Just use the puffer on its own if you don't have a spacer. Take 4 breaths from the spacer after each puff.
3. Wait 4 minutes. If there is no improvement, take another 4 puffs.
4. If little or no improvement **CALL AN AMBULANCE IMMEDIATELY (DIAL 000** and/or **112** from mobile phone) and state that you are having an asthma attack. Keep taking 4 puffs every 4 minutes until the ambulance arrives.

See your doctor immediately after a serious asthma attack.

Name:..... Date: ..... Best Peak Flow*:..... Next Doctor's Appointment: .....

* *Not recommended for children under 12 years*

My Asthma Action Plan

Is your asthma...

Under control

- almost no symptoms

Action

continue usual treatment

.....

.....

.....

Getting worse

- at the first sign of a cold
- waking from sleep
- using reliever more than 3 times a week (excluding pre-exercise medication)

Action

increase your treatment

.....

.....

.....

Severe

- needing reliever every 3 hours or more often
- too wheezy to get on with normal activity

Action

start oral prednisolone (or other steroid) and see your doctor

.....

.....

Danger signs

Dial 000 for an ambulance *and/or* 112 from a mobile phone

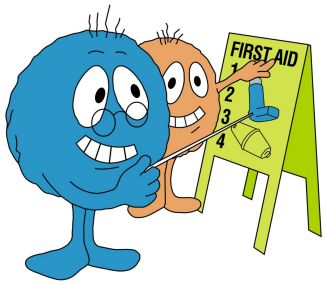
- there is extreme difficulty breathing
- little or no improvement from reliever puffer
- lips turn blue

and follow the Asthma First Aid Plan on reverse page while waiting for ambulance to arrive.

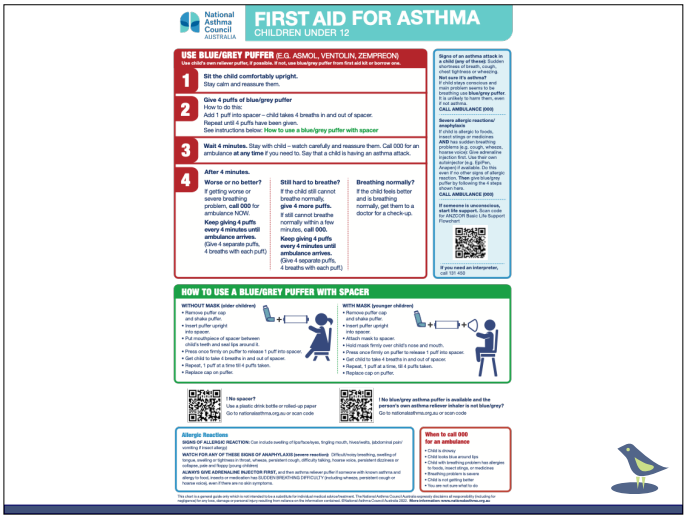
Patient's name:.....

Patient's doctor:.....

Date:.....



Asthma First Aid



National Asthma Council AUSTRALIA

FIRST AID FOR ASTHMA
CHILDREN UNDER 12

USE BLUE/GREY PUFFER (E.G. ASMOL, VENTOLIN, ZEMPREON)
Use child's own reliever puffer, if possible. If not, use blue/grey puffer from first aid kit or borrow one.

1. **Sit the child comfortably upright.** Stay calm and reassure them.
2. **Give 4 puffs of blue/grey puffer**
   How to do this:
   Add 1 puff into spacer – child takes 4 breaths in and out of spacer.
   Repeat until 4 puffs have been given.
   See instructions below: How to use a blue/grey puffer with spacer
3. **Wait 4 minutes.** Stay with child – watch carefully and reassure them. Call 000 for an ambulance **at any time** if you need to. Say that a child is having an asthma attack.
4. **After 4 minutes.**
   - **Worse or no better?** If getting worse or severe breathing problem, **call 000** for ambulance NOW. **Keep giving 4 puffs every 4 minutes until ambulance arrives.** (Give 4 separate puffs, 4 breaths with each puff)
   - **Still hard to breathe?** If the child still cannot breathe normally, **give 4 more puffs.** If still cannot breathe normally within a few minutes, **call 000. Keep giving 4 puffs every 4 minutes until ambulance arrives.** (Give 4 separate puffs, 4 breaths with each puff.)
   - **Breathing normally?** If the child feels better and is breathing normally, get them to a doctor for a check-up.

Signs of an asthma attack in a child (any of these): Sudden shortness of breath, cough, chest tightness or wheezing. Signs of severe asthma: If child stops conversion and main problem seems to be breathing use **blue/grey puffer.** It is unlikely to harm them, even if they don't need it.
CALL AMBULANCE 000

Severe allergic reactions/ anaphylaxis
If child is allergic to foods, insect stings or medicines **AND** has sudden breathing problem, cough, chest tightness, hoarse voice: Give adrenaline injection first. Use their own adrenaline injector (EPIPEN) if available. Do this even if no other signs of allergic reaction. **Then** give blue/grey puffer by following the 4 steps on the reverse side.
CALL AMBULANCE 000

If someone is unconscious, start life support. Scan code or call 000 (Basic Life Support Flowchart)

If you need an interpreter, call 131 450

HOW TO USE A BLUE/GREY PUFFER WITH SPACER

WITHOUT MASK (older children)
- Remove puffer cap and shake puffer.
- Insert puffer upright into spacer.
- Put mouthpiece of spacer between child's teeth and seal lips around it.
- Press once firmly on puffer to release 1 puff into spacer.
- Get child to take 4 breaths in and out of spacer.
- Repeat, 1 puff at a time till 4 puffs taken.
- Replace cap on puffer.

WITH MASK (younger children)
- Remove puffer cap and shake puffer.
- Insert puffer upright into spacer.
- Attach mask to spacer.
- Hold mask firmly over child's nose and mouth.
- Press once firmly on puffer to release 1 puff into spacer.
- Get child to take 4 breaths in and out of spacer.
- Repeat, 1 puff at a time, till 4 puffs taken.
- Replace cap on puffer.

! No spacer? Use a plastic drink bottle or rolled-up paper. Go to nationalasthma.org.au or scan code

! No blue/grey asthma puffer is available and the person's own asthma reliever inhaler is not blue/grey? Go to nationalasthma.org.au or scan code

Allergic Reactions
SEVERE ALLERGIC REACTION: Can include swelling of lips/face/eyes, tingling mouth, hives/welts, (abdominal pain/ vomiting if food allergy)
WATCH FOR ANY OF THESE SIGNS OF ANAPHYLAXIS (severe reaction): Difficult/noisy breathing, swelling of tongue, swelling or tightness in throat, wheeze, persistent cough, difficulty talking, hoarse voice, persistent dizziness or collapse, pale and floppy (young children)
ALWAYS GIVE ADRENALINE INJECTOR FIRST, and then asthma reliever puffer if someone with known asthma and allergy to food, insects or medication has SUDDEN BREATHING DIFFICULTY (including wheeze, persistent cough or hoarse voice), even if there are no skin symptoms.

When to call 000 for an ambulance
- Child is drowsy
- Child looks blue around lips
- Child with breathing problem has allergies and has been given adrenaline medicine
- Breathing problem is severe
- Child is not getting better
- You are not sure what to do

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Asthma First Aid
Step 1

- Sit the person down.
- Remain calm to reassure them.

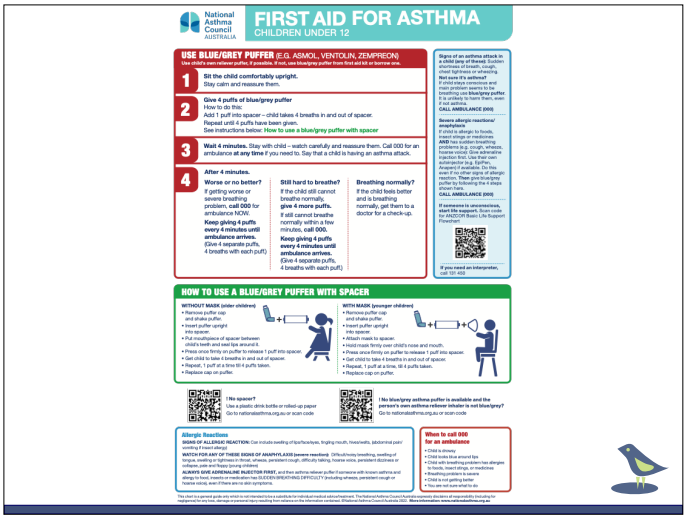
Asthma First Aid
Step 2

4

- Give 4 puffs of a blue reliever, one puff at a time.
- Use a spacer.
- Ask the person to take 4 breaths from the spacer.

Asthma First Aid
Step 4

- If there is little or no improvement, repeat steps 2 and 3.
- If there is still little or no improvement, call an ambulance immediately.
- Continue to repeat steps 2 and 3 while waiting for the ambulance.



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1 **Sit the child comfortably upright.**
Stay calm and reassure them.

2 **Give 4 puffs of blue/grey puffer**
How to do this:
Add 1 puff into spacer – child takes 4 breaths in and out of spacer.
Repeat until 4 puffs have been given.
See instructions below: **How to use a blue/grey puffer with spacer**

3 **Wait 4 minutes.** Stay with child – watch carefully and reassure them. Call 000 for an ambulance **at any time** if you need to. Say that a child is having an asthma attack.

4 **After 4 minutes.**

Worse or no better?
If getting worse or severe breathing problem, **call 000** for ambulance NOW.
Keep giving 4 puffs every 4 minutes until ambulance arrives.
(Give 4 separate puffs, 4 breaths with each puff)

Still hard to breathe?
If the child still cannot breathe normally, **give 4 more puffs.**
If still cannot breathe normally within a few minutes, **call 000.**
Keep giving 4 puffs every 4 minutes until ambulance arrives.
(Give 4 separate puffs, 4 breaths with each puff)

Breathing normally?
If the child feels better and is breathing normally, get them to a doctor for a check-up.

Signs of an asthma attack in a child (any of these): Sudden cough, wheeze, tight cough, chest tightness or wheezing.
Not sure it's asthma?
If child stays conscious and main problem seems to be breathing difficulty, ask doctor if it is unlikely to harm them, even if not asthma.
CALL AMBULANCE (000)

Severe allergic reactions/ anaphylaxis
If child is allergic to foods, insect stings or medicines **AND** has sudden breathing problem, bad cough, wheeze, hoarse voice): Give adrenaline injection first. Use their own adrenaline pen, or EpiPen/ Anapen/ if available. Do this even if no other signs of allergic reaction. Then give blue/grey puffer by following the 4 steps shown here.
CALL AMBULANCE (000)

If someone is unconscious, start life support. Scan code for ANZCOR Basic Life Support Flowchart

If you need an interpreter, call 131 450

HOW TO USE A BLUE/GREY PUFFER WITH SPACER

WITHOUT MASK (*older children*)
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! No spacer?
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! No blue/grey asthma puffer is available and the person's own asthma reliever inhaler is not blue/grey?
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Allergic Reactions

SIGNS OF ALLERGIC REACTION: Can include swelling of lips/faces/eyes, tingling mouth, hives/welts, (abdominal pain/ vomiting if insect allergy)

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When to call 000 for an ambulance
- Child is blue
- Child with blue around lips
- Child with breathing problem has allergies to foods, insect stings, or medicines
- Breathing problem is severe
- Child is not getting better
- You are not sure what to do

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Asthma Handbook