

PHARMACY BULLETIN

PHARMACY, LABUAN HOSPITAL
2/2011

*My son has been coughing at night for the last 2 weeks...
My 3 months old baby has difficulty in breathing
and a build up of mucus in his nose... Is it asthma or allergy? Is there
anything I can do to help my child to avoid an asthma attacks?*

I have
Asthma



ASTHMA IN CHILDREN

Alternative names:
Pediatric Asthma, Childhood Asthma

Asthma is one of the commonest illness in children. Childhood asthma is a chronic respiratory disease, due to swelling and narrowing of the airways. Lungs and airways will become inflame when exposed to certain triggers or allergens.

When a kid encounters a **trigger**, an asthma attack can occur. Example of triggers of asthma are **cigarette smoke, dust mites, pollens, animal or plush fur, flour residue in kitchen, paints, some chemicals in food or air, intense or excessive exercise and sudden changes in temperature.**

Asthma can interfere a child daily activities like playing, sporting, schooling and sleeping. Episodes of asthma attack will increase emergency department visits, hospitalizations and even missed school days.

Actually, there is no different between asthma in children and adult. However, children's airways are narrower. Therefore, a trigger may cause more severe problems in a child than an adult. During an asthma attack, muscle bands that surrounding airways are tighten, lining of airways become swollen and inflamed, as well as more mucus are secreted and thicken. These cause disturbances for air to move in and out of lungs freely and lead to breathing difficulty (*refer figure on right*).

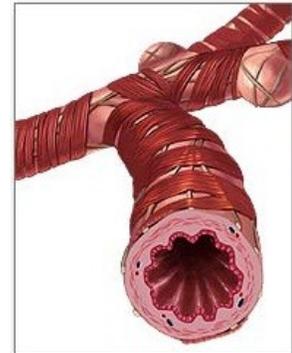
References:

<http://wlib.moh.gov.my:2088/das/patient/body/266510491-3/1180067543/10041/31876.html>

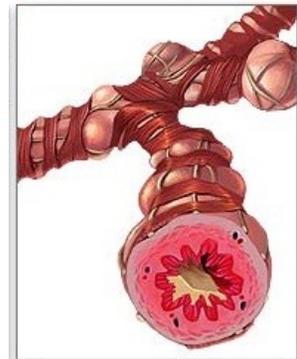
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Normal bronchiole



Asthmatic bronchiole



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How to know whether your kids suffer from asthma?

Normally, certain symptoms can be noticed. Common symptoms are fast breathing, tightness of chest and persistent cough especially at night. Parents should take immediate action to manage an asthma attack before it gets worse.

Early warning signs and symptoms of an asthma attack are:

- Frequent cough
- Shortness of breath
- Feeling tired and weak especially after exercise
- Difficult in sleeping
- Bluish of lips and face
- Sweating

“Treatment of asthma is about to prevent triggers and overcome symptoms of asthma, in order to prevent sudden episode of asthma attack.”

If an asthmatic kid is at school...

it is important to inform the school teacher or coach that the child has asthma. Parents can also provide an emergency action plan to teachers in case the child has asthma attack. If the child is on medication, make sure the child brings along the medication during school hours.

Management of Asthma

Parents or care-givers should cooperate with pediatric doctors in the management of asthma of children. Parents should have an emergency action plan in case their children have an asthma attack. Besides, parents should get rid of asthma triggers in their houses in order to protect their children. Smoking should be forbidden in a house or area around a child with asthma. Cigarette smoke can residue in the clothes and hair of a smoker, this also can trigger an asthma attack.

Basically, choice of treatment for asthma consists of **two groups**: controller and reliever.

Both of the medications can be taken orally or by inhalation, preferably by inhalation. **Controllers** are used to provide long term control on asthma by preventing inflammation of airways and reduce asthma symptoms. Controllers are not for treatment during an attack and should be taken every day. **Relievers**, also known as quick relief medications are used to relieve asthmatic symptoms during an attack. Choice of medication for an asthmatic child will depend on the severity of asthma, patient’s ability to use inhaler and doctor’s decision.

Inhalers available at Labuan Hospital...



Metered Dose Inhaler



Turbuhaler



Accuhaler

How to use inhalers correctly?

Metered Dose Inhaler

1. Remove the mouthpiece cover. Hold the MDI in an upright position.
2. Shake the MDI.
3. Exhale slowly and completely through your mouth. Do not exhale into the mouthpiece.
4. Insert inhaler into mouth and seal with lips. Do not bite the mouthpiece.
5. Actuate the MDI once. Continue inhalation for about 3-5 seconds until the lungs are full.
6. Hold breath for 4-10 seconds.
7. Remove MDI from mouth and exhale slowly.
8. Close cap and keep MDI in a dry place.

Wait 30 seconds to 1 minute before repeating step 2-7 if subsequent doses are required.

Reference:

Handling of Inhaler Devices: A Practical Guide for Pharmacists from Pharmaceutical Services Division, Ministry of Health of Malaysia.

Turbuhaler

1. Unscrew and lift off the cover. Hold the turbuhaler upright with the grip facing downwards.
2. To load a dose, turn the grip as fast as it will go in one direction. Then turn it back again as far as it will go in the opposite direction until a "click" sound is heard.
3. Breathe out, away from the mouthpiece.
4. Place the mouthpiece gently between the lips. Ensure a tight seal around it.
5. Breathe in forcefully and deeply through the mouth only.
6. Remove the turbuhaler from the mouth before breathing out again. Do not breathe into the mouthpiece.
7. Replace the cover and store turbuhaler in a dry place.

Wait 30 seconds to 1 minute before repeating step 2-6 if subsequent doses are required.

Accuhaler

1. Hold the outer case and put the thumb of another hand on the thumb grip. Push the thumb grip as far as it will go until a 'click' sound is heard.
2. Hold the device horizontally with the mouthpiece towards the patient. Slide the lever as far as it will go until another 'click' sound is heard to load a dose in the device.
3. Hold the accuhaler away from mouth and breathe out completely.
4. Put the mouthpiece into the mouth and ensure a good seal. Breathe in forcefully and deeply through the mouth only.
5. Remove the accuhaler from the mouth and hold breath for 10 seconds.
6. Close the device by sliding the thumb grip until a 'click' sound is heard.

Wait 30 seconds to 1 minute before repeating step 2-5 if subsequent doses are required.

DRUG ALLERGY

Drug Allergy? Adverse Drug Reaction?

Adverse drug reaction is a response to a drug which is **unintended** and caused by the medication at **normal doses for normal use**.

A *drug allergy* is a reaction mediated by an **immune response**.

Drug allergy is a group of symptoms caused by an unwanted allergic reaction to a medication taken. Allergic reaction to medications are common, almost any medication can cause drug reaction. Symptoms of drug allergic reactions can range from mild and irritating adverse effects to life-threatening anaphylaxis.

How does Drug Allergy occurs?

Drug allergy occurs when the body's immune system produces antibody called IgE against the medication that the patient taken. If the patient takes the same medication again, the body's immune system will recognize the medication as a foreign substance. Thus, the body produces certain chemicals, such as large amount of histamine, to expel the medication from the body.

Symptoms of Drug Allergy

Most drug allergies cause minor skin rashes and hives. Serum sickness is a delayed type of drug allergy that occurs a week or more after exposure to a medication. When an allergic reaction occurs, the release of histamine can cause **hives, skin rashes, itchy skin or eyes, congestion, and swelling of lips, tongue or face**.

More severe allergic reactions may include **difficulty in breathing with wheeze or hoarse voice, blueness of the skin, dizziness, rapid pulse, nausea and vomiting, diarrhea, abdominal pain or cramping, as well as confusion**.

Drug Allergy Sticker

Two red Drug Allergy Stickers. Each sticker has fields for NAMA, NO.KIP, NAMA UBAT, and INFORMASI ALAHAN. It also features a circular logo with the text "AMARAN ALAHAN UBAT" and "No. Seri".

Drug Allergy Card

Front

Back

(Back)

Good news for patients with any drug allergy!

Drug allergy card and sticker are now available at Pharmacy Department, Labuan Hospital. **Drug Allergy Card** and **red Drug Allergy Sticker** contain information of an drug allergy (**medication that caused allergy and symptoms shown**). Drug allergy card will be carried by patient who has drug allergy while the red sticker will be put on patient's drug chart and medical notes. This will ease the medical personnel to identify whether patient has any drug allergy immediately.

Doctors need to fill up the drug allergy form for their patients and pass to Pharmacy Department to issue the Drug Allergy Card and Drug Allergy Sticker.

Reference: <http://www.nlm.nih.gov/medlineplus/ency/article/000819.htm>