

Sailor the Puffer Fish

Asthma Education

Teachers Booklet



asthma waikato

Better respiratory health for New Zealanders



sportwaikato
out there and active



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Overview:

This booklet has been designed as a resource for a teacher with no special asthma training other than reading these notes. It is not meant to be a replacement for either staff or pupils in seeking medical attention. Unmanaged asthma can still be fatal.

National Asthma Awareness week is the first week in May. Balloon Day is the first Friday in May. This awareness week will be supported by a national radio and television campaign and media releases.

Asthma Waikato provides FREE education for Waikato children and their families affected by asthma and training sessions for school staff.

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Curriculum Links

Main learning intentions

WALT:

- * identify the symptoms and treatments of asthma

We will be able to:

- * say how someone might feel if they get asthma
- * say what someone should do if they get asthma
- * identify Sailor the puffer fish

English

- Listening and Speaking: Complete a mind map to show what your class already knows about asthma. Ask a child who has asthma to talk to the class; what happens to their body, how they feel, what starts their asthma and what they do to manage their asthma. After the talk, add to mind map to show what the class learnt.
- Write a character description of Sailor the puffer fish.
- Write a story about a time when your parents bought you a pet.

Mathematics

- Make up number stories about Sailor
- Statistics: Survey peers to find out how many people they know who have asthma and graph the results.
- Measurement: Blowing a table tennis ball or pencil across a table is a fun game and can be varied by blowing through a straw. Measure how far each object goes.

Health and Physical Education

- After exercising, warm down by doing some breathing exercises. Show the children how to take a deep breath in through their nose to make their tummy really big. Then show them how to slowly blow out as much air as they can. Tell them to watch how their tummy goes in and see how little they can make it. Have them try to make their tummy really big (breathing in) and really small (breathing out) whilst relaxing their shoulders.

Social Sciences

- Investigate the role of health professionals in our community: Invite an Asthma Educator into the classroom for children to interview about their role in the community and how they help people to manage their asthma.

Technology

- Food technology: Make Sailor's favourite food - sushi (recipe provided on activity sheet). Design and create their own version.
- Technology challenge: Can the children design and create their own spacer to use when administering asthma medicine?
- IT: Create a flow chart communicating the actions someone should take to manage their asthma. (Inspiration is ideal software for this.)

The Arts

- Drama: Role-play a situation where someone is experiencing asthma symptoms and what they need to do to help them.
- Music: Teach children to play an instrument involving controlled breathing: a recorder, mouth organ, whistle or a toy trumpet.
- Visual Arts: Study images of different types of fish including puffer fish. Compare their attributes and sketch.



Resources

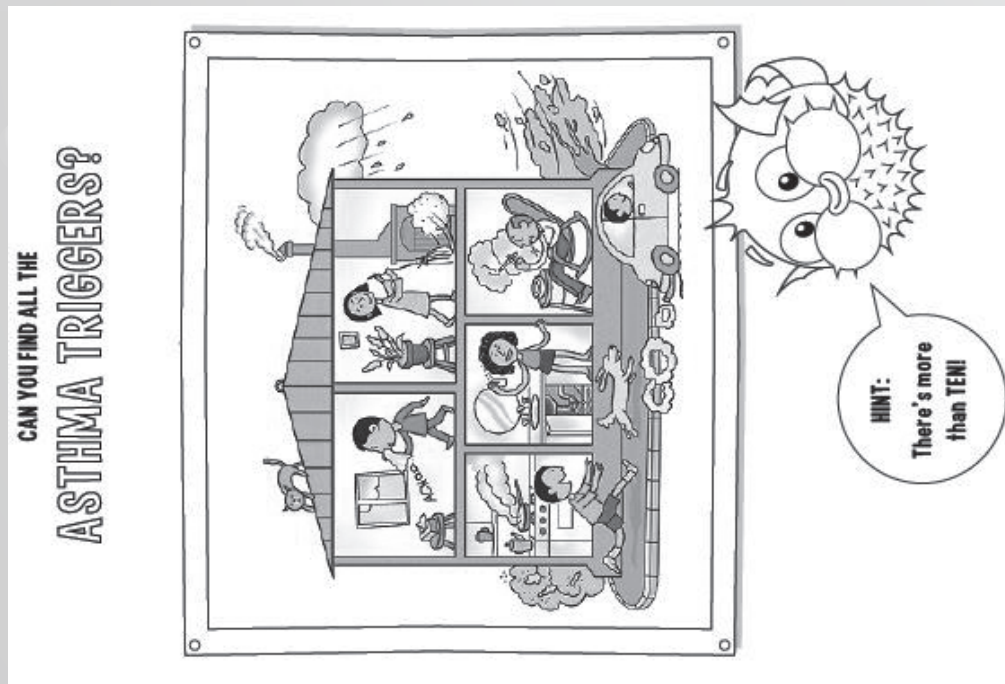
Home Play Challenge

Sailor's Home Play Challenge cards and action sheets are available on request. The cards have fun active games for children to complete at home on their own or with friends and whanau. The action sheets have game details, recipes and Spoke's story 'Learn to Breathe Easy.'

The following games and puzzles are ideal for the junior – middle school. Please go to www.sailorthePufferfish.co.nz to download each item. Sailor's website also has other resources and ideas.



Triggers - Can you find them?



Triggers and symptoms - Word find

TRIGGERS AND SYMPTOMS WORD FIND

SYMPOMS
wheezy
short breath
tight chest
cough

TRIGGERS
smoke
animals
dust mites
colds
pollens
strong smells
stress
weather change

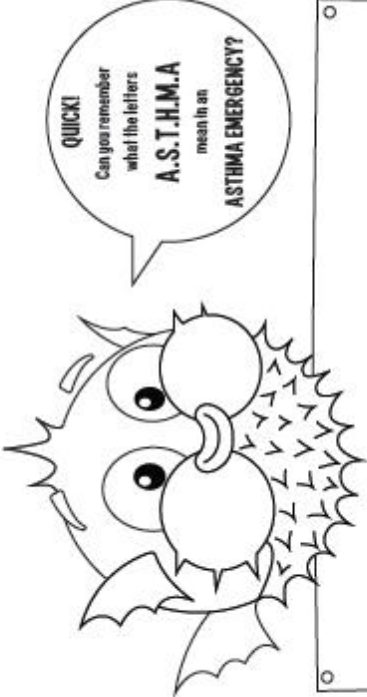
C	O	L	D	S	H	P	K	V	N	D	H	C	A	N
E	J	G	C	W	Y	L	P	P	O	L	L	E	N	S
S	T	R	O	N	G	S	M	E	L	L	S	W	N	B
A	T	B	Z	C	Y	P	R	U	T	Q	W	H	G	C
R	Z	R	U	F	G	X	Z	O	T	U	J	M	V	O
X	W	H	E	E	Z	Y	W	E	I	M	I	R	K	U
N	E	R	X	S	W	K	R	O	G	Q	R	J	E	G
A	D	P	Q	T	S	R	D	J	H	O	Y	B	L	H
N	E	H	G	I	F	D	U	S	T	M	I	T	E	S
I	R	I	M	E	L	O	U	L	C	Z	G	D	S	C
M	P	X	K	I	Z	O	L	M	H	B	M	V	P	U
A	I	O	L	W	C	M	D	H	E	L	I	D	W	Y
L	M	B	R	N	Q	U	V	Z	S	A	I	G	J	F
S	H	O	R	T	B	R	E	A	T	H	X	R	T	Q
F	S	W	E	A	T	H	E	R	C	H	A	N	G	E

Resources (cont'd)

Asthma emergency - complete the key words

ASTHMA EMERGENCY!

QUICK!
Can you remember what the letters **A.S.T.H.M.A** mean in an **ASTHMA EMERGENCY?**



A S T H M A

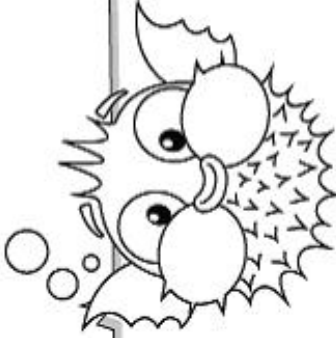
Tips for control - fill the gaps

FILL IN THE GAPS FOR SAILOR'S 7 TOP TIPS FOR ASTHMA CONTROL!

1. I know how my _____ help me.
2. I always take my _____ as prescribed.
3. I know how to use my inhaler and _____.
4. I know how I _____ when I am getting asthma.
5. I know where my inhalers are kept - in my _____.
6. I stay away from _____ smoke.
7. I'm _____, I eat _____.

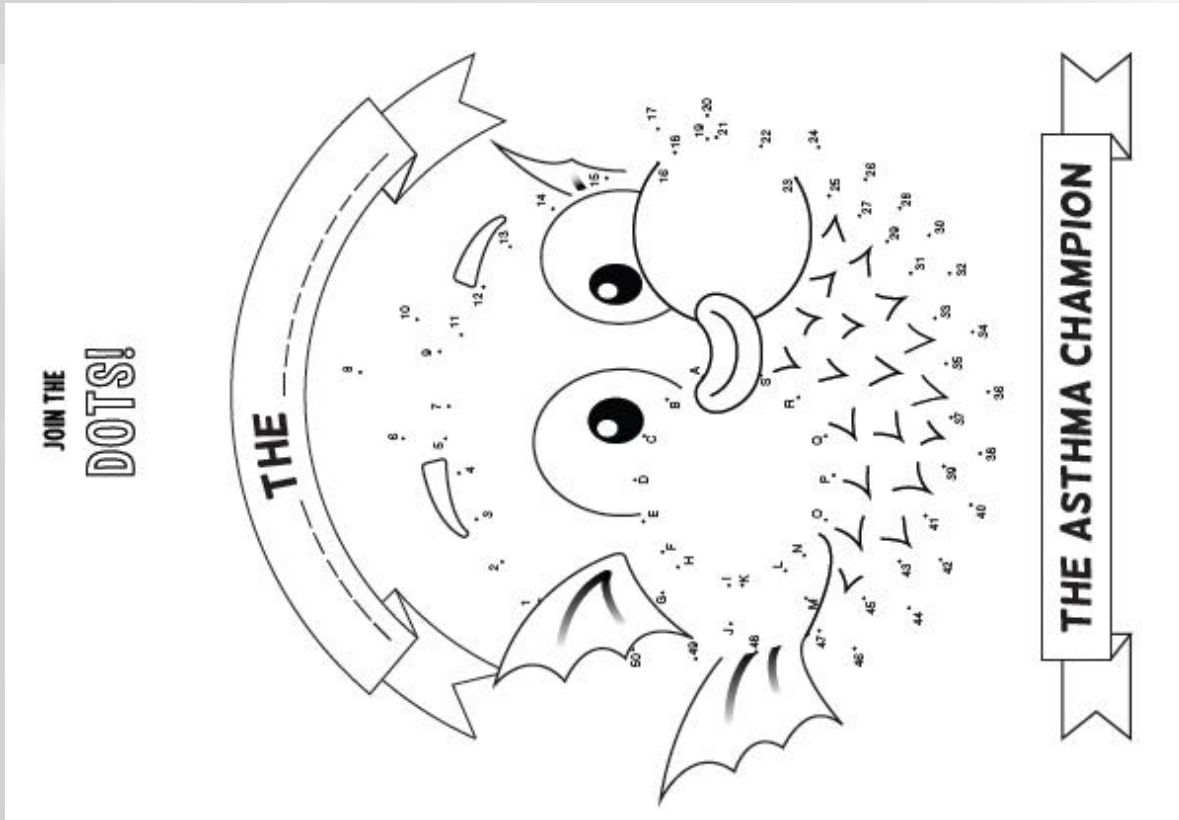
WORDS TO USE

active cigarette feel healthy
inhalers medicine spacer special box

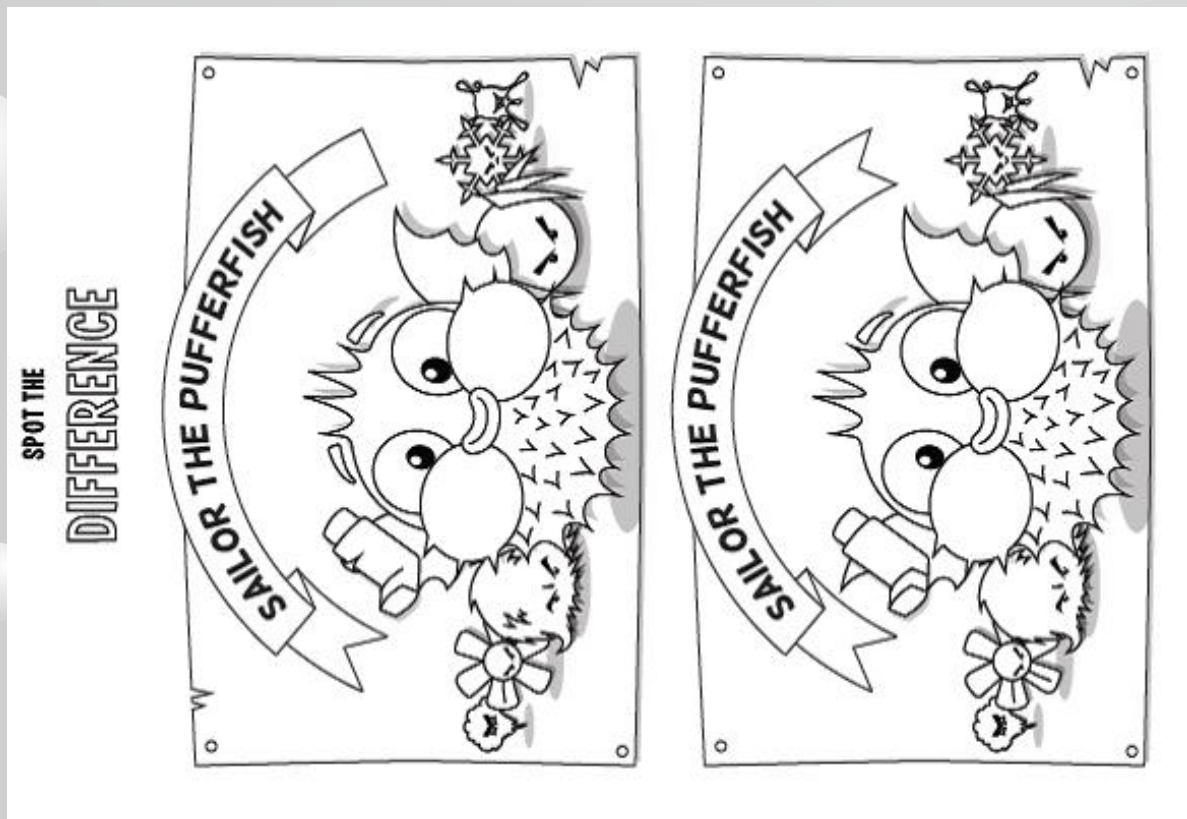


Resources (cont'd)

Sailor - join the dots



Sailor - spot the difference



Educational Material

55,000 school days are lost to asthma each year in New Zealand

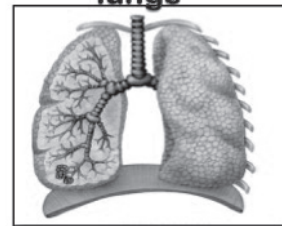
Children and Asthma

Currently in New Zealand 1 in 4 under 15 year olds is affected by asthma. Asthma can vary in individual children from mild (you would not be aware they were asthmatic) to severe (despite good management these children still end up in hospital at some stage). The key to well controlled asthma is good management.

Who gets asthma?

Asthma affects all age groups. It is more common in children but can start at any age. It affects males and females equally. No one knows why some people get asthma and others don't (even in the same family) but we do believe there is a genetic predisposition.

Asthma affects the small airways in the lungs

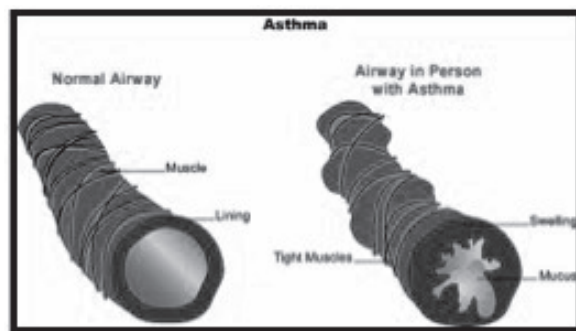


What happens in your body when you have asthma?

People with asthma have oversensitive airways which react to triggers that don't affect other people. Asthma affects the small bronchioles in the lungs. In an adult the bronchioles are about 2-2.5cm long and as fat as a piece of cooked spaghetti. In children they are proportionally that much smaller.

There are 3 things to particularly note in the changes to the bronchiole; a) the swelling (inflammation) of the lining, b) the tightening of the muscles, c) the over production of the mucous.

The asthma process starts with the inflammation of the lining; the muscles and mucous respond.



The lining of the little tubes become swollen and inflamed with lots of mucous secreted. Also the muscles around the outside of the tubes tighten.

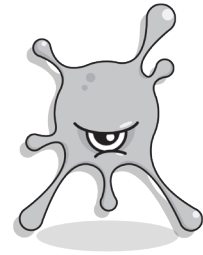
Educational Material (cont'd)

Symptoms and Triggers

Asthma Symptoms

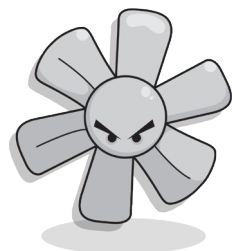
The symptoms of asthma are struggling to breathe, cough and/ or wheeze. Not all asthmatics wheeze. The wheeze is due to the airways being tightened and blocked. For many asthmatics a persistent, dry cough can be their main symptom.

Asthma symptoms need to be triggered. Not everyone has the same triggers.



Asthma Triggers

1. **Viral infections** i.e. colds, flu etc
2. **Inhaled irritants** like cigarette smoke and including second hand smoke, perfume sprays, air fresheners, paint fumes, glue fumes. In fact anything you can smell has the potential to trigger an attack.
3. **Some foods**
4. **Pollens** (grass pollen and other wind borne pollens)
5. **Cold air or sudden temperature changes** such as walking or biking to school on a cold winter morning then entering a warm classroom, or sitting in a heated family room at night and then going to a cold bedroom.
6. **House dust mite**; a microscopic creature that lives in our soft furnishings. No problem to most of us but if you have asthma and are allergic to them, this can be a real issue. You can keep the numbers of house dust mites down by washing your bedding in hot (55*) water and putting blankets, duvets etc out in the sunshine to air. If you really have a problem with the house dust mite, allergen-barrier pillow, duvet and mattress covers can be purchased.
7. **Animals** – anything with fur or feathers has the potential to trigger asthma. Cats are one of the most significant triggers because there is a protein in their saliva that can be highly allergic to people with asthma. Cats are very clean animals and as they lick themselves the saliva dries on the cat's fur and then breaks down while the cat is preening itself, this circulates around the room. It is then breathed in and can irritate sensitive breathing tubes.
8. **Exercise** – for some people the only trigger they have is exercise. These people are called "exercise induced asthmatics". For most asthmatics exercise can be difficult if their asthma is not well managed. Exercise is the one trigger people should not avoid. Using a reliever medication before exercising may help.



Educational Material (cont'd)

Asthma Medication

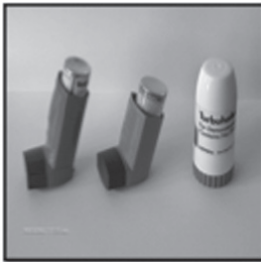
Medication

There are four groups of medication – relievers, mainly blue; preventers, mainly orange or brown; long lasting relievers (also known as symptom controllers), green and bluish and combinations, red and purple.

Relievers

Ventolin, Salamol and Bricanyl (see picture below), also Respigen(not shown)

Relievers work quickly, usually in 5 minutes and can last for up to 4 hours. Relievers work on relaxing the muscle encompassing the airway, allowing the airways to open. They do not prevent asthma from starting again. Relievers are the first aid for asthma attacks and during this time as much reliever as needed can be used. However, general over reliance on relievers can be dangerous. If relievers are needed to be used on a regular basis an asthma review is strongly recommended as the asthma may not be well controlled.



The blue inhalers relieve the asthma episode by relaxing the muscles around the tubes. They work quickly (within 5 minutes) and last for about 4 hours.

Preventers

Beclozone, Pulmicort and Flixotide

Preventers are the most important medication in asthma management. The preventer helps to protect the lining of the tubes. This should stop the lining from swelling and hence stopping the asthma process (remember- the muscles tighten and the mucous over produces in response to the inflammation of the lining.) To be effective, preventers must be taken every morning and night even when there are no asthma symptoms. They take 1-3 weeks before you will notice any improvement. The most common mistake is to stop taking the preventer when feeling well. If there are still daily symptoms the following should be checked

1. Is the medication being taken as prescribed?
2. Is the technique correct?
3. Is a spacer being used for an aerosol inhaler?
4. If yes is the answer to all the above see a G.P for an asthma review.



Educational Material (cont'd)

Symptom Controllers

Long lasting relievers, sometimes called symptom controllers.

Oxis, Serevent

Long lasting relievers are taken twice a day, usually in the morning and at night and last 12 hours. They MUST be used with a preventer, it is dangerous to use just a long acting reliever for asthma and not use your preventer.



If asthma attacks keep occurring while regularly using the preventer, the doctor may prescribe a teal inhaler. This is a long-acting reliever that relaxes the muscles like the blue inhaler but it lasts for 12 hours instead of 4 hours. They need to be taken every morning and night with the preventer.

Combination Inhalers

Combination medications, Symbicort, Seretide.

These medications combine the preventer and long acting reliever within the same inhaler. Symbicort is Pulmicort and Oxis in together, Seretide is Flixotide and Serevent in together. Both come in different strengths.



These inhalers are red or purple and contain 2 medications. The preventer and the symptom controller. Having the 2 in 1 makes it easier to take and also has a better preventative effect.

Spacers

Spacers are a very valuable tool to help maximise the amount of medication deposited in the lungs. Everyone who uses a MDI (metered dose inhaler or "asthma puffer") should use a spacer. Spacers are free to anyone who is prescribed a MDI and available from your doctor.

Spacers Care Video: www.sailortheppufferfish.co.nz



A spacer is an important tool if you are using a Metered Dose Inhaler. By using a spacer you get 50% more medication in your tubes.



Educational Material (cont'd)

Emergencies

Asthma Emergencies

Asthma is out of control if you:

- Wake at night because you are short of breath or coughing
- Use your blue reliever inhaler more than 3 times a week
- Can't participate in exercise because of your asthma

A.S.T.H.M.A. steps

It is important to recognise and treat asthma as soon as possible, so that it can be brought back under control. Remember the A.S.T.H.M.A. steps:

ASSESS

Assess whether the attack is mild, moderate or severe

Mild symptoms might include:

- Slight wheeze
 - Mild cough
 - Symptoms when excited or running
- Moderate

Moderate symptoms might include:

- Obvious breathing difficulties
 - Persistent cough
 - Difficulty speaking a complete sentence
- Severe

Severe symptoms might include:

- Distress
- Gasping for breath
- Difficulty speaking more than one or two words
- Looking pale and sounding quiet
- Complaints that the reliever medicine is not working
- Unresponsiveness

If you or someone you know has severe asthma or is frightened, call an ambulance immediately on 111.

Educational Material (cont'd)

SIT

Sit down and lean the child forward slightly. Ensure the child's arms are supported by their knees, a table or the arms of a chair.

TREAT

Treat an asthma attack with up to 6 puffs of a reliever inhaler.

If reliever medicine comes in a metered dose inhaler (MDI), use a spacer if possible to gain the maximum benefit of the medicine. Puff the inhaler once into the spacer and breathe 6 times (as normally as possible) in and out through the spacer. Repeat the process up to 6 times (with a total of 36 breaths).

HELP

If the person with asthma is not improving after 6 minutes call the ambulance (if you haven't already). Remember, puff the inhaler once into the spacer and take 6 normal breaths. Continue to use the reliever inhaler 6 puffs every 6 minutes until help arrives.

In this situation you will not overdose the person by giving them the reliever every 6 minutes.

MONITOR

If improving after 6 minutes keep checking. If necessary, repeat doses of the reliever inhaler.

ALL OKAY

The person with asthma can return to normal activities when they are free of wheeze, cough and breathlessness. If symptoms recur, repeat treatment, rest, and see your child's doctor.



Educational Material (cont'd)

A Healthy Lifestyle

Exercise

Regular exercise is important for everyone and for most asthmatics this is achievable. For children with asthma, physical activity is particularly important. It improves lung capacity, blood flow and has an overall calming effect. Active children usually have less symptoms and better control over their asthma.

When children are using preventer medication morning and night, exercise should not be a problem for most asthmatic children. Some children may need 1-2 puffs of their reliever prior to exercising. If the reliever is needed more than once after the initial puffs, stop the activity session for that day. Children who are recovering from a recent asthma episode should not do active exercise for a week.

Be aware that cold air is an important asthma trigger. A good warm up period is essential on colder days. Stop, rest and take your reliever if necessary.

If asthma is affecting a child to the extent that they can't exercise regularly or play sport, then they need to see a doctor for a medical review.



Healthy Eating

Research has shown that children who are overweight are more prone to having asthma and they often need encouragement to exercise regularly.

A well balanced diet with lots of fresh fruit and vegetables; breads, cereals and grains; low-fat dairy; fish and lean meats and plenty of water, is just as important for children with asthma as it is for everyone else. Sweet treats, takeaways and packet foods are for special occasions, not a daily event.



Smoking

It is desirable for everyone to be smoke free and it is particularly important for children with asthma to live in a smoke free environment. This means avoiding both cigarette and marijuana inhalation.

On school trips it is advisable that a child with asthma travels with a parent who is totally smoke free. Remember if you can smell smoke you are breathing in the chemicals.



SAILOR SAYS,

'Be smoke free – be active – eat healthy – sleep well'



Sailor's 7 Top Tips for Asthma Control

1. Know how your inhalers help you
2. Always take your medicine as prescribed so you don't have asthma
3. Know how to use your inhaler and spacer properly
4. Know how you feel when you are getting asthma
5. Know where your inhalers are kept
6. Stay away from cigarette smoke
7. Be active and eat healthy



To find out more about how to stay in control of your asthma, check out the website

www.sailortheufferfish.co.nz

or call one of our asthma nurses for a free chat on

Phone 07 838 0851



Asthma Waikato

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Phone 07 838 0851
Email waikato_asthma@xtra.co.nz
Website www.sailorthepufferfish.co.nz
www.asthmawaikato.co.nz

Project Energize, Sport Waikato

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Website www.sportwaikato.org.nz



asthma waikato

Better respiratory health for New Zealanders

