

ASTHMA : AN EXAMPLE OF CHRONIC ILLNESS IN TAEKWON-DO

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CONSIDERATIONS FOR THE INSTRUCTOR

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1. INTRODUCTION

With minimal prior experience of instructing, the reality of what is required of an instructor soon became evident when I took over as head instructor of the Kapiti Coast School.

Instructing is more than just planning and delivering a class twice a week. It's personalising your style and delivery to meet the individual needs of your students. Over and above this, it is being aware of any significant conditions that your students may have, learning about each condition and with your student, formalising a strategy to manage these conditions to ensure the safety of your school, yourself (as instructor) and most importantly your student. These strategies must be a consideration in each class you prepare.

Whilst there is any number of chronic illnesses that you could encounter in your school, perhaps the most prevalent is Asthma.

Whilst this essay will focus on Asthma, the strategies discussed within this document can be applied to any chronic condition that you may encounter in your school.

2. WHAT IS ASTHMA

Asthma is a condition that affects a person's ability to breathe easily. Sensitive airways in the lungs, when exposed to certain triggers, will narrow and constrict the amount of air that can flow through the airways.

2.1 The Statistics

- One in six adults and one in four children experience asthma symptoms. That's over 600,000 of us, or approximately 14% of the population
- New Zealand has the second highest rate of asthma in the world (UK is first)
- Asthma related hospitalisation has more than doubled in the past 30 years
- Asthma is the most common cause of admission to hospital among children
- Asthma is estimated to cost New Zealand (directly and indirectly) approximately \$825 million per year
- A significant proportion of this cost is attributed to chronic severe and / or poorly managed asthma

2.2 Narrowed Airways

Two main factors generally cause the airways to narrow:

- The interior lining of the normal airway becomes swollen. As a result of this, extra mucus may be produced, further narrowing and constricting the airway



NORMAL AIRWAY



RED & SWOLLEN



EXTRA MUCUS

- The muscle surrounding the airway tightens and constricts, narrowing the airway. This is known as bronchoconstriction.



NORMAL AIRWAY



MUSCLE SPASM

2.3 Typical Triggers of Asthma

The narrowing of the airways, through either swelling of the airways inner linings or Bronchoconstriction can be elicited by any number of triggers. Common triggers include:

- Inhaled allergens
- Viral infections
- Air pollutants
- Medications
- Some foods / food additives
- Emotions
- **Exercise** (Exercise Induced Asthma - EIA)

3. EXERCISE INDUCED ASTHMA (EIA)

As the instructor, your exposure to asthma will most likely be as a result of Exercise Induced Asthma (EIA). To help your student manage EIA, it is important that you learn about EIA, its triggers and symptoms, and what you can do to assist a student experiencing EIA.

Physical activity is of course, good for us all. It improves fitness levels, blood flow, flexibility and for the most part is fun. For those living with asthma, physical activity is especially important as it helps people to manage asthma when they do have it and generally speaking, people who exercise regularly will have less asthma. The barrier that many people with asthma encounter is that physical exercise itself can trigger EIA.

3.1 What Causes EIA

Generally, most people will breathe through their nose whilst at rest. Breathing through the nose will warm and moisten the air being delivered into the body. Whilst exercising however, most people will breathe through their mouth. Although breathing through the mouth will still warm and moisten air entering the body, it is not as efficient as the nose. This results in colder and drier air reaching the small airways of the lungs, causing water loss and cooling. It is believed that this change from warm, moist air to cooler, drier air irritates and tightens the airways of people with asthma

3.2 Preventing EIA

Whilst your student will be able to recognise the symptoms and onset of EIA in a training situation before you necessarily do, you as instructor can still have an active roll in the prevention of your students EIA. Actions you can take include:

- Regularly talking with your student regarding their day-to-day asthma. This doesn't need to be a lengthy 1-on-1 formalised meeting. From my personal experience, just a quick comment in passing (at an appropriate time when other students cannot hear your conversation) on a regular basis will help you to maintain a mental note of the

frequency your student experiences asthma and will act as a stimulus for further discussion / planning should comment necessitate it.

- Encourage your student to regularly review their asthma with their doctor and to prepare a written Asthma Self Management Plan (Appendix One). A Self Management Plan may provide an additional mechanism in assisting your student in managing their asthma.
- Encourage your student to use their reliever (such as Airomir, Asmol Epaq or Ventolin) approximately 5 to 10 minutes before they warm up. (Whilst this for the most part will be of benefit, you do also need to be aware that routine pre-exercise use can make airways more irritable, further enhancing the risk of asthma)

These medications are typically known as 'relievers'. Some 'preventer' medications (Intal, Intal Forte, Singulair and Tilade) and some 'symptom controller' medications (Foralide, Oxis and Serevent) may also be used to assist in the management of EIA.

However, your student should **always** seek professional medical advice as to the medication type which is most appropriate to them and their asthma for the type of activity you will be conducting in your class. As instructor, you can provide your student with a summary of the typical types and levels of exercise that could be expected from a standard class you instruct. This will assist your student's doctor in making the correct determination for your specific student.

- Ensure your student always warms up appropriately before any exercise. A warm up will usually consist of 15 to 20 minutes of light, intermittent exercises and stretching slowly increasing in intensity. The warm up should match the level of intensity you plan for your actual class.
- Ensure all your students, at the end of your class cool down appropriately rather than abruptly stopping intense exercise.

3.3 EIA During Your Class

It is more than likely that at some point, your student will experience EIA during one of your classes. You need to take some very simple steps to allow your student the opportunity to recover.

- Ensure your student stops training / exercising (if they leave the do-jang for fresh air ensure they are supervised)
- Have your student take 4 separate puffs on their reliever (Airomir, Asmol Epaq or Ventolin) with a spacer if available
- Allow your student to return to active participation in the class only when they can breathe normally again and are free of symptoms.

Should your student's symptoms not alleviate immediately, or if they return shortly after resuming training, you should consider the following:

- Ensure your student uses their reliever as before
- Not allow your student to return to active participation in the class for the rest of the evening
- Encourage your student to seek professional medical advice on asthma management. Whilst your student may have done this in the past, the management plan they currently employ may not suit the type of exercise that Taekwon-Do demands of them.

4. PLANNING TO MANAGE THE RISK

As eluded to earlier, the best form of risk management with regard your student's asthma, EIA or any other chronic illness, is to be thoroughly prepared for all eventualities. Taking the time to design a personalised management plan with your student will give both you as instructor, and your student confidence that their asthma is manageable and is not an issue that will stop them from enjoying your classes.

Whilst the following steps relate to the management of EIA between you and your student, the same process can be followed to develop a strategy for any medical / chronic condition your students may cite.

4.1 Step 1 - Listen to Your Student

Each student that joins your school will complete a joining application form. Perhaps the most important section of this form is in relation to any medical conditions that your student may have.

Where medical conditions, such as Asthma are noted, it is important to talk with your student (and / or their parent) to establish the full extent of the condition. It is also important to undertake the following:

- Confirm with your student (and / or their parent) that any information regarding their medical condition will remain absolutely confidential and will not be discussed with any other party.
- Seek information on the severity of their asthma
- Seek information on how the student currently manages their asthma
- Seek information on the symptoms of their asthma (what to look for as an indicator that your student is experiencing symptoms of it)
- Seek information on the appropriate treatment for their Asthma
- Advise your student you will research the condition further and sit down with them to develop a strategy for managing their asthma whilst at training.

4.2 Step 2 - Study Up

You have made a commitment to learn more about Asthma (or the condition your student has), so it is important to do so. How you act and treat this aspect of your student's application to join your school will significantly impact how they view you and Taekwon-Do.

The internet is awash with information regarding virtually everything. So make sure you visit the National Organisation's website for the condition you are researching. In this case, the Asthma Foundation of New Zealand (.asthmafoundation.org.nz) will prove to be a valuable resource.

Make notes on the condition, its symptoms and triggers, how it's treated and potential risks to both you and your student. You don't need to become an expert on asthma, but you do need to have a basic understanding of it so you can discuss the issue with your student intelligently and confidently.

4.3 Step 3 - Share Your Learning & Make a Plan

From my experience, taking time either directly before or after class to sit with your student one-on-one and share what you've learnt about their condition is valuable. It demonstrates your commitment to your student and their safety, which is pivotal to a student that may harbour some reservations about undertaking the type of activity Taekwon-Do demands.

Making an action plan for the effective management of your student's asthma is important. It doesn't need to be complicated or lengthy, but it does need to address key aspects that are important in ensuring your students safety in your class. Considerations you may wish to make are:

- How do your specific student's asthma symptoms manifest themselves ? E.g. What should you be looking for if your student is experiencing EIA
- What are the differing levels of EIA that your student could experience (mild, moderate, severe) and how would the symptoms of each differ ?

- Mindful that treatment for each level of EIA (mild, moderate, severe) may differ, what are the treatments for each ?
- Where will any required medications be located - Ensure you and your student establish a routine very quickly so that you know where their medications are immediately at any time.
- Should your student require the application of medication, what are the implications to you should you administer it ?
- A full list of emergency contact information should be provided
- In what circumstances should you as the instructor immediately escalate any EIA event to the emergency services ?

4.4 Step 4 - Test the Plan

Having developed an action plan on what to do in case your student experiences EIA, it is important to ensure that aspects that have been agreed upon by both parties are actually undertaken.

For instance, if your student has agreed to always place their inhaler in the front pocket of their gear bag, ensure that it has been done and you know what their gear bag looks like and where your student has agreed to always place it. Likewise, if you have undertaken to always have something available at the front of the class, demonstrate to your student that you have done so.

Regularly test what you have implemented so as to ensure both parties consistently meet their respective obligations.

5. CONSIDERING THE ITFNZ SYLLABUS

You may additionally discover that as a result of your student's asthma (or other chronic illness), they may have difficulty in achieving some of the physical requirements of our syllabus.

I imagine all instructors, as I have, encounter people wishing to join Taekwon-Do that are put off by the limitations their body's have. Be it a physical limitation or a limitation they perceive their chronic illness may create.

5.1 ITFNZ Mission - It's For Everyone

The primary objective of the ITFNZ is to promote and teach the Chang-Hon style of Taekwon-Do, the amateur sport, the martial art, and the philosophy in accordance with the International Taekwon-Do Federation (ITF) and in accordance with the teachings of Gen. Choi Hong Hi, the founder of Taekwon-Do.

Section I, Article 2.2(k) of the Constitution of the ITFNZ further states that its objective is:

“to encourage participation and achievement in Taekwon-Do in ITFNZ and among ITFNZ's members...”

Section II, Article 4.1 of the Constitution of the ITFNZ continues:

“Membership shall be open to any individual or organisation functioning in a lawful manner regardless of gender, race or religion, that wishes to be involved with the Chang-Hon style of Taekwon-Do developed by Gen. Choi Hong Hi, the founder of Taekwon-Do, and who seek the honourable goals intrinsic in ITFNZ activities”

Whilst asthma in itself may not pose significant enough risk or difficulty to you or your student to preclude an individual from wanting to learn Taekwon-Do, there are many

chronic / serious illnesses which will challenge you as an instructor to meet the above objectives of the organisation, whilst teaching your student and maintaining their safety.

As I have in my capacity of instructor, some of you may encounter students with serious chronic illnesses such as Haemophilia (a condition which relates to an individual's ability to produce blood clotting agents). Working alongside and with your student, you need to consider the ITFNZ's objectives and your student's safety and if essentially the benefit outweighs the risk.

Whilst managing the risk of chronic illnesses such as asthma is very important, further detailed and careful consideration and planning must be taken into account when addressing other serious illnesses such as Haemophilia.

Having said this, the same steps as outlined in Section 4 still apply. Just the level of learning and planning will need to be significantly increased. As instructor, you will need to consider (and plan for) students who cannot participate in some of the activities that are a part of Taekwon-Do, so your lesson plan will need to cater for this.

Should you decide that the benefits outweigh the risks, you will also need to very carefully plan how any and all eventualities are catered for.

Chronic illnesses do not need to preclude your student from enjoying everything Taekwon-Do has to offer.

5.2 Cater The Syllabus

As I have done with my students that have chronic illnesses which limit their physical ability in Taekwon-Do, I have catered the syllabus to meet the student's level of ability.

If for instance your student simply cannot physically jump due to some medical condition, as instructor, it's your responsibility to find a suitable alternative to that specific technique that is of a similar difficulty level, yet provides a real and tangible challenge for your student.

It may be that you need to work through the entire syllabus handbook, assessing every technique and if your students limitations would preclude them from undertaking it.

Where you have undertaken substitution of techniques from the prescribed ITFNZ syllabus to something else for your specific student, it is important that you notify the chief examiner of the changes, the reasons for them, and why the replacement technique provides a suitable level of difficulty and challenge. You may find that the chief examiner will make other technique suggestions or ask additional queries with regard your student.

6. CONCLUSION

Chronic illness, be it anything from asthma through to severe haemophilia need not be a barrier to anyone wishing to learn Taekwon-Do.

The important things to remember, as instructor, are:

- Identify any and all students that have medical conditions
- Learn about each condition
- Design an action plan with your student
- See the plan through
- Plan your classes accordingly

It may well be that after studying your student's illness, discussing it with them, and planning for all the possible eventualities, that you determine the risk to your school, you as instructor and your potential student are too great and you do not accept their application to join your school. Having all the available information, and making a sound, well informed decision is the key to managing such risks within your school.

However, the health benefits that individuals with chronic illnesses can obtain are immense. Additionally, our organisations objective is to make Taekwon-Do available to all - wouldn't it be a shame for someone to miss out on the opportunity we have all enjoyed simply through a lack of learning and planning ?

7. APPENDIX ONE - Asthma Self Management Plan

7.1 Adult's Self Management Plan

Courtesy of the Asthma & Respiratory Foundation of New Zealand, an example of an Asthma Self Management plan for you and your student to prepare.

USING A SPACER

If you use a Metered Dose Inhaler (MDI), a spacer will help get the correct dose of medication into your lungs. Ask your doctor about a spacer. If you don't already have one, you need one. Spacers increase your medication's effectiveness by up to 50%.



- 1 Shake the inhaler well (holding it upright).
- 2 Fit the inhaler into the opening at the end of the spacer.
- 3 Seal lips firmly around the mouthpiece.
 - press the inhaler once only.
- 4 Take 1-9 slow breaths in and out through your mouth. Do not remove the spacer from your mouth between breaths.
 - remove the spacer from your mouth.
- 5 Repeat steps 1-4 for further doses.

Washing your spacer

Wash your spacer once a week with warm water and dishwashing liquid. **DO NOT RINSE. DRIP DRY** to ensure that your medicine gets into your lungs and doesn't stick to the sides of the spacer.

CLEANING YOUR MDI

All MDIs (Metered Dose Inhalers) need to be washed weekly. Here is how to wash and dry an MDI.

- 1 Remove the plastic mouthpiece cap.
- 2 Remove the metal canister (don't put it in water).
- 3 Rinse the mouthpiece and cap under warm water for at least 30 seconds.
- 4 Shake off any excess water and dry the mouthpiece and cap thoroughly.
- 5 Put the metal canister back in, and replace cap.

Check the manufacturers' instructions for any special instructions for your type of inhaler.

USING YOUR TURBUHALER

- 1 Unscrew and remove the protective cover.
- 2 Hold the Turbuhaler upright.
- 3 Twist the coloured grip as far as it will go in one direction and then back again until you hear a click.
 - Your Turbuhaler is now loaded with a dose of medication. Breathe out gently.
- 4 Place the mouthpiece between your lips.
 - Suck in deeply and forcefully through the Turbuhaler. You may not taste or feel the medication.
 - Remove the inhaler from your mouth and breathe out. Do not breathe back into the mouthpiece as you will make it damp inside.
 - If more than one dose is required, repeat the steps above.
 - When you are finished, place the cover back on the inhaler and twist shut.
- 5 Your Turbuhaler has a dose indicator window just below the mouthpiece. When you see red in the window it is time to get a new Turbuhaler.

Caring for your Turbuhaler:

- Do not wash your Turbuhaler as it will not work properly if it gets wet.
- Wipe the mouthpiece with a dry tissue or cloth.

ASTHMA

Self Management Plan

This Asthma Self Management Plan belongs to:

See your doctor for an influenza vaccination every March





The Asthma and Respiratory Foundation of New Zealand (Inc.)
Te Taumata Hoanga, Matai He a Aotearoa







supported by PHARMAC



www.asthmafoundation.org.nz

Your Asthma Self Management Plan

	ASTHMA SYMPTOMS	YOUR MEDICATION IS CRUCIAL	MEDICATION ALERT															
FEELING GREAT	<p>Your asthma is under control when</p> <ul style="list-style-type: none"> • you don't have asthma symptoms most days (wheeze, tight chest, breathlessness, or a cough) • you don't wake at night with asthma symptoms • you can continue with all your usual activities • you use a reliever less than 3 times per week <p style="font-size: 8px; border: 1px solid #003366; padding: 2px;">your peak flow reading is above</p>	<table border="1" style="width: 100%; border-collapse: collapse; font-size: 8px;"> <tr> <td style="font-size: 7px;">Preventer</td> <td style="font-size: 7px;">puffs</td> <td style="font-size: 7px;">morning and night every day</td> </tr> <tr> <td style="font-size: 7px;">Symptom controller</td> <td style="font-size: 7px;">puffs</td> <td style="font-size: 7px;">morning and night every day</td> </tr> <tr> <td style="font-size: 7px;">Reliever</td> <td style="font-size: 7px;">puffs</td> <td style="font-size: 7px;">as needed</td> </tr> <tr> <td style="font-size: 7px;">Exercise management</td> <td style="font-size: 7px;">puffs</td> <td style="font-size: 7px;">5-10 minutes before exercise</td> </tr> <tr> <td style="font-size: 7px;">Emergency reliever</td> <td></td> <td></td> </tr> </table>	Preventer	puffs	morning and night every day	Symptom controller	puffs	morning and night every day	Reliever	puffs	as needed	Exercise management	puffs	5-10 minutes before exercise	Emergency reliever			<ul style="list-style-type: none"> • if you regularly need to take more than 6 puffs of reliever every day, see your doctor as there is a risk of harmful side effects • if you regularly take more than 3 doses of reliever a week you should be taking regular preventer medication
Preventer	puffs	morning and night every day																
Symptom controller	puffs	morning and night every day																
Reliever	puffs	as needed																
Exercise management	puffs	5-10 minutes before exercise																
Emergency reliever																		
GETTING WORSE	<p>Caution – your asthma is getting worse when</p> <ul style="list-style-type: none"> • you are waking at night with asthma symptoms; or • you are very breathless or wheezy; or • exercise or daily activities are becoming difficult because of asthma symptoms; or • you are using more reliever than usual; or • your reliever lasts a much shorter time <p style="font-size: 8px; border: 1px solid #003366; padding: 2px;">your peak flow reading is below</p>	<p>Let's keep calm, but get prepared...</p> <ul style="list-style-type: none"> • continue with your regular medication • take your reliever as required (up to a maximum of 12 puffs in 24 hours) <div style="border: 1px solid #003366; height: 20px; width: 100%; margin: 5px 0;"></div> <ul style="list-style-type: none"> • If you have been prescribed prednisone begin as follows: <table border="1" style="width: 100%; border-collapse: collapse; font-size: 8px;"> <tr> <td style="font-size: 7px;">prednisone</td> <td style="font-size: 7px;">mg</td> <td style="font-size: 7px;">for</td> <td style="font-size: 7px;">days</td> </tr> <tr> <td colspan="4" style="font-size: 7px;">and then</td> </tr> </table>	prednisone	mg	for	days	and then				<ul style="list-style-type: none"> • if you are not improving within 1 hour of taking your reliever or your symptoms worsen, move to the emergency zone • if you need to take more than 12 puffs of reliever in 24 hours, see your doctor today; or • if you have no prednisone see your doctor or pharmacist* today • if you are no better after 1-2 days of commencing prednisone, see your doctor • if you require 2 or more courses of prednisone see your doctor 							
prednisone	mg	for	days															
and then																		
EMERGENCY	<p>EMERGENCY</p> <ul style="list-style-type: none"> • you have severe breathlessness; or • you are finding it hard to speak; or • you feel faint or are frightened; or • your reliever is not working <p style="font-size: 8px; border: 1px solid #003366; padding: 2px;">your peak flow reading is below</p>	<ul style="list-style-type: none"> • dial 111 for an ambulance and explain you are having severe asthma • sit upright and relax your shoulders • take 6 puffs of your emergency reliever every 6 minutes until your symptoms are relieved or the ambulance arrives • use a spacer with your metered dose inhaler if available <p style="font-size: 8px;">Remember: 1 puff at a time into your spacer and 6 slow breaths in and out</p>	<div style="border: 2px solid #003366; padding: 5px; font-size: 8px;"> <p>Best peak flow: _____</p> <p>Plan prepared by: _____</p> <p>Date prepared: _____</p> <p>Review date: _____</p> <p>GP: _____</p> <p>Doctor's signature: _____</p> </div>															

7.2 Children's Asthma Plan Symptom Diary

Courtesy of the Asthma & Respiratory Foundation of New Zealand, an example of an Asthma Self Management plan for you and your student to prepare.



The Royal New Zealand College of General Practitioners



The Asthma and Respiratory Foundation of New Zealand (Inc.)
Te Kaitiaki Whānau, Mata Rau o Aotearoa

Child Asthma Plan

How well is your child?
If frightened at any stage call 111.

Name _____

What do I do?
Your health worker may need to vary these instructions to suit.

Doctor _____

This Plan Issued / / _____

Expires and needs replacing on / / _____

WELL
No cough or wheeze
Symptom scores mostly 0

- No day or night time cough or wheeze
- Play or behaviour same as other children

Usual Preventer medication _____

WELL

MILD COUGH OR WHEEZE OR GETTING A COLD
Child not distressed
Symptom scores mostly 1

- Mild – moderate daytime cough or wheeze
- Occasional cough at night
- Cough or wheeze when excited or running
- Needing reliever to control symptoms

Reliever (Blue Inhaler – only if required) _____

ASTHMA MILD
Continue using your preventer puffs

Use your reliever _____

ASTHMA WORSE
Short of breath
Child becoming distressed
Symptom scores mostly 2

- Moderate daytime cough or wheeze
- Unable to play like other children
- Sleep very little due to asthma
- Only able to sit quietly, no energy

Use your _____ reliever _____

ASTHMA WORSE
Continue using your preventer

If no better contact your doctor _____

8. APPENDIX TWO - Asthma First Aid Plan

Action first aid plan which can be reproduced for placement in a prominent location in your club.

ASTHMA FIRST AID PLAN

STEP ONE : Sit the person upright and give reassurance.
Do not leave the person alone.

STEP TWO : Without delay, give 4 separate puffs of a reliever (Airomir, Asmol, Epaq or Ventolin).

The medication is best given one puff at a time via a spacer device

Ask the person to take 4 breaths from the spacer after each puff of medication

STEP THREE : Wait 4 minutes. If little or no improvement, repeat steps 2 and 3

STEP FOUR : If there is still little or no improvement, call an ambulance - Dial 111

Continuously repeat steps 2 and 3 while waiting for the ambulance to arrive.