

# **Asthma and Travel to Beijing**

By Dr. Fiona Newton BMBS (Hons)

Family Medicine Physician at Beijing United Family Hospital and Clinics

## **So you have asthma? Is travel to Beijing out of the question?**

Asthma is a common illness all over the world, and particularly so in developed countries including Australia.

News of terrible air quality in Beijing and China intermittently hits the airwaves in Australia and causes much concern for would – be travellers to China. The reality here in Beijing is that the air quality varies a great deal, from good to poor to occasionally diabolical.

Either way, there are plenty of ways to reduce the impact of asthma when travelling to or living in China, which I'll outline below.

## **What exactly is asthma?**

Asthma is a chronic inflammatory condition of the airways with symptoms of episodic coughing, wheezing and shortness of breath.

Asthma symptoms or flare-ups can be triggered by many factors including viral infections (the common cold), environmental factors including cigarette and wood smoke, outdoor air pollution, moulds, house dust mite, pet fur, fragrances, cold dry air, humidity and thunderstorms, pollens, and physical exercise.

## **Can I travel to China if I have asthma?**

The answer is very likely to be “yes”. Of course each individual is different and it's important to seek advice from your own doctor regarding the risks of travel for you and your family.

## **How can I best prepare for travel to China if I have asthma?**

Before travelling to China, visit your GP to discuss your asthma management. It is ideal if your asthma is stable and well controlled before you travel. Asthma symptoms can be subtle, including an annoying night cough, minor breathlessness or chest tightness, or a tendency for colds to linger on longer than usual.

Your GP will assess you and help **stabilise your asthma** using a range of medications.

These include:

- “relievers” such as salbutamol or albuterol (Ventolin) which provide rapid relief from asthma symptoms by relaxing tightened airways
- “preventers” including inhaled corticosteroids such as budesonide (Pulmicort) and fluticasone (Flixotide), and montelukast tablets (Singulair). “Preventers” are designed for regular use to reduce airway inflammation and stabilise asthma.

- Others, including prednisolone for management of more severe flare-ups

Ensure that you ask your GP for an “**Asthma Management Plan**” so that you can recognise your symptoms and know when to seek medical advice. Your plan will help you to adjust your asthma management according to your needs.

**Understanding your medications** and knowing how to use them properly is important. Ask your GP to refer you to an asthma educator. Learn the best **technique for using your asthma inhalers**. It is ideal to use your inhalers via a spacer device, which improves the effectiveness of inhaled medications and reduces side effects. Children, in particular, can’t manage to use inhalers without a spacer, and very young children will need a spacer and mask combination.

**Carry supplies of your asthma medications**, ensuring some medication is accessible as cabin baggage.

I’d also recommend discussing **immunisation** with your doctor. Immunisations against influenza and the pneumococcal bacteria can reduce the risks of a significant asthma flare-up associated with these infections. Influenza immunisation is recommended each Autumn while in China too.

Ensuring a healthy lifestyle prior to and during travel in China is important. Avoid cigarette smoke exposure, eat a balanced diet, exercise regularly, and consider meditation and breathing techniques (commonly incorporated into yoga or tai chi practice) for stress management.

### **What facilities are available to me in Beijing?**

I recommend establishing a health care provider in China to help keep your asthma well controlled. It is useful to visit the doctor upon arrival to China to establish plans for your ongoing management and a plan should symptoms or an emergency occur.

Beijing United Family Hospital is well placed to manage your healthcare needs. This is an international standard hospital with English speaking doctors and nurses including Family Medicine physicians (GPs), Lung specialist doctors, Emergency Department facilities, and even an Intensive Care Unit.

The hospital pharmacy stocks most of the usual range of asthma medications available in Australia. You can purchase a spacer, or purchase or hire a nebulizer via the hospital pharmacy.

It is reassuring to have an action plan in place in case of an asthma emergency, and our Emergency Department physicians are available 24 hours per day, to be able to assist you in English, including arranging ambulance transport if required.

Please visit [beijing.ufh.com.cn](http://beijing.ufh.com.cn) for more information, locations of our clinics, and for useful health articles on asthma and other topics.

There are a number of other Western style clinics in Beijing. It’s important to be aware that local Chinese hospitals and clinics, although significantly cheaper to access, will generally not employ English – speaking staff or have the same standards of care and privacy as Australian facilities.

As always, it is important to consider travel insurance, or health insurance if you are planning to stay in China for a longer period.

### **What about the Beijing air pollution?**

The Australian Asthma Handbook advises that “studies suggest a strong relationship between air pollution and asthma symptoms or flare-ups, including severe acute asthma requiring hospital admission. The mechanisms appear to involve airway inflammation and reduction in lung function. Airborne pollutants associated with worsening of asthma symptoms include:

- coarse particulate matter (diameter  $\leq$  10 micrometre) known as PM 10
- fine particulate matter (diameter  $\leq$  2.5 micrometre) known as PM 2.5
- carbon monoxide
- ozone
- nitrogen dioxide
- sulphur dioxide
- diesel exhaust (multiple chemicals)”

### **How can I reduce the impact of air pollution on my asthma?**

Reducing exposure to environmental air pollution improves asthma control. Reducing exposure to PM 2.5 fine particles is particularly important as it is these particles that are most associated with respiratory illness including asthma.

This can be achieved in Beijing and China by monitoring air quality, and when appropriate:

- wearing a N95 face mask when outdoors. These masks filter 95 percent of the fine particles (PM 2.5) in the air we breathe.

There are many available masks, including disposable 3M masks available in convenience stores throughout Beijing, or longer-lasting masks such as Vog masks, which are available for sale at Beijing United Family Hospital.

- Using hired or purchased air purifiers which filter the indoor air via a HEPA filter system.

There are many options available, which vary markedly in price. It is important to consider the size of your living space so that sufficient air purifiers are used to adequately filter the air.

For very helpful information when considering masks, air purifiers, air quality monitors and all things health-related in Beijing, check [www.myhealthbeijing.com](http://www.myhealthbeijing.com). This blog by Dr Richard St Cyr, who is also a Family Medicine Physician at Beijing United Family Hospital, is a great source of information especially for those who plan to stay longer in Beijing or China.

### **How can I easily measure the air quality?**

Fortunately there are a number of user – friendly ways to monitor air quality in Beijing and other cities of China.



<http://www.aqicn.info/> provides real time air quality data for multiple areas of Beijing and for many other Chinese cities, which can be conveniently accessed on your computer device or mobile phone.

Air quality monitors, including the relatively inexpensive and newly available “Laser Egg”, make it easy to check the air quality (particularly PM2.5) inside your home and living spaces.

### **So how do I act on air quality information to reduce the impact of air pollution on my health?**

Check the Air Quality Index regularly and adjust your lifestyle accordingly. Suggested guidelines, available on <http://www.aqicn.info/> are tabled below.

Please note that people with asthma, infants, children and pregnant women, are more susceptible to the damaging effects of pollution, so guidelines regarding pollution exposure are more stringent for these groups.

Beijing AQI: Beijing Real-time Air Quality Index (AQI).		
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#### About the Air Quality Levels

AQI	Air Pollution Level	Health Implications	Cautionary Statement (for PM2.5)
0 - 50	Good	Air quality is considered satisfactory, and air pollution poses little or no risk	None
51 -100	Moderate	Air quality is acceptable; however, for some pollutants there may be a moderate health concern for a very small number of people who are unusually sensitive to air pollution.	Active children and adults, and people with respiratory disease, such as asthma, should limit prolonged outdoor exertion.
101-150	Unhealthy for Sensitive Groups	Members of sensitive groups may experience health effects. The general public is not likely to be affected.	Active children and adults, and people with respiratory disease, such as asthma, should limit prolonged outdoor exertion.
151-200	Unhealthy	Everyone may begin to experience health effects; members of	Active children and adults, and people with respiratory disease,

AQI	Air Pollution Level	Health Implications	Cautionary Statement (for PM2.5)
		sensitive groups may experience more serious health effects	such as asthma, should avoid prolonged outdoor exertion; everyone else, especially children, should limit prolonged outdoor exertion
201-300	Very Unhealthy	Health warnings of emergency conditions. The entire population is more likely to be affected.	Active children and adults, and people with respiratory disease, such as asthma, should avoid all outdoor exertion; everyone else, especially children, should limit outdoor exertion.
300+	Hazardous	Health alert: everyone may experience more serious health effects	Everyone should avoid all outdoor exertion

Consider if air quality protocols are in place when choosing schools for your children. Many schools in Beijing now have excellent air filtration systems and strict protocols for limiting outdoor activities to clean air days. An example (from USA) is tabled below:

Activity Recommendations for Schools on Poor Air Quality Days					
Air Quality Index (AQI) Chart for Real-time PM <sub>2.5</sub> and Ozone Levels					
ACTIVITY ↓ AQI →	0-50 GOOD	51-100 MODERATE	101-150 UNHEALTHY FOR SENSITIVE GROUPS	151-200 UNHEALTHY	201-300 VERY UNHEALTHY
<b>Recess (15 min)</b>	No restrictions.	No restrictions.	Students with asthma or other heart/lung conditions should have indoor options available.	Indoor recess is advised. Restrict outdoor activities to light exercise. Sensitive students should remain indoors.	No outdoor activity. All activities should be moved indoors.
<b>P.E. (1 hr)</b>	No restrictions.	Exceptionally sensitive individuals should limit intense activities.	Any student who has asthma or other heart/lung conditions should exercise indoors or limit the intensity of outdoor exercise.	Indoor P.E. is advised. Restrict outdoor activities to 20 minutes of high exertion. Sensitive students should remain indoors.	No outdoor activity. All activities should be moved indoors.
<b>Athletic Practice and Training (2-4 hrs)</b>	No restrictions.	Exceptionally sensitive individuals should limit intense activities.	Increase rest periods and substitutions for all students. Insure that asthmatics or others with heart/lung conditions are medically managing their condition.	Reschedule time of day or move indoors if possible. Reduce conditioning activities to 1 hr of high exertion. Increase rest breaks and substitutions (see CIF guidelines for prevention of heat-related illness). Sensitive students should remain indoors.	No outdoor activity. All activities should be moved indoors.
<b>Scheduled Sporting Events</b>	No restrictions.	Exceptionally sensitive individuals should limit intense activities.	Increase rest periods and substitutions. Insure asthmatics or others with heart/lung conditions are medically managing their condition.	Reschedule or relocate when possible. Increase rest breaks and substitutions per CIF guidelines. Insure asthmatics or others with heart/lung conditions are medically managing their condition.	Event must be rescheduled or relocated.

*AQI School Guide San Joaquin Valley RAAN PM2.5 Ozone*

**Are there other ways I can reduce asthma symptoms and the risk of flare-ups?**

Other potentially important asthma triggers to consider and reduce if feasible are exposures to cigarette smoke, house dust, mould, animal fur, and cockroach droppings.

**So, in summary**, take steps to optimally manage your asthma, be aware of air quality and how to monitor it and reduce it's impact on your health. Then enjoy your stay in Beijing and China!

For more information on Dr. Newton and Family Medicine Services see [www.ufh.com.cn](http://www.ufh.com.cn)