

Exercise Induced Bronchoconstriction



**Asthma
Australia**

Consumer Fact Sheet

This fact sheet provides information regarding exercise and asthma. The information is intended for people aged 12 and over. If you require information for children aged under 12, we recommend you speak to your specialist or doctor to determine the best treatment plan.

What is Exercised Induced Bronchoconstriction?

Exercise Induced Bronchoconstriction (EIB) previously called Exercise Induced Asthma (EIA), although both terms are often used. EIB is the current and correct term as the cause and development of EIB can be very different to asthma.

EIB is temporary narrowing of the lower airways, occurring after vigorous exercise.

It may occur in people with asthma or in people without asthma.

In people with asthma who experience EIB, exercise is an asthma trigger. This means that for some people during vigorous exercise the small airways in the lungs become red, swollen and may become blocked with mucus. This narrows the airways and makes it more difficult to breath.

Not everybody that has asthma has EIB and some people with EIB may not have asthma.

What causes Exercise Induced Bronchoconstriction?

With heavy exercise breathing increases significantly. This leads to drying of the airways in the lungs; the upper airways are unable to keep up with the demand of warming and humidifying the air breathed. This increased drying and cooling of the airways results in inflammation and airways narrow. Other environmental triggers may contribute to EIB such as air

pollution, irritants, pollens and viruses. For example, running along a street with heavy traffic.

How common is Exercise Induced Bronchoconstriction?

Up to 90% of people with asthma, 50% of competitive athletes and up to 26% of school children experience EIB.

EIB is one of the first symptoms to appear in people with asthma who are not being treated adequately. This means you may not be on the right medication, or using it properly. Check with your doctor.

If you have been diagnosed with asthma and find your symptoms worsening especially if they appear shortly after you exercise, then this may be an early warning sign that your asthma may be getting worse or you may need your medications reviewed by your doctor.

If exercise is causing asthma symptoms, always speak to your doctor about this.

How do I know if I have Exercise Induced Bronchoconstriction?

You may experience cough, wheeze, a feeling of tightness or discomfort in the chest, breathlessness and/or excessive mucus production. These symptoms often appear or get worse **5-10 minutes after exercise** and therefore may not affect your performance whilst exercising.

About 50% of people will have what is called a refractory period

following exercise. What this means is that once they have recovered from one episode of EIB then they may not experience another episode of EIB for 2-3 hours even if they exercise again.

It is important to remember that any episode of shortness of breath or chest pain or discomfort, especially associated with exercise, must always be investigated by a doctor as soon as possible as there are other causes of these symptoms some of which may be very serious.

How is Exercise Induced Bronchoconstriction diagnosed?

A detailed history and examination performed by your doctor are essential and will help to identify exercise as the cause of your symptoms. Your doctor may refer you to another specialist and arrange for further testing and investigations to be performed to confirm diagnosis.

A lung function test such as spirometry can assess your lung volume and lung strength. You may also be referred for Bronchial Challenge Testing. This is a specialised test, which attempts to identify if your lungs are very sensitive, and if the airways become narrow to certain triggers. Bronchial Challenge Testing is an essential requirement for those involved in competitive sports especially if medication is prescribed to control EIB.

Please turn over >

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How is Exercise Induced Bronchoconstriction treated?

People with EIB are encouraged to be physically active. There are many high profile professional athletes who experience EIB and with the help of their doctor, education and appropriate medication, manage their EIB exceptionally well.

It is vital to determine which treatment works for you. A medication that works well for one person may not work as well for another.

Being appropriately investigated and having the correct diagnosis is essential to the safe and correct management of your symptoms.

If your doctor prescribes medication, make sure you are using your medication properly – ask your doctor, pharmacist or your local Asthma Foundation for more advice.

Ask your doctor or pharmacist to

- Show you how to use your asthma inhalers and devices
- Check that you are using the correct technique with regular reviews.

Up to 90% of people do not use their asthma medication devices correctly.

There are several different medications, which may be used alone, or in combination to manage EIB, three of the most common medications are as follows:

Reliever medication

These tend to be the most effective medicines for short-term protection

against EIB and for quick recovery after exercise. It is important to remember that reliever medication should not be used regularly and should definitely not be used daily as frequent use may result in an increase of severity of EIB symptoms over time.

Your doctor and pharmacist will explain how best to use your medication, although in general, reliever medication is usually taken 5-20 minutes before exercise and will last approximately 2-4 hours, the timing and duration will depend on the medication prescribed.

Long Acting Reliever medication

Depending on the medication prescribed, you may need to take the long acting reliever anywhere from 5-30 minutes prior to exercise and the effects may last for up to 12 hours. Repeated use of this type of medication (even a second dose within 72 hours), are less effective and the benefits of repeated doses may last less than 6 hours.

Neither type of reliever medication should be used regularly and should definitely not be used daily as too frequent use may result in an increase of severity of EIB symptoms over time.

If you are using reliever medication regularly to manage EIB – see your doctor for a review.

Preventer medication

If taken regularly, as prescribed and long term (for 4 weeks or more - it may be 12 weeks until maximum benefit is obtained)

preventer medications are effective in decreasing the frequency and severity of EIB in some patients. The response can be quite variable and may result in complete resolution of symptoms to no benefit at all. If preventer medications work for you then you may no longer need to take reliever medication for EIB, although this is a decision you make with your doctor.

What about taking medications if I'm involved in competitive sport?

For elite, professional and semi-professional athletes this is a very significant concern as the issue of drugs in sport and any medications or supplements you take, may have serious implications.

Many sporting bodies require elite, professional and semi-professional athletes to provide evidence of EIB, such as Bronchial Challenge Test results, before they are permitted to use EIB medicines during competition. So for any athlete competing at this level before you take any medication or supplement, even if prescribed by your doctor, you must always check with:

The Australian Sports Anti-Doping Authority (ASADA)
13 000 ASADA (1300 027 232)
www.asada.gov.au/

The World Anti-Doping Agency website
www.wada-ama.org

Please turn over >

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What else can I do to help with my Exercise Induced Bronchoconstriction?

As well as seeing your doctor, and taking medication as prescribed the following suggestions may help some people with EIB manage their symptoms:

- Being as fit as possible – increasing fitness raises the threshold for EIB, so that moderately strenuous exercise may not cause an attack.
- Exercising in a warm and humid environment
- Avoiding environments with high levels of allergens, pollution, irritant gases or airborne particles.
- Breathing through the nose to help warm and humidify the air
- Using a mask to filter air, although this may be impractical
- Warming up before exercise
- After strenuous exercise doing cooling down exercise, breathing through the nose and covering the mouth in cold, dry weather
- If you smoke cigarettes, consider speaking to your doctor about quitting.

References are available.