

# Prevention and treatment of an asthma attack

## EXERCISE-INDUCED ASTHMA

Exercise can often trigger asthma - research indicates that about 80% of people with asthma have symptoms triggered by exercise. For most people exercise is one of a number of different triggers. Exercise-induced asthma can affect anybody with asthma including recreational sports people or elite athletes. This leaflet examines the symptoms, ways to reduce the risk of an attack and also what to do in case of an acute attack while exercising.

## WHAT IS ASTHMA?

Asthma is an inflammatory process affecting the airways of the lungs. People with asthma have airways that are almost always red, inflamed and swollen. This redness, inflammation and swelling means that the airways are overly sensitive to various stimuli, which will set off asthma symptoms - these are called triggers.

When the airways come into contact with a trigger, the muscles that wrap around the airways react by tightening and constricting the airways. The trigger can also cause further swelling in the lining of the airways, which causes the airways to narrow even more. The combination of the swelling and tightening results in breathing difficulties.

Asthma affects individuals in different ways and the triggers will also vary. Respiratory and viral infections, pets, house dust mites and cigarette smoke, to name a few, can make the airways narrower in people with asthma.

## WHY DOES EXERCISE TRIGGER ASTHMA?

It is not known exactly how exercise triggers asthma. When people exercise they breathe faster and this makes it more difficult for the nose and upper airways to warm and add moisture to the air being breathed in. This results in the air breathed in during exercise being drier and colder than usual. It is thought that this cold, dry air in the airways triggers the symptoms of exercise induced asthma.

This may explain why swimming is a good sport for those with exercise induced asthma. The humid air in the swimming pool does not act as such a strong trigger.

## SYMPTOMS

Symptoms of exercise-induced asthma include coughing, wheezing, chest tightness and difficulty in breathing that is triggered by the exercise. Symptoms usually begin after exercise and worsen about 15 minutes after exercise stops.

Research shows that if exercise is attempted again within three hours the symptoms are less severe. As with all asthma symptoms, there is a wide variation between different people at different times.

## WHAT SHOULD YOU DO IN AN ASTHMA ATTACK

When someone is having an asthma attack, if any of the following happen:

- The symptoms (cough, tight chest, breathlessness) are getting worse
- The reliever (blue) inhaler does not help their symptoms
- The person is too breathless to speak:

## THEN

1. Get the person with asthma to take their usual reliever inhaler straight away
2. Keep calm and try to relax the person as much as possible
3. Sit them down, don't lie them down
4. Rest their hands on their knees for support
5. Try to slow their breathing down as this will make them less exhausted
6. Wait 5-10 minutes
7. If the symptoms disappear, the person should be able to go back to whatever they were doing
8. If the reliever has no effect, call a doctor or ambulance
9. Continue to give the person their reliever inhaler every few minutes until medical help arrives. It is not possible to overdose on reliever.

## MEDICATIONS

It is important that asthma is well-controlled before exercise. Regular inhaled preventer treatment as prescribed by a doctor is the main means of control. Medications allow the control of symptoms and different medications are chosen for different people.



- Inhaled steroids. Used to prevent asthma symptoms. Controlling the asthma symptoms using regular inhaled steroids will reduce the trigger effect of exercise
- Short- and long-acting beta agonists. Used to relieve asthma symptoms
- Sodium cromoglycate or nedocromil sodium. Used to prevent asthma symptoms especially before exercise
- Leukotriene receptor antagonists. Recently developed medications, in tablet form, which appear to be helpful in controlling exercise-induced asthma

## IMPORTANT NOTE

Asthma should be no obstacle to exercise, playing sport and keeping fit. Many Olympic competitors, footballers and other top sports people have asthma including Paula Radcliffe and Paul Scholes. It is particularly important to encourage children with asthma to participate in sport and physical activity. Often they will opt for less active positions such as goal-keeper instead of participating on the field due their fear of suffering an asthma attack.

## TIPS TO PREVENT EXERCISE-INDUCED ASTHMA

These should be used with any medications:

- Warm up and down. A 10 minute warm up period can be helpful. Useful exercises include 30 second sprints after a 5-10 minute brisk walk in order to get the blood circulating to the muscles. This has been found to be particularly effective at reducing the risk of an attack. Warm down afterwards also.
- Avoid the cold air. It can help to cover the nose and mouth in cold weather with a scarf. This warms and humidifies the air, which may reduce the trigger effect of cold air
- Fitness. Good aerobic fitness can also help.