

# PATIENT INFORMATION BROCHURE

## ANAPHYLAXIS

- Anaphylaxis is a sudden and severe allergic reaction that may be life threatening.
- It must be treated as an emergency, and patients who have anaphylaxis or are at risk for anaphylaxis must know how to reduce their risk by preventing exposure to potential triggers, knowing how to recognize early signs and be prepared for emergency treatment at any time.

### TRIGGERS

#### Common triggers of anaphylaxis are

- **Foods**

Egg, milk, peanuts, nuts, fish, shellfish, sesame, soya and wheat are the most common foods that can cause anaphylaxis. Almost any food can, however cause anaphylaxis.

- **Insect stings**

Bee venom is the most common cause of anaphylaxis due to insect stings in South Africa.

- **Medications**

Any medications can cause an allergy. More common causes include antibiotics, pain medication and drugs used during anaesthesia

- **Other**

Latex allergy is less common.

Some people have anaphylaxis only when 2 triggers are present, such as a specific food with exercise.

Some people have anaphylaxis without any cause being identified.

### SYMPTOMS OF ANAPHYLAXIS

- Symptoms of anaphylaxis usually occur rapidly, within 15 minutes to 1 hour of exposure to an allergen, sometimes even faster. The rapid development and worsening of anaphylaxis makes it a very dangerous condition.

- It is important to realise that the features of anaphylaxis can range from mild skin changes and facial swelling to life-threatening respiratory and cardiac involvement.
- Skin manifestation, which include flushing, redness, itching, hives and local swelling especially of the face are common.
- Abdominal symptoms include cramps, nausea, vomiting and diarrhoea.
- The most life-threatening features of anaphylaxis involve the respiratory system and the heart.
- Respiratory involvement can cause upper airways swelling of the tongue, the back of the throat, the area of the voice box or larynx. This may start with a hoarse voice and a persistent dry cough and then progress to throat tightness causing difficulty breathing. The airways of the lung may be involved causing chest tightness and a wheezing noise.
- Symptoms involving the heart and circulatory system are the most severe and include a sudden drop in blood pressure, irregular heartbeat and general collapse.

## WHAT HAPPENS IN ANAPHYLAXIS?

- Why some people become allergic to foods or venoms or medicines (Antigens) is not well understood.
- What is known is that a special class of antibody known as IgE antibody is produced by allergic people who have become sensitized to that specific allergen.
- These antibodies recognise the allergens and bind to them, causing the release of very powerful chemical substances such as histamine from certain cells in body.
- These chemicals result in the symptoms of anaphylaxis.

The body's natural response to anaphylaxis is to release a natural body chemical called adrenaline. Adrenaline, the fight or flight chemical, is the natural antidote to the anaphylactic reaction.

Adrenaline:

- Reduces swelling of the airways.
- Stimulates the hearts circulation to vital organs.

## TREATMENT FOR ANAPHYLAXIS

- Anaphylaxis can be prevented and treated.
- Identifying triggers and avoiding them is far better than treating an anaphylactic reaction!
- Anaphylaxis must be recognized early and treated quickly before it progresses.
- Call for an ambulance :
- **Municipal: 10177**
- **ER24: 084 124**
- **Netcare 911: 082 911**

- The most effective treatment for the serious effects of anaphylaxis is adrenaline. Adrenaline must be injected into a muscle as soon as anaphylaxis occurs. If someone has an emergency injection with them, either assist them to inject it into the large muscle of their thigh, or give it to them yourself.
- Help avoid shock by lying the person down with their feet raised off the ground.
- Do not give any medication by mouth if the person is having difficulty breathing. Other treatments that can help after adrenaline has been given include antihistamine and steroids.

*Adrenaline given for anaphylaxis saves lives and rapidly reverses the dangerous effects of anaphylaxis. In some cases it may be necessary to maintain a clear airway for the patient, provide oxygen and to monitor the circulatory system and blood pressure very closely.*

## **PREVENT ANAPHYLAXIS**

- To prevent anaphylaxis, people who have a reaction must identify the trigger and then avoid future exposure.
- This is done by a trained allergist taking a good history, doing allergy tests and occasionally by doing specific very controlled challenges.
- People at risk for anaphylaxis must be taught to immediately recognise the early signs of anaphylaxis. They must be provided with an emergency action plan that describes the signs of a mild-moderate attack versus a severe anaphylactic attack, and taught the correct response for either possibility.
- People at risk of anaphylaxis must wear a Medic Alert disc identifying them as being at risk and also detailing their own unique trigger factors.
- Patients must carry emergency treatment with them at all times and know how to inject themselves with adrenaline for a severe attack.

## **ADRENALINE**

- In your doctor's surgery or in the Emergency Department of a hospital, adrenaline is injected using a syringe and needle.
- For non-medical people such as parents or teachers who are not trained to use a syringe, adrenaline may be given using an automatic injection device.
- The device simply has to be pressed against the outer aspect of the upper thigh and adrenaline will automatically be injected into the person. The only adrenaline auto injector in South Africa at present is the epipen®. Epipen® comes in 2 strengths, epipen® junior for children between 8 and 25 kg and epipen® for adults and children greater than 25 kg. Large adults may need 2 epipens®.
- Where epipen® is not available, patients should carry a vial of adrenaline and a needle in a secure case and will require extensive education and training to teach them to draw up and administer the correct dose (0.01ml/kg) in an emergency.

## **CHILDREN AND ANAPHYLAXIS**

- Children must always be taught to avoid foods to which they are allergic.
- The school should have a copy of the action plan, the adrenaline emergency epipen® or kit must be with the child at school and teachers must be fully informed about these risks and be trained to give adrenaline in the case of an emergency.
- Where schools have children who are allergic to a specific food, in particular peanuts, it may be wise to prohibit that specific food from being brought to school by other school children.

## **KEY POINTS**

It is important to consult your doctor if you have ever experienced an anaphylactic episode. The correct diagnosis must be established and your doctor will complete an action plan, an application form for a Medic-Alert bracelet, provide the necessary education and prescribe an automatic adrenaline injector or adrenaline kit for emergency use.

- Anaphylaxis is the most severe form of sudden and life-threatening allergic reaction.
- Foods, insect venoms, antibiotics and some other medications are the main triggers for anaphylaxis.
- Adrenaline is the essential treatment for anaphylaxis.
- Adrenaline can only be given by injection.
- The epipen® is a device designed for emergency use by people at risk, which injects adrenaline automatically.
- Antihistamines do not reverse the dangerous complications of anaphylaxis and must only be used after adrenaline has been injected.