

## Reflex Anoxic Seizures (RAS)

### What are Reflex Anoxic Seizures?

“Reflex Anoxic Seizures (RAS) is the term used for a particular fit which is neither epileptic nor due to cyanotic breath-holding, but which rather results from a brief stoppage of the heart through excessive activity of the vagus nerve. Syncope (sin-co-pee) is derived from the Greek word to ‘cut off’. Syncope is the result of the temporary cutting off of the supply of oxygenated blood to the brain. The mechanism of the syncope in susceptible individuals includes reflex cardiac standstill (always reversible) commonly following an unexpected bump to the head or elsewhere. Associated marked pallor of the skin has led to these attacks being called Pallid Syncope. In more recent times these attacks have been referred to as Reflex Asystolic Syncope.”

*Founder Patron: Professor J B P Stephenson*

### Symptoms

Reflex Anoxic Seizures occur mainly in young children but can occur at any age. Any unexpected stimulus, such as pain, shock or fright causes the heart and breathing to stop, the eyes to roll up into the head, the complexion to become deathly white, often blue around the mouth and under the eyes, the jaw to clench and the body to stiffen; sometimes the arms and legs jerk. After what seems like hours, but is probably less than 30 seconds, the body relaxes, the heart starts beating (sometimes very slowly initially) and the sufferer is unconscious. One or two minutes later the person may regain consciousness but can sometimes be

unconscious for over an hour. Upon recovery the person may be very emotional and then fall into a deep sleep for two to three hours and look extremely pale with dark circles under the eyes. RAS attacks may occur several times per day/week/month. The attacks appear to come in batches.

### Diagnosis

A good description by a witness, establishing the trigger, keeping a diary of events and consulting a doctor who is fully aware of the condition and takes a detailed history will lead to a correct diagnosis.

Some Paediatricians will use the following tests to decide whether or not your child has Reflex Anoxic Seizures:

- **12-lead Electrocardiogram (ECG)** for heart rhythm analysis – wires placed on the chest to monitor the heart
- **Electroencephalogram (EEG)** for brain activity analysis – wires placed on the head to read the electrical output of the brain
- **Heart Rhythm Monitor** to record heart rhythms whilst away from hospital

### Misdiagnosis of RAS

The symptoms of RAS share common factors with a number of conditions, with the result that RAS is often misdiagnosed as temper tantrums, cyanotic breath holding (prolonged expiratory apnoea) or epilepsy.

For further information contact STARS

## Immediate action in the event of an RAS attack:

Everyone who has responsibility for a person with RAS must know what to do in the event of an attack.

1. Ensure the individual is lying flat in a safe environment and that nothing is blocking their airway.
2. Talk reassuringly as it is known that the individual can sometimes hear but is unable to answer. Comfort upon recovery. Allow to sleep if necessary.
3. It is not necessary to call a doctor. However, if the person has had a particularly nasty bump then it may be wise to seek medical advice.

## Reflex Anoxic Seizures are also known as:

Reflex asystolic syncope (RAS)  
Vaso-vagal syncope (VVS)  
Reflex syncope  
Neurally mediated syncope (NMS)  
Neurocardiogenic syncope (NCS)  
Pallid syncope  
Stephenson's syndrome  
Vagal cardio-inhibitory fainting fit  
White breath-holding attacks

Other patient information sheets are available on the condition, diagnosis and treatment of syncope.

For further information contact STARS