STARS
Syncope Trust And Reflex anoxic Seizures®
www.stars.org.uk

Take Fainting to Heart
There is no such thing as a simple faint...

Education information



Working together with individuals, families and medical professionals to offer support and information on syncope and reflex anoxic seizures

The aims of this booklet

- To inform and reassure you.
- To outline the ways a school can effectively manage a child with syncope/RAS to provide support and enable inclusion.
- To provide you with the information, materials and support with which you can plan and action a whole school strategy on the care and management of a child with syncope/RAS.

Definitions

- It is believed that about two thirds of loss of consciousness is due to syncope. Syncope (sin-co-pee) is a transient loss of consciousness and posture, caused by a temporary reduction in blood flow to the brain. It is characterised by rapid onset, short duration, and spontaneous complete recovery.
- This is quite different from epilepsy, where the problem begins in the brain itself, and the blood flow during an attack may be completely normal.
- Reflex Anoxic Seizures (RAS) is the childhood version of Reflex Syncope.
- Reflex Syncope is similar to RAS, but is more commonly diagnosed in older patients.

Key points to remember

This is a NON-life threatening condition and there are no known long term ill effects.

- The frequency of attacks vary with each individual - they may occur several times per day/ week/ month or year.
- While RAS more frequently occurs in young children, it is not uncommon for it to occur at any age.
- Good management of the child is the key to inclusion.

What will I see when someone is having an attack?

Each child is individual so symptoms may differ slightly

Triggers	Unexpected stimulus - such as pain, shock, surprise or fright
Signs	• May be off colour • A marked pallor of the skin • Emotional • Keeping a diary can help predict episodes
Symptoms	The heart and breathing momentarily stop. The eyes roll up into the head, the complexion becomes waxen, (while the skin may appear blue around the mouth and under the eyes), the jaw clenches and the body stiffens. There may be loss of muscle tone and possibly loss of bladder control.

What will I see when someone is entering the recovery stage?

Recovery	The body relaxes and the heart starts beating (sometimes very slowly). Consciousness is usually regained within one or two minutes, but occasionally it may be longer.
Upon Recovery	The child may be very emotional and fall into a deep sleep for two or three hours. They may also look extremely pale with dark circles under their eyes.

Think of a hedgehog! Whenever the hedgehog faces danger it curls into a ball shutting itself off from the world to protect itself and only uncurls when it is sure it is safe to do so. This is very similar to children with RAS, their body shuts down until the 'nasty thing' has gone away.

What should I do if someone is having an attack?

Do not panic

An unexpected syncopal attack can be alarming; just remember that the child WILL recover.

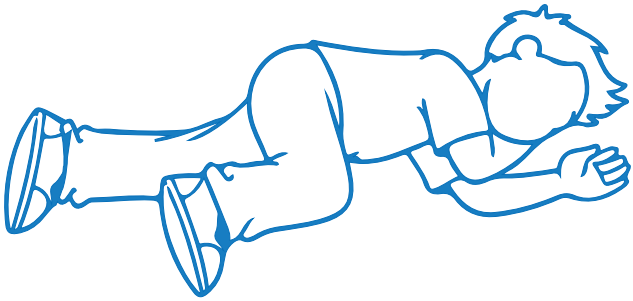
Roll the child into recovery position.

Are there any dangers which could cause them harm? If so, ensure the area is safe.

Stay with them, talking quietly and reassuringly. To the recovering child everything can appear disorientated and noisy, so try to keep the room calm, quiet and provide reassurance.

The Recovery Position

1. Place the arm nearest to you at a right angle.
2. Move the other arm, and place the back of their hand against their opposite cheek. Then get hold of the knee furthest from you and pull it up until the foot is flat on the floor.



3. Pull the knee towards you, keeping the child's hand pressed against their cheek, and position the leg at a right angle.
4. Make sure that the airway remains open by tilting the head back and lifting the chin, and checking the breathing.
5. Monitor the child's condition until help arrives, if help is needed.

How can I help to prevent attacks?

- Share information with ALL staff who come into contact with the child.
- Keep a note of the number of days there has been poor concentration, it can be a forewarning of possible episodes.
- Maintain good hydration - encourage regular drinks of water.
- Pre-warn the child of possible dangers, to reduce unexpected shock.
- Allow a young child to watch, survey and become accustomed before participating in any activity whether that be a game, party or even a crowded room.
- Swimming: encourage them to participate, but allow them time to enter the water gradually, sitting on the side of the pool with feet in the water to get used to the temperature.

During and after an attack

Stay calm!

- Make sure the child is safe. Lie the patient down flat - on your lap / floor /bed or sofa and put them into the recovery position. Check their airway to make sure nothing is in their mouth.
- When the child regains consciousness allow them to rest, and only move them when they feel ready. Talk to them in a quiet voice, constantly reassuring them and even give them a cuddle.
- If they wish to sleep, allow them to (they may sleep for two-three hours). Or they may feel dizzy, afraid and disorientated so try to reassure them.

- Many report that noise is amplified, so try to keep the environment around them as quiet and calm as possible.
- The child may be emotional for quite a while after the event - on an individual basis, decide whether they need to be sent home.
- If an injury is sustained, you are concerned, or if the child is unconscious for an unusually long period, please call the emergency services.
- If they are not breathing or have no pulse, dial 999 immediately and start basic life support.

How do I manage behaviour of a pupil with RAS?

Knowing that unexpected bumps and shocks can trigger an attack, it is understandable that some parents and teachers are concerned about managing behaviour. However, it should be remembered that:

- Children with RAS or syncope have a medical condition but should be expected to behave as any other pupil.
- Occasionally a loud, unexpected shout or noise could trigger an attack, such as the sound of the fire alarm or being startled by a shout.
- Anxiety can also trigger 'dizzy' spells.
- After an attack it is best if they can recover in a quiet area. For some it may be necessary to be sent home. However, once they have recovered and returned to the class, they should be able to return to normal class activities and follow usual codes of conduct.
- If uncertain, refer to RAS care plan, seek advice from the family or contact 01789 867 503 or info@stars.org.uk.

How can I enable inclusion?

- Share the child's care plan with all staff who will be responsible for the care of the pupil.
- Maintain regular communication with the child's family.
- Plan time ahead to share information with the pupil - for example when an alarm is due to ring.
- Allow time to acclimatise - to gently slide into a swimming pool or watch an activity before joining in.
- If uncertain, seek advice from the family or contact 01789 867 503 or info@stars.org.uk.

What should be included in a care plan?

To download a care plan, please visit the STARS website: www.stars.org.uk

- Student name
- Student DOB
- Student photo
- Background of medical condition
- Triggers & warning signs
- Management strategy

Important Information

Emergency Contact Details:
Parent/Guardian
Doctor
STARS helpline: 01789 867 503

Other information

Signed & Dated by:
Head Teacher
Parent/Guardian
Student if in secondary education

Frequently Asked Questions

What is Reflex Anoxic Seizures (RAS)

RAS occurs mainly in young children but can occur at any age. Any unexpected stimulus, such as pain, fright or shock, causes the heart and breathing to stop. The eyes roll up into the head, and the complexion becomes waxen, often blue around the mouth and under the eyes. Also the jaw may clench and the body can stiffen. Sometimes the arms and legs will jerk. After about 30 seconds the body relaxes and the heart and breathing restart, but the sufferer remains unconscious. One or two minutes later the person may regain consciousness but can appear to be unconscious for over an hour.

Upon recovery the person may be emotional and sleep for three to four hours, RAS can occur several times a day/ week/month and often occur in clusters.

What is the age of the youngest and oldest known RAS sufferer?

The youngest known sufferer had his first attack during his first day of life. There are RAS sufferers in their 50s and 60s.

What causes RAS in children?

Reflex Anoxic Seizures (RAS) is caused by the vagus nerve being over stimulated due to an unexpected stimulus such as pain/shock/fear. It is not known why this should happen in some children.

Will the heart weaken through time?

No, an RAS attack puts no strain at all on the heart.

Placing the child into the recovery position immediately after the fright or other stimuli and before loss of consciousness seems to lessen the severity of the attack, or result in a 'near miss'. Is there any medical foundation for this?

This does seem to be the case, although the doctors are unsure why. It should be noted that the child does not always have to be placed in the recovery position. (It can possibly reduce the effect of the drop in blood pressure which occurs after the heart stops.)

Does an RAS attack cause any damage to the brain, short term/long term?
There is no evidence that RAS causes brain damage. The 'fail safe' mechanism in the brain restarts the heartbeat and breathing before the oxygen level is low enough to cause damage.

If the cessation of the heart beat and breathing continues beyond the child's normal reaction time, at what point should resuscitation be attempted and how should this be administered?
It would be extremely unlikely that resuscitation would be needed because of the 'fail safe' mechanism in the brain. However, if the child's heart and breathing has not restarted after a period of two minutes, then attempting resuscitation in the normal manner would do no harm.

Is there a support group for them?
Yes. STARS, Syncope Trust And Reflex anoxic Seizures, provides support for sufferers of all ages.

Can an RAS attack occur whilst the child is sleeping?
Probably not, however, there are other heart stopping conditions, notably Prolonged QT Syndrome, which do occur during sleep and whilst awake, especially with exercise. Prolonged QT Syndrome can be diagnosed using an electrocardiogram (ECG), and parents are encouraged to have this done to rule out this diagnosis.

Is there a genetic factor in RAS?
Almost certainly. More research is needed to establish what gene actually carries the susceptibility to RAS.

Could the child with RAS carry a card like people with epilepsy or diabetes, with 'RAS' on one side and instructions for first aid response on the other?
STARS offer an information card with the child's name on one side and medical instructions on the other. This could be kept in a purse, wallet, bag or pocket. For further information on alert cards contact info@stars.org.uk.

Is there a link between RAS and other medical conditions, e.g. early childhood illness, heart murmurs or developmental delays?
As far as the medical experts are aware, the answer is no.

What can I say to a child to comfort them during an attack?
It does seem to help to talk to your child calmly and reassuringly during an attack as it would appear that they are aware of at least the sound of voices. Perhaps talk about the child's favourite meal, holiday, activities or birthday parties.

Has an RAS patient had an attack in a swimming pool? If so, what happened?
Yes - fortunately the parent noticed immediately so no harm occurred. The stimulus of cold water splashing in the face is a particularly strong stimulus to the vagus nerve and can result in an attack. The child with RAS must learn to swim but should have close parental supervision at all times in the pool.

Are pains in the legs common amongst children with RAS?
Yes! However, many children suffer with pains in their legs even if they do not have RAS.

What is the longest time a child with RAS has been free from attacks before they experience attacks again?
10 years.

Why does a child's face in an RAS attack go white and not blue?
During an RAS attack, the heart stops beating and breathing stops. Blood vessels constrict and the blood is not able to get to the skin. This results in a waxen pallor to the face. The blood is lacking in oxygen and will be blue coloured; only noticeable on the lips in the early stages of the attack. During a blue breath-holding attack, lack of oxygen from the lungs causes blood to turn blue. However, as the heart is still pumping, this 'blue' blood passes through the blood vessels of the face, causing the whole face and the skin of the body to have a blue tinge.

What makes the heart restart after an attack?

As the oxygen level decreases in the brain, there is a chemical release (the fail-safe mechanism), which induces the heartbeat and breathing mechanisms to restart.

How does an epileptic attack differ from an RAS attack?

An EEG (brain wave activity) of an epileptic attack would show excessive elective spike or epileptic discharges, which are not present in an RAS attack. In an RAS attack the EEG goes slow for a few seconds then is flat as the cerebral cortex shuts down, then goes slow again during the drowsy recovery phase before returning to normal. An RAS attack is always precipitated by a shock trigger, albeit sometimes difficult to identify.

Are there any problems with insurance cover for RAS students?

Schools and playgroups should be made aware of the child's condition and should advise their insurance companies accordingly. Travel insurance companies should be informed of the child's condition and may require a doctor's letter to certify that the person is fit to travel. This should not increase your premium.

Is there a pattern to the frequency of the attacks?

It does appear that they occur in batches- as yet we do not know why.

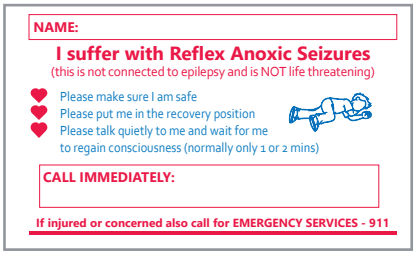
Education Resources

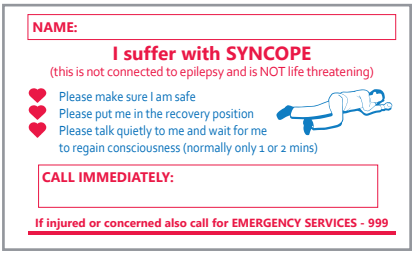
Care plans

All educational establishments now require care plans and these are available to download from the STARS website: www.stars.org.uk There is a form for the parent/carer to complete in conjunction with school. A care plan should be shared with all staff who will be responsible for the care of the child. There are care plans for RAS and Syncope.

Alert cards

Every child should carry one of these cards and family and friends should ideally have one for reference. The size of a credit card, they will provide immediate information and an emergency contact number in the event of an RAS/Syncope episode. These can be purchased through STARS website: www.stars.org.uk

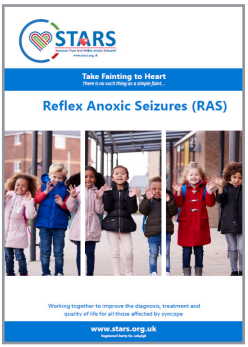




Patient Information Booklets

Reflex Anoxic Seizures (RAS)

Provides information for families, friends and individuals who care for a child who has been diagnosed with reflex anoxic seizures.

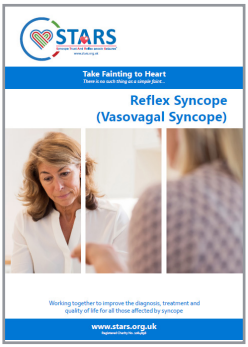


RAS Frequently Asked Questions

Written to provide answers to the many questions that concern parents/carers diagnosed with RAS.

Reflex Syncope

Seen as the adult version of RAS includng when a child goes to secondary school. Triggers may change during this time, so this booklet provides guidelines on managing this condition.



Jack has RAS

A fully illustrated booklet written to help parents explain RAS to siblings. Experience has shown that brothers and sisters who witness an RAS attack find it very frightening and worry it is their fault. This book provides reassurance.

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"This booklet will be a lifesaver for those struggling with emotional stress and anxiety and little support and understanding."

Sarah P, Cornwall

To view our patient resources, scan the QR code below:

Please remember that this publication provides general guidelines only. Individuals should always discuss their condition with a healthcare professional. If you would like further information or would like to provide feedback, please contact STARS.

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If you would like further information or would like to provide feedback please contact STARS.