

# Autonomic Dysreflexia

***Autonomic Dysreflexia is a medical emergency that requires immediate attention.***

## What is it?

Autonomic Dysreflexia, also referred to as autonomic hyperreflexia, is a **potentially life-threatening condition**, which affects individuals with spinal cord injury (SCI) at or above the T6 neurological level. (Although it has been known to occur in patients with a lesion as low as T10)

Autonomic Dysreflexia is caused by a sensation below the level of the spinal cord injury that would normally be painful or noxious. This leads to the excessive reflex activity in the autonomic nervous system.

This results in sudden high blood pressure, which may continue to rise.

If the cause of the Dysreflexia is not found and treated, blood pressure can rise to dangerously high levels which, if untreated, can lead to seizures, brain haemorrhage (stroke) or in extreme cases if untreated, death.

The normal BP (Blood Pressure) for a person with a spinal cord injury is commonly 90/60 - 100/60 lying and lower when sitting. A BP of 130/90 is therefore considered high in this population.

## Symptoms and Signs

The person may have a variety of symptoms which can vary in intensity from being no obvious symptoms, to mild discomfort and headache, to a life-threatening emergency.

Some or all of the following may be present:

- Sudden High blood pressure (Hypertension)
- Pounding headache, which gets worse as the blood pressure rises
- Blurred vision
- Flushed (reddened) face
- Flushing and blotching of the skin above the level of the spinal cord injury
- Slow pulse rate (Bradycardia)
- Profuse sweating *above* spinal injury level
- Blurred vision (from dilatation of the pupils)
- Goose bumps (Piloerection) *below* the level of spinal injury
- Chills without fever
- Nasal congestion
- Shortness of breath, sense of apprehension or anxiety

## Common Causes

### Bladder Irritation

For Example

- distended bladder (blocked catheter)
- urine infection
- bladder or kidney stones
- urological procedure
- or even inserting/changing a catheter

### Bowel Irritation

For Example

- Constipation
- Faecal (bowel) impaction
- distended / gaseous stomach
- rectal irritation (eg. enema or manual evacuation)
- haemorrhoids
- distended rectum
- chemically irritant suppositories

### Skin Irritation

For Example

- pressure injury (pressure sore)
- ingrown toenail
- burns
- tight clothing

### Any Other Irritating Stimulus

Including

- Broken (fractured) bones
- acute intra-abdominal disease (e.g. appendicitis)
- epididymo-orchitis (inflammation/infection in the testis)
- labour *or severe menstrual cramping*
- sexual intercourse

## Treatment

Treatment must be initiated quickly to prevent complications.

- Remember: this is a **medical emergency**, you should not be alone.
- If equipment is available and you have others with you, one person should monitor blood pressure while another assists to find and remove the cause.
- Do you suspect a cause?
- Be in a sitting position, elevate your head and lower the legs (this will help lower BP while a cause is identified).
- Avoid pressing over the bladder, or bending forward which will also increase pressure on the bladder.
- If you are able, pressure lift immediately.
- Loosen any constrictive clothing, such as an abdominal binder, or compressive stockings.
- Since a full bladder is the most common cause, check the urinary drainage system. If you have an indwelling urethral or suprapubic catheter, check the following:
  - Is your drainage bag full?
  - Is the catheter blocked?
  - Is there a kink or blockage in the drainage bag tubing?
  - Is the drainage bag at a higher level than your bladder?
  - Is the leg bag strap too tight?
- *NB. Autonomic Dysreflexia may be caused by staff clamping a catheter for a procedure such as a bladder ultrasound or kinking catheter by accident in operating theatre during a surgical procedure.*

## Further Treatment

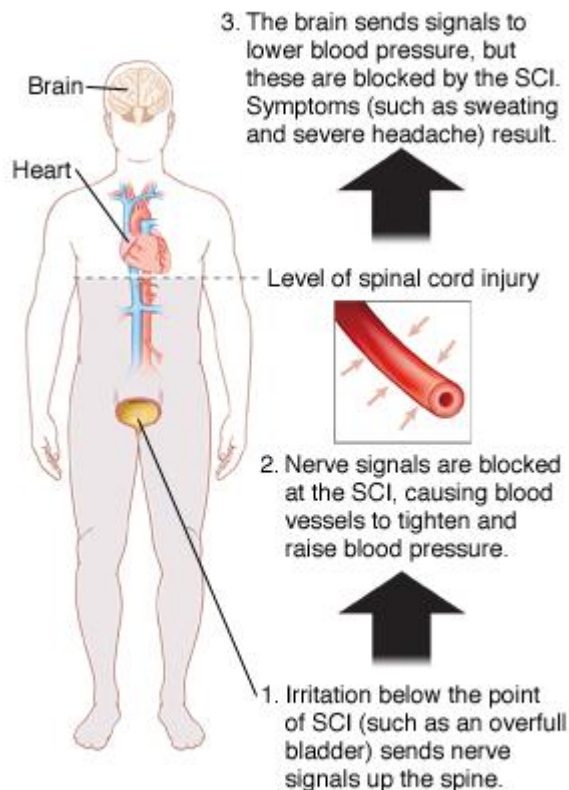
If symptoms do not settle quickly or if the cause cannot be found, take your prescribed medication for Autonomic Dysreflexia

**NB: Remember** Anything you do in attempting to solve the problem has the potential to worsen the situation as it may irritate the system more, at least temporarily e.g. unblocking the catheter, inserting a catheter or emptying the bowel

- All these things must be done with great care.
- **If the blood pressure and symptoms do not settle quickly  
RING "000" for an AMBULANCE and SEEK MEDICAL ASSISTANCE**
- You must know what to do because other people may not. Your carers and people close to you should also be aware of the problem and know how to deal with it.

This is a link to the medical treatment protocol endorsed by the Australian and New Zealand Spinal Cord Society.

[http://www.aci.health.nsw.gov.au/\\_data/assets/pdf\\_file/0019/155143/algorithm.pdf](http://www.aci.health.nsw.gov.au/_data/assets/pdf_file/0019/155143/algorithm.pdf)



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## References and Further Resources

[http://www.rah.sa.gov.au/hampstead/downloads/Auto\\_Dysreflexia2.pdf](http://www.rah.sa.gov.au/hampstead/downloads/Auto_Dysreflexia2.pdf)

<http://www.health.qld.gov.au/qscis/documents/dysreflexia.pdf>

<http://www.aci.health.nsw.gov.au/networks/spinal-cord-injury/resources>

[http://www.aci.health.nsw.gov.au/\\_data/assets/pdf\\_file/0007/155149/Autonomic-Dysreflexia-Treatment.pdf#zoom=100](http://www.aci.health.nsw.gov.au/_data/assets/pdf_file/0007/155149/Autonomic-Dysreflexia-Treatment.pdf#zoom=100)

[http://www.aci.health.nsw.gov.au/\\_data/assets/pdf\\_file/0019/155143/algorithm.pdf](http://www.aci.health.nsw.gov.au/_data/assets/pdf_file/0019/155143/algorithm.pdf)

[http://scia.org.au/images/SCIA-media/sciresources/health-sci-facts/AD\\_SN014.pdf](http://scia.org.au/images/SCIA-media/sciresources/health-sci-facts/AD_SN014.pdf)

[http://www.spinalhub.com.au/how-to-keep-healthy/autonomic-dysreflexia/article/Autonomic\\_dysreflexia\\_explained](http://www.spinalhub.com.au/how-to-keep-healthy/autonomic-dysreflexia/article/Autonomic_dysreflexia_explained)

This is a link to a Video Presentation on Autonomic Dysreflexia by Dr. James Middleton, Director of the NSW State Spinal Cord Injuries Service. <http://www.aci.health.nsw.gov.au/resources/clinician-resources/spinal/video-presentation-on-autonomic-dysreflexia>