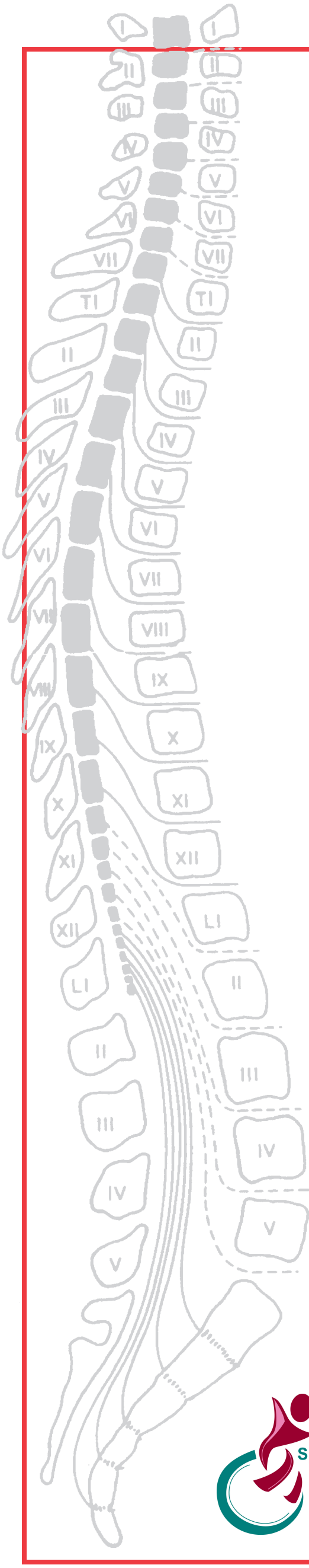

AUTONOMIC DYSREFLEXIA
is a life threatening emergency

Autonomic dysreflexia (AD) is a potentially life-threatening condition that occurs in individuals with a spinal cord injury at level T6 or above. Patients usually present with elevated blood pressure and bradycardia. Noxious stimuli to intact sensory nerves below the injury lead to relatively unopposed sympathetic outflow and dangerous blood pressure elevations. Parasympathetic outflow through cranial nerve X (vagus) can cause reflexive bradycardia but can't compensate for severe vasoconstriction.

COMMON SIGNS AND SYMPTOMS MAY INCLUDE:

- HYPERTENSION
- BRADYCARDIA
- POUNDING HEADACHE
- NASAL CONGESTION
- BRONCHOSPASM
- BLURRED VISION
- SEIZURES
- CHILLS WITHOUT FEVER
- SWEATING ABOVE LEVEL OF INJURY
- SKIN FLUSHING ABOVE LEVEL OF INJURY
- GOOSE BUMPS ABOVE LEVEL OF INJURY
- APPREHENSION OR ANXIETY

Follow the examination tree below to eliminate any noxious stimuli below level of injury. A drop in blood pressure will occur with the removal of the stimuli. Seizures, stroke, or death may occur if stimuli are not immediately removed.

EXAMINATION TREE:

Sit up and take blood pressure in both arms (repeat blood pressure every 3 minutes and between steps.) Important note – Normal systolic BP for an individual with an SCI above T6 can be in the 90-110mm Hg range. If blood pressure elevated, give medications as indicated. Use an antihypertensive with rapid onset and short duration while the causes of AD are being investigated.

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Look for Noxious Stimuli below level of injury

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Check Bladder for Distention ⇨ Catheterize bladder using 2% lidocaine jelly. If indwelling catheter already in place, inspect for kinks, folds, constrictions, or obstructions. Irrigate or replace the catheter to insure patency – RELIEF? – collect U/A and C/S (irritation may be due to infection). Assess for any urologic obstruction such as kidney or bladder stones.

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Check Bowel ⇨ Anesthetize using Lidocaine jelly 2% (wait 5 minutes) prior to checking for impaction. Remove impaction and recheck blood pressure – RELIEF? – Evaluate for high impaction.

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Check Skin ⇨ Remove constricting clothing – RELIEF? – Examine for pressure ulcers – Does repositioning lower blood pressure? – Examine for insect bites – Treat – RELIEF? – Examine seat cushion and wheelchair for sharp or hard objects – Evaluate environmental temperature – Do symptoms change as environmental and patient's temperature change? – Evaluate recent surgical sites – Treat symptoms – RELIEF? – Observe for ingrown toenails – Anesthetize, debride, treat for infection – RELIEF?

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Evaluate for Gastrocolic Irritation ⇨ Tube feeding given recently? – Too rapid? – Treat – RELIEF? – Too cold? – Treat – RELIEF? – Too large a volume? – Treat – RELIEF?

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Gender specific ⇨ Males: Genitalia pinched? – Correct – RELIEF? – Condom catheter too tight? – Remove catheter – RELIEF? – Reflexogenic erection? – Remove condom catheter and clothing – RELIEF?

Females: Menstrual cramping? – Treat – RELIEF? – Uterine contractions? – Treat – Evaluate follow-up – Vaginitis? – Treat symptoms and infection

TREATMENT REMINDERS

1. Sit patient up.
2. Check BP often and treat elevated systolic blood pressure (>150) until cause is found and eliminated.
3. Medications commonly used for elevated BP are:
   - –Nitroglycerine Paste. Apply 1-2 inches to skin q2hrs above the level of injury. May wipe off if BP stable and reapply if needed.
   - –Nifedipine 10 mg capsule (immediate release form). May repeat in 20-30 minutes if needed. Avoid sublingual which can cause abrupt hypotension.
   - –IV Antihypertensives. These are secondary agents to be utilized in a monitored setting.
4. Treat symptomatic hypotension by laying down the individual and elevating the legs.
5. Anesthetize noxious stimuli prior to removal to present exacerbation of AD.
6. Monitor symptoms and BP for at least 2 hrs after the resolution of an AD episode.
7. Admit the patient if response to treatment is poor or cause has not been identified. AD can lead to seizures, stroke, or death.

Spinal Cord Injury Model System
SCIMS | NIDRR
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SPAIN REHABILITATION CENTER

Follow-up: Call UAB MIST line (1-800-822-6478) to contact UAB Rehabilitation Medicine physician at Spain Rehabilitation Center, or contact patient's private physician for questions and follow-up.