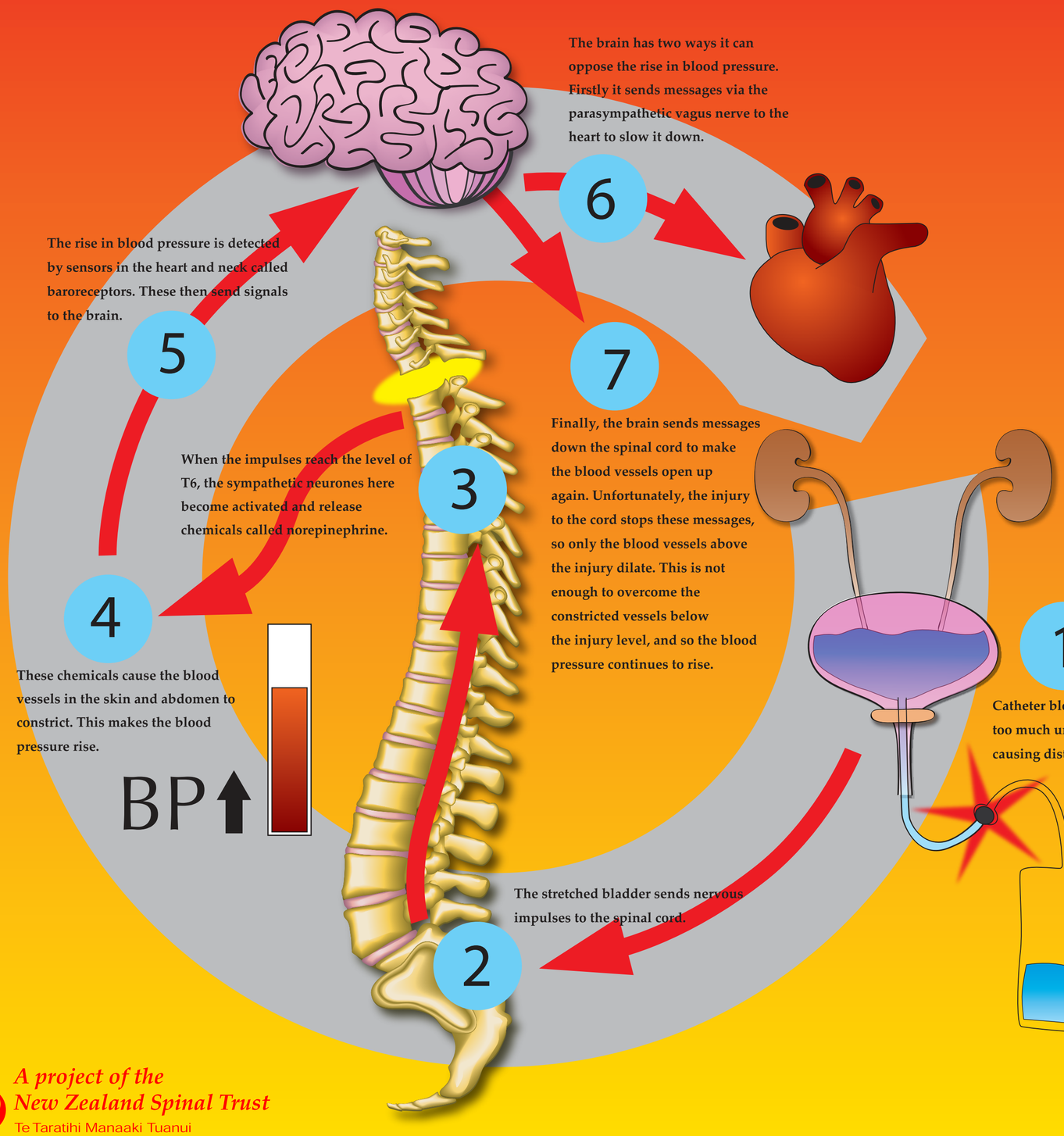
AUTONOMIC DYSREFLEXIA

The body's internal organs are controlled by the autonomic nervous system. This has two parts:

- The sympathetic nervous system which excites the body
  = increased heart rate and blood pressure
- The parasympathetic nervous system which slows the body
  = decreased heart rate and blood pressure

Normally, the sympathetic and parasympathetic systems counteract each other, but following a spinal cord injury above T6, this no longer happens.



Symptoms & Signs

- Flushing and sweating above the injury level
- Nasal stuffiness
- Goose bumps and paleness below injury level
- Sudden high blood pressure (hypertension)
- Pounding headache
- Slow heart rate (bradycardia)
- Blurred vision or spots in vision
- Irregular heart beat
- Anxiety or apprehension
- May be no symptoms (silent autonomic dysreflexia)

Causes

- The most common cause for autonomic dysreflexia (AD) is bladder distension (e.g. due to blocked catheter or detrusor sphincter dyssynergia), followed by bowel distension.
- Other causes include:
  - Urinary–bladder or kidney stones, urinary tract infection, urological procedure e.g. catheterisation or cystoscopy
  - Gastrointestinal–bowel impaction, endoscopy/colonoscopy, haemorrhoids, anal fissure
  - Haematological–deep vein thrombosis, pulmonary embolism
  - Skin– tight clothing, contact with hard object, pressure sore, sunburn, ingrown toenail, insect bites
  - Reproductive– sex, ejaculation, menstruation, pregnancy, labour
  - Other – fracture, heterotopic bone, substance abuse, surgery

At Risk People

- Any person with a spinal injury at or above T6, after spinal shock has resolved

Treatment

- Recognise the signs and symptoms of AD
- Check the blood pressure and monitor frequently
  - NB Patients with SCI above T6 have normal systolic blood pressure of 90-110mmHg
- Sit the person up, lower the legs
- Loosen any clothing or constrictive devices
- Survey the patient looking for the underlying cause and correct if found:
  - Bladder
    - Insert a catheter if patient does not have one, using lignocaine jelly
    - Check existing catheters for kinks, folds, obstructions and correct placement
    - If catheter is blocked–irrigate the bladder with 10-15ml saline
    - If catheter is not draining–remove and replace it
- If systolic blood pressure (top reading) is raised above 150mmHg, consider giving medication to lower it e.g. Glyceryl Trinitrate spray, and pain relief e.g. morphine
- Continue looking for a cause
  - Bowel - Faecal impaction – insert lignocaine gel, wait 2 minutes, then insert lubricated gloved finger into rectum to remove stool
- Look for the other causes of AD
- Monitor blood pressure for at least two hours after episode has resolved
- Document episode in medical records
- Review precipitating cause to look for preventative strategies

Prevention

1. Avoid triggers:
   a. Ensure bladder and bowel management prog rammes are followed carefully with adequate bladder drainage
   b. Keep catheter free from kinks, keep bag empty and check for grit forming
   c. Use local anaesthesia before bowel evacuation if prone to AD
   d. Ensure good skin care – avoid pressure sores
   e. Avoid sunburn
   f. Eat a well balanced diet with adequate fluid intake
   g. Comply with medication
   h. Consider spinal anaesthesia before operations such as suprapubic catheter insertion or endoscopy
2. Carry an autonomic dysreflexia card, especially when going into hospital
3. Educate your family, friends, carers, doctors about AD

A project of the
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Te Taratihi Manaaki Tuanui

This sudden increase in blood pressure is a **medical emergency** that can lead to seizures, intracranial bleeds (strokes) or even death.

If in doubt then please urgently contact the medical teams at:
the Burwood Spinal Unit (03) 383 6850 or the Auckland Spinal Rehabilitation Unit (09) 270 9000