

Principal symptoms of autonomic dysfunction include:

Bladder, bowel and sexual dysfunction. These are often very distressing to patients.

Neurogenic bladder dysfunction may cause difficulty initiating urination and emptying the bladder, or hyperactive detrusor with sphincter disturbance causing incontinence. If the bladder is incompletely emptied (leaving a residual volume) there is a risk of recurrent urine infection.

Detrusor hyperactivity can give rise to high bladder pressures and possible reflux of urine to the kidneys, with a risk of hydronephrosis.

Either problem may be exacerbated by decreased bladder sensation, which may lead to overflow incontinence, especially if there is an element of visceral hyperpathia.

There may also be nocturia. Drugs such as antidepressants (e.g. amitriptyline) may worsen bladder dysfunction, causing difficulty in initiating micturition and emptying the bladder.

Bowel function may also be affected. Constipation due to drug treatment (especially opiates) and decreased mobility may complicate the picture.

Dyspepsia and intermittent vomiting are relatively common problems. They may be due to gastroparesis similar to that seen in diabetic autonomic neuropathy.

Symptoms of gastroparesis include postprandial nausea, epigastric pain/burning, bloating, anorexia and vomiting.

There may be vomiting of undigested food in the middle of the night or in the morning prior to eating breakfast. Prokinetic drugs such as Cisapride may relieve bowel motility disorders, including reflux oesophagitis.

Sexual dysfunction may affect potency and ejaculation in men, as well as causing problems with orgasm in both sexes.

Blood pressure disturbance (high, low or fluctuating); this may cause dizziness, syncope, or headaches. Orthostatic hypotension may occur.

Very rarely, there may be autonomic dysreflexia as seen in spinal cord injuries, with paroxysmal hypertension due to excess sympathetic activity reflexly activated by bladder or bowel distension, as described by various authors. ([11](#))

Other cardiovascular symptoms include palpitations.

Cold extremities (Raynaud type phenomenon) are a common vasomotor problem.

Sudomotor effects of hyperhidrosis or anhidrosis may impact on temperature regulation, which is a very common problem.

Hyperhidrosis may be compensatory for loss of sweating in another area, or may be the initial phase before progression to anhidrosis. The majority of patients experience heat intolerance.

An uncommon problem may be facial pain, loss of sweating on one side of the face and change in size of one pupil (Horner's syndrome). There are also isolated reports of Adie's tonic pupil.

Oedema of the limbs is seen in some patients. A number of patients seem to be diagnosed with Reflex Sympathetic Dystrophy (RSD), (Complex Regional Pain Syndrome Type I).

This is characterised by severe burning pain in a limb, after trauma or surgery. There is usually an element of allodynia and hyperpathia.

Autonomic effects include sudomotor and vasomotor abnormalities. There are changes in limb temperature, discolouration and oedema.

Later stages may involve joint stiffness, loss of mobility and osteopaenia or osteoporosis, as well as skin texture and hair growth changes.

The similarities between this condition and arachnoiditis suggest that the RSD type symptoms are in fact a part of the arachnoiditis syndrome, rather than a separate disease entity.

[\[i\]](#) Mathias CJ *Hypertension* 1991 Nov; 18(5 Suppl): III22-30 Role of sympathetic efferent nerves in blood pressure regulation and in hypertension.

Colachis SC 3d *J Am Paraplegia Soc* 1992 Jul; 15(3):171-86 Autonomic hyperreflexia with spinal cord injury.