Autonomic Dysreflexia. AD is a syndrome that affects persons with SCI at the T6 level or above, which is above the major splanchnic outflow. It is caused by a noxious stimulus below the injury level, which elicits a sudden reflex sympathetic activity, uninhibited by supraspinal centers, resulting in profound vasoconstriction and other autonomic responses. The symptoms of AD are somewhat variable but include a pounding headache; systolic and diastolic hypertension; profuse sweating and cutaneous vasodilatation with flushing of the face, neck, and shoulders; nasal congestion; pupillary dilatation; and bradycardia. The hypertension can be profound and result in cerebral hemorrhage and even death.

The noxious stimulus responsible for AD frequently stems from the sacral dermatomes, most often from a distended bladder. Other causes include fecal impaction, pathology of the bladder and rectum, ingrown toenails, labor and delivery, surgical procedures, orgasm, and a variety of other conditions. It is probable that all people with severe SCI at or above T6 can develop AD after the period of neurogenic shock is over, given a sufficient stimulus, but the reported incidence of AD varies between 18% and 85%.

Treatment of acute AD must be prompt and efficient to prevent a potentially life-threatening crisis.18 Recognition of symptoms and identification of the precipitating stimulus are paramount. The patient should be sat up, constrictive clothing and garments should be loosened, the blood pressure monitored every 2 to 5 minutes, and evacuation of the bladder done promptly to ensure continuous drainage of urine. If symptoms are not relieved by these measures, fecal impaction should be suspected and, if present, resolved. Local anesthetic agents should be used during any manipulations of the urinary tract or rectum. If hypertension is present, fast-acting antihypertensive agents shouldbe administered, usually nitroglycerin or nifedipine. After resolution of the AD episode, the person's symptoms and blood pressure should be monitored for at least 2 hours.

Occasionally, there are recurrent symptoms of AD with or without an identifiable stimulus, a condition that requires chronic pharmacologic therapy. A variety of α-adrenergic (phenoxybenzamine, prazosin, terazosin), anticholinergic (oxybutynin, propantheline), and antihypertensive (clonidine, guanethidine, mecamylamine) agents have been used quite successfully for such purpose, but often with some side effects.