

## APPENDIX A: AD KNOWLEDGE TEST AND SCORING KEY

Note: Allocation of points is indicated in italics below the question stem. Correct responses are indicated with an X. Maximum score is 22.

### **How would you rate your knowledge of Autonomic Dysreflexia? (Check one)**

- ☐ Excellent
- ☐ Good
- ☐ Fair
- ☐ Poor
- ☐ None

### **1. What is Autonomic Dysreflexia? (Check one)**

*(no answer/incorrect = 0, correct = 1)*

- ☐ A group of spontaneous stereotypical reflexes mediated by the nervous system in individuals with central nervous system injury
- X A sudden rise in blood pressure and associated symptoms from noxious or non-noxious stimuli that trigger sympathetic hyperactivity of the spinal cord
- ☐ A failure of the autonomic system (e.g. postural hypotension)
- ☐ Age-related hypertension

### **2. The typical resting systolic blood pressure (BP) for a person with a chronic tetraplegia will be: (Check one)**

*(no answer/incorrect = 0, correct = 1)*

- ☐ 120 mmHg
- ☐ 130 mmHg
- ☐ 115 mmHg
- X 90 mmHg

### **3. In a person with spinal cord injury (SCI), the lowest spinal cord segment associated with the occurrence of AD is: (Check one)**

*(no answer/incorrect = 0, correct = 1)*

- ☐ C6
- X T6
- ☐ T12
- ☐ T1

### **4. A 20 year-old male with C6 complete tetraplegia complains of a pounding headache and nasal congestion shortly after being put to bed. His home care nurse is concerned and brings him into the emergency department with: temperature 37 °C, pulse 60 bpm, BP 190/100 mmHg. He has no prior history of hypertension. Your initial steps/recommendations are to: (Check one)**

*(no answer/incorrect = 0, correct = 1)*

- ☐ Prescribe hydrochlorothiazide 25 mg, po daily to start in the morning
- ☐ Prescribe acetaminophen for the headache and increase vital sign monitoring to every 4 hours
- ☐ Order electrolytes, electrocardiogram, and renal scan to evaluate hypertension and monitor the blood pressure frequently to determine if further therapy is indicated
- ☒ Sit him up in bed, loosen any tight clothing or restrictive equipment, and empty his bladder
- ☐ Prescribe no therapy since BP commonly varies in people with tetraplegia
- ☐ None of the above

**5. To your knowledge, which of the following signs or symptoms would an individual with a SCI experience during an episode of AD? (Check all that apply)**

*(no answer = 0, 1 point each correct answer, -1 each incorrect; range -2 to 4)*

- ☐ Sudden decrease in blood pressure
- ☒ Sudden increase in blood pressure
- ☒ Sudden low heart rate
- ☒ Headache
- ☐ Flushed Skin below the lesion
- ☒ Flushed Skin above the lesion

**6. Indicate the two most common causes of AD? (Use numbers 1 and 2; 1 = most common)**

*(no answer = 0, 1 point each correct answer, +1 for correct order; max 3 points)*

- ☐ Skin (pressure sores and ingrown toenails)
- ☐ Menses
- ☒ 2 Gastrointestinal (constipation, hemorrhoids)
- ☐ Uterus contractions during labour
- ☐ Blood clots (legs or lungs)
- ☒ 1 Bladder (distention, infection, tests)
- ☐ Broken bones or fractures
- ☐ Kidney stones

**7. Is medication indicated to lower your patient's BP as part of managing their AD?**

*(no answer/incorrect = 0, correct = 1)*

- ☒ Yes
- ☐ No

**8. If yes to 7, what would this medication be? (Check the most appropriate medications)**

*(no answer = 0, 1 point each correct answer; max 3 points)*

- ☒ Captopril
- ☒ Nifedipine (Adalat, Procardia)
- ☒ Nitroglycerine
- ☐ Ramipril (Altace)
- ☐ Atenolol (Tenormin)
- ☐ Hydrochlorothiazide (Hydrodiuril)

**9. In a person with a SCI, who has experienced a severe untreated episode of AD, which of the following complications could occur? (Check all that apply)**

*(no answer = 0, 1 point each correct answer, -1 each incorrect; range -1 to 5)*

- ☒ Seizure
- ☒ Intracranial hemorrhage
- ☒ Angina
- ☒ Myocardial infarction
- ☐ Renal failure
- ☒ Death

**10. Following implementation of the AD management protocol, you should: (Check one)**

*(no answer/incorrect = 0, correct = 1)*

- ☐ Discharge the patient home once systolic BP reaches 150 mmHg or lower
- ☐ Monitor BP and patient q 30 minutes for 24 hours
- ☒ Monitor BP and heart rate for at least 2 hours after BP normalizes to the expected BP for that individual's injury level
- ☐ None of the above

**11. Once you identify and treat/remove the trigger for AD, you may expect the following: (Check one)**

*(no answer/incorrect = 0, correct = 1)*

- ☐ The patient becomes hypotensive
- ☐ The patient may lose consciousness
- ☐ The patient complains of dizziness and lightheadedness
- ☒ All of the above
- ☐ None of the above