

8. The correct initial treatment in Question 7 is an appropriate management step because this:
- Leads to release of extra glucose stores for greater peripheral tissue uptake
  - Leads to restoration of intravascular volume, decreases insulin counter regulatory hormones, and clears the blood of excess glucose and ketones
  - Prevents rebound hypoglycemia
  - Increases epinephrine and norepinephrine, freeing up usable glucose from protein and fat stores
  - Corrects metabolic acidosis by acting as an intracellular buffer

The answer is B.

9. A 54-year-old patient with a known history of alcohol abuse is transported to the emergency department for the complaint of altered mental status. Glucose by finger stick is 40 mg/dL. What are the two most common causes of hypoglycemia in adults?
- Oral sulfonylurea use and malnutrition
  - Liver disease and hormonal deficiencies
  - Toxic drug ingestions and alcohol abuse
  - Alcohol abuse and insulin
  - Fasting and alcohol use

All of the other answer choices are other potential, but less common causes of hypoglycemia in adults. The answer is D.

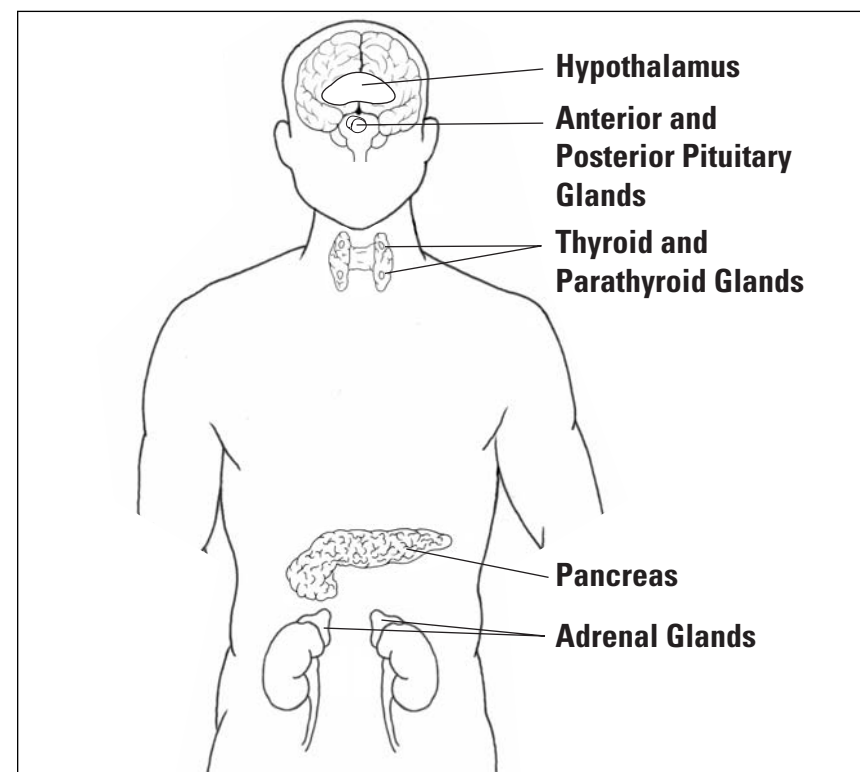
10. After one ampule of 50% dextrose in water is given intravenously, the patient proceeds to pull out his intravenous line and asks permission to leave the ambulance. He states, "I feel fine now, thanks." Failure to transport this patient to the emergency department for further evaluation could result in all of the following EXCEPT:
- Nothing; hypoglycemia often responds dramatically to intravenous dextrose and patients can often be safely discharged on-scene after treatment
  - Hyperglycemia and ketosis
  - Failure to diagnose an underlying medical disorder
  - Failure to address potentially correctable social factors responsible for the patient's illness
  - The Somogyi phenomenon

The answer is A.

## Brief Overview of Adrenal and Thyroid Physiology

### ORGANIZATION OF THE ENDOCRINE SYSTEM

The endocrine system is an important communication system in the human body, releasing chemical messengers known as hormones into the blood that have a wide variety of effects on body tissues. For the purposes of this chapter, the focus is solely on the extremes of adrenal and thyroid glands disorders, keeping in mind that there are a large number of other endocrine glands and hormones in nearly every body system. Figure 21-1 provides an overview of the anatomical locations of the major endocrine glands.



**Figure 21-1** Locations of the major endocrine organs.