

## IV Approval Course Objectives

### I. Course Introduction

Upon completion of Module I, the EMT-Basic should be able to:

#### Cognitive Objectives

- 1.1 Describe this Course's duration, completion requirements, and policies and procedures
- 1.2 Briefly describe the history of IV Therapy
- 1.3 Describe the purpose of this Courses as it relates to the EMT-Basic

#### Psychomotor Objectives

None identified

#### Affective Objectives

- 1.4 Briefly describe personal attitudes regarding the performance of these skills

### II. Roles, Responsibilities, and Legal Considerations

Upon completion of Module II, the EMT-Basic should be able to:

#### Cognitive Objectives

- 2.1 Briefly describe the purpose of the "Acts Allowed" and the regulatory body which establishes those Rules
- 2.2 Summarize the provision in the "Acts Allowed" which authorizes the EMT-Basic to establish Intravenous Access
- 2.3 Summarize the authority under which and EMT-Basic may take a blood alcohol sample and the procedures for establishment of this authority
- 2.4 Given a variety of unusual patient scenarios, describe the appropriate action the EMT-Basic should take from a legal standpoint and explain the rational behind those decisions
- 2.5 Discuss the principles of consent to treatments as they apply to the EMT-Basic
- 2.6 Discuss abandonment as it applies to the EMT-Basic with additional training above the Basic level
- 2.7 Describe the relationship between the EMT-Basic and his/her physician advisor
- 2.8 Differentiate between protocols and standing orders by definition and field practice
- 2.9 State the local protocol for authorization of the EMT-Basic to establish IV Therapy  
(content to be established by local training programs)

#### Psychomotor Objectives

None identified

**Affective Objectives**

- 2.10 Briefly describe the approach to be taken with a patient refusing IV Therapy
- 2.11 Briefly describe considerations when obtaining a blood alcohol sample

**III. Cellular and Vascular Anatomy and Physiology**

Upon completion of Module III, the EMT-Basic should be able to:

**Cognitive Objectives**

- 3.1 Define the following terms
  - 3.1.1 Diffusion
  - 3.1.2 Osmosis
  - 3.1.3 Semi-selective permeable membrane
  - 3.1.4 Osmotic pressure
  - 3.1.5 Oncotic pressure
  - 3.1.6 Tonicity
  - 3.1.7 Hypertonic
  - 3.1.8 Isotonic
  - 3.1.9 Hypotonic
  - 3.1.10 Electrolytes
  - 3.1.11 Intracellular fluid
  - 3.1.12 Extracellular fluid
  - 3.1.13 Interstitial fluid
  - 3.1.14 Intravascular fluid
  - 3.1.15 Crystalloid solution
  - 3.1.16 Colloid solution
  - 3.1.17 Volume expanding fluids
  - 3.1.18 Experimental research solutions
- 3.2 Describe the purposes of body water
- 3.3 State the percentage of body weight comprised of water and factors which affect this relationship
- 3.4 Describe the role of electrolytes, osmotic pressure, oncotic pressure, and diffusion in the maintenance of body fluid balance
- 3.5 Identify intravenous therapy solutions as being isotonic, hypertonic, or hypotonic in nature
- 3.6 Explain the effects of infusion of isotonic, hypertonic, and hypotonic IV solutions upon intracellular, intravascular, and interstitial fluids
- 3.7 Describe the role each of the following systems have on body fluid regulation
  - 3.7.1 Cardiovascular system
  - 3.7.2 Renal system
  - 3.7.3 Nervous system
  - 3.7.4 Respiratory system
- 3.8 List the components of blood and their function

- 3.9 Briefly describe the anatomy of the circulatory system
- 3.10 Define and explain the significance of hemoglobin and hematocrit
- 3.11 Briefly describe the blood clotting process
- 3.12 State at least three factors which may alter the body's ability to form clots
- 3.13 List indications for blood transfusion
- 3.14 List three differences between veins and arteries

**Psychomotor Objectives**

None identified

**Affective Objectives**

None identified

**IV. Shock (hypoperfusion) Principles (review of material on the EMT-Basic level)**

Upon completion of Module IV, the EMT-Basic should be able to:

**Cognitive Objectives**

- 4.1 Describe the signs and symptoms of internal bleeding
- 4.2 Define shock (hypoperfusion)
- 4.3 Describe the signs and symptoms of shock (hypoperfusion)
- 4.4 Describe briefly the physiology reaction to shock (hypoperfusion) in arteries, capillaries and veins

**Psychomotor Objectives**

None identified

**Affective Objectives**

- 4.5 Estimate the volume of simulated blood loss in different settings

**V. Body Substance Isolation (BSI)**

Upon completion of Module V, the EMT-Basic should be able to:

**Cognitive Objectives**

- 5.1 Discuss the importance of body substance isolation (BSI)
- 5.2 Define pathogens
- 5.3 Define routes of exposure
- 5.4 Describe the steps the EMT-Basic should take for personal protection from exposure to pathogens
- 5.5 List the personal protective equipment necessary when initiating venipuncture

**Psychomotor Objectives**

None identified

**Affective Objectives**

- 5.6 Explain why the practice of body substance isolation (BSI) is important
- 5.7 Explain the rationale for the EMT-Basic serving as an advocate for the use of appropriate protective equipment

**VI. Venipuncture Site Selection and Preparation**

Upon completion of Module VI, the EMT-Basic should be able to:

**Cognitive Objectives**

- 6.1 Define peripheral IV sites
- 6.2 List three commonly used peripheral IV sites
- 6.3 List advantages and disadvantages to each site listed in 6.2
- 6.4 Explain the complications associated with the use of lower extremity veins for IV initiation of leg veins for IV initiation
- 6.5 List factors which may effect the size and condition of a vein
- 6.6 Describe methods that may be used to distend a vein for identification and venipuncture
- 6.7 Explain why site selection should be based on patient's clinical presentation
- 6.8 Describe the steps in preparing a site for venipuncture
- 6.9 Given the following patient scenarios, describe the site that should be explored first for starting an IV
  - 6.9.1 Cardiac arrest
  - 6.9.2 Major systems trauma
  - 6.9.3 Burns
  - 6.9.4 Pediatric
- 6.10 Explain how a venous constricting band might become a source of contamination
- 6.11 List the steps in venipuncture site preparation
- 6.12 Define the following terms
  - 6.12.1 Septic
  - 6.12.2 Aseptic
  - 6.12.3 Venous constricting band
  - 6.12.4 Anticubital space
  - 6.12.5 Clean
  - 6.12.6 Sterile

**Psychomotor Objectives**

- 6.13 Demonstrate the techniques of locating a suitable venipuncture site
- 6.14 Demonstrate three techniques to distend a vein for venipuncture
- 6.15 Demonstrate proper aseptic technique in venipuncture site preparation

**Affective Objectives**

- 6.16 Explain how a non-critical patient situation might alter IV site selection

**VII. Phlebotomy Equipment**

Upon completion of Module VII, the EMT-Basic should be able to:

**Cognitive Objectives**

- 7.1 List the equipment necessary to perform phlebotomy venipuncture
- 7.2 Identify on a mannequin or live model two commonly used sites to obtain blood samples using phlebotomy venipuncture techniques
- 7.3 List common additives found in the following blood collection tubes, and state their importance
  - 7.3.1 Red top
  - 7.3.2 Blue top
  - 7.3.3 Green top
  - 7.3.4 Yellow top
  - 7.3.5 Lavender top
  - 7.3.6 Marbled top
- 7.4 List common test performed with the following blood collection tubes
  - 7.4.1 Red top
  - 7.4.2 Blue top
  - 7.4.3 Green top
  - 7.4.4 Yellow top
  - 7.4.5 Lavender top
  - 7.4.6 Marbled top

**Psychomotor Objectives**

- 7.5 Select the equipment necessary to perform phlebotomy venipuncture
- 7.6 Assemble the equipment needed to perform phlebotomy venipuncture

**Affective Objectives**

None identified

**VIII. Phlebotomy Venipuncture Technique**

Upon completion of Module VIII, the EMT-Basic should be able to:

**Cognitive Objectives**

- 8.1 Review the authority in which an EMT-Basic may perform phlebotomy/venipuncture
- 8.2 Describe legal blood alcohol sample collection
- 8.3 List at least two sites that are commonly used to perform phlebotomy venipuncture

- 8.4 Explain common questions that should be asked to patients prior to performing phlebotomy venipuncture
  - 8.4.1 Allergies
  - 8.4.2 Current medication therapy
  - 8.4.3 Phobias
    - 8.4.3.1 Blood
    - 8.4.3.2 Needles
- 8.5 Explain how to properly prepare a patient prior to phlebotomy/venipuncture
- 8.6 Explain to the patient the process for performing phlebotomy/venipunctures
- 8.7 Describe the importance of obtaining consent from the patient prior to phlebotomy/venipuncture
- 8.8 Explain proper site preparation prior to phlebotomy/venipuncture
- 8.9 Describe the proper technique for performing phlebotomy/venipuncture
- 8.10 List the necessary Body Substance Isolation (BSI) needed to perform phlebotomy/ venipuncture
- 8.11 Explain the proper technique for labeling and handling of blood tubes after performing phlebotomy/venipuncture
- 8.12 Explain the correct method for terminating phlebotomy/venipuncture
- 8.13 Explain how to take care of the site after performing phlebotomy/venipuncture
- 8.14 Define appropriate documentation in regards to phlebotomy/venipuncture

**Psychomotor Objectives**

- 8.15 Demonstrate the following phlebotomy/venipuncture techniques (human/mannequin)
  - 8.15.1 Patient assessments
  - 8.15.2 Proper preparation
  - 8.15.3 Patient preparation
  - 8.15.4 Equipment assembly
  - 8.15.5 Site selection
  - 8.15.6 BSI precautions
  - 8.15.7 Site preparation
  - 8.15.8 Venipuncture performance
  - 8.15.9 Manipulation of collection tubes
  - 8.15.10 Termination of phlebotomy technique
  - 8.15.11 Site maintenance
  - 8.15.12 Documentation

**Affective Objectives**

- 8.16 Discuss possible anxieties a patient might have regarding venipuncture and how to allay them

**IX. Intravenous Therapy Equipment**

Upon completion of Module IX, the EMT-Basic should be able to:

**Cognitive Objectives**

- 9.1 List the equipment necessary to perform venipuncture technique using an over the needle catheter
  - 9.1.1 Fluid
  - 9.1.2 Administration set
  - 9.1.3 Over the needle catheter size
  - 9.1.4 Venous constricting bands
  - 9.1.5 Cleaning solution
  - 9.1.6 Securing device
  - 9.1.7 Tape
  - 9.1.8 Commercially available devices
- 9.2 List the equipment necessary to perform venipuncture technique using a butterfly needle
  - 9.2.1 Fluid
  - 9.2.2 Administration set
  - 9.2.3 Catheter/needle size
  - 9.2.4 Venous constricting bands
  - 9.2.5 Cleaning solution
  - 9.2.6 Securing device
  - 9.2.7 Tape
  - 9.2.8 Commercially available devices

**Psychomotor Objective**

- 9.3 Demonstrate proper assembly of the equipment listed in 9.1 and 9.2

**Affective Objectives**

None Identified

**X. Intravenous Therapy Venipuncture Technique**

Upon completion of Module X, the EMT-Basic should be able to:

**Cognitive Objectives**

- 10.1 Describe the proper technique for adult intravenous therapy
  - 10.1.1 Patient assessments
  - 10.1.2 Proper authority
  - 10.1.3 Patient preparation
  - 10.1.4 Equipment assembly
  - 10.1.5 Site selection
  - 10.1.6 BSI precautions
  - 10.1.7 Site selection
  - 10.1.8 Venipuncture performance
  - 10.1.9 Site maintenance
  - 10.1.10 Documentation

- 10.2 Describe the proper techniques for pediatric intravenous therapy
  - 10.2.1 Patient assessments
  - 10.2.2 Proper authority
  - 10.2.3 Patient preparation
  - 10.2.4 Equipment assembly
  - 10.2.5 Site election
  - 10.2.6 BSI precautions
  - 10.2.7 Site selection
  - 10.2.8 Venipuncture performance
  - 10.2.9 Site maintenance
  - 10.2.10 Documentation

**Psychomotor Objectives**

- 10.3 Demonstrate on a mannequin or live model intravenous venipuncture technique for an adult
  - 10.3.1 Patient assessments
  - 10.3.2 Patient consent
  - 10.3.3 Patient preparation
  - 10.3.4 Equipment assembly
  - 10.3.5 Site selection
  - 10.3.6 BSI precautions
  - 10.3.7 Site selection
  - 10.3.8 Venipuncture performance
  - 10.3.9 Site maintenance
  - 10.3.10 Documentation
- 10.4 Demonstrate on a mannequin (or live model) intravenous venipuncture techniques for a pediatric patient;
  - 10.4.1 Patient assessments
  - 10.4.2 Patient consent
  - 10.4.3 Patient preparation
  - 10.4.4 Equipment assembly
  - 10.4.5 Site selection
  - 10.4.6 Hand
  - 10.4.7 Anticubital
  - 10.4.8 Forearm
  - 10.4.9 Saphenous
  - 10.4.10 Foot
  - 10.4.11 BSI precautions
  - 10.4.12 Site selection
  - 10.4.13 Venipuncture performance
  - 10.4.14 Site maintenance
  - 10.4.15 Documentation

**Affective Objectives**

None identified

**XI. Method of Combining Phlebotomy and Intravenous Therapy Techniques**

Upon completion of Module XI, the EMT-Basic should be able to:

**Cognitive Objectives**

- 11.1 Describe the reasons for combining blood draws with IV insertion
- 11.2 Describe two types of equipment used to combine phlebotomy and IV insertion:
  - 11.2.1 Syringe
  - 11.2.2 Luer type adapter
- 11.3 List common equipment problems that may be encountered when combining phlebotomy and IV insertion
  - 11.3.1 Connections
  - 11.3.2 Faulty luer type adapters
  - 11.3.3 Operator errors

**Psychomotor Objectives**

- 11.4 Demonstrate the correct technique for combining phlebotomy and IV insertion technique

**Affective Objectives**

None Identified

**XII. Drip Rate Calculation**

Upon completion of Module XII, the EMT-Basic should be able to:

**Cognitive Objectives**

- 12.1 Describe how to convert pounds to kilograms using long division and the three AM rule
- 12.2 Explain how to convert cc/ml to liters, kg to grams, mg to micrograms
- 12.3 Explain how to calculate amount of medication to patient weight in a acute patient environment
- 12.4 Describe how to calculate physician orders to gtts per minute with macro, micro and blood pump administration sets
- 12.5 Describe the conversion process for a known dose of a medication on hand to desired dose

**Psychomotor Objectives**

- 12.6 Demonstrate how to convert pounds to kilograms using long division and the three AM rule
- 12.7 Demonstrate how to convert cc/ml to liters, kg to grams, mg to micrograms
- 12.8 Calculate amount of medication to patient weight in a acute patient environment
- 12.9 Calculate physician orders to gtts per minute with macro, micro and blood pump administration sets

12.10 Convert known dose of a medication on hand to desired dose

**Affective Objectives**

None identified

**XIII. Maintenance of Intravenous Therapy**

Upon completion of Module XIII, the EMT-Basic should be able to:

**Cognitive Objectives**

- 13.1 Describe the proves of obtaining vital signs before and after application of the IV
- 13.2 Name three critical changes that occur from fluid administration and the associated changes in the patients vital signs
- 13.3 Explain how to listen to breath sounds
- 13.4 List three indication of fluid overload
- 13.5 Describe three ways to confirm the patency of an IV
- 13.6 List three reasons to immediately discontinue an IV
- 13.7 Explain how to correct the flow of an IV that has discontinued flowing

**Psychomotor Objectives**

- 13.8 Demonstrate the ability to obtain vital signs before and after application of the IV
- 13.9 Recognize three critical changes that occur from fluid administration and the associated changes in the patients vital signs
- 13.10 Demonstrate listening to breath sounds
- 13.11 Demonstrate three ways to confirm the patency of an IV
- 13.11 Perform the proper documentation of a IV administration
- 13.12 Demonstrate how to correct the flow of an IV that has discontinued flowing

**Affective Objectives**

None identified

**XIV. Discontinuation of Intravenous Therapy**

Upon completion of Module XIV, the EMT-Basic should be able to:

**Cognitive Objectives**

- 14.1 Explain the reasons for contacting on line medical control prior to removing an IV
- 14.2 Explain the importance of describing to the patient the signs and symptoms of infection after an IV has been removed
- 14.3 Describe preparing the proper equipment for discontinuing an IV
- 14.4 Explain how to describe to the patient the procedure for discontinuing and IV

**Psychomotor Objectives**

- 14.5 Simulate contacting on line medical control prior to removal of an IV
- 14.6 Describe to the patient the signs and symptoms of infection after an IV has been removed
- 14.7 Demonstrate preparing the proper equipment for discontinuing an IV
- 14.8 Describe to the patient the procedure for discontinuing an IV
- 14.9 Prepare the equipment for discontinuation of the IV
- 14.10 Demonstrate removing an IV with aseptic technique

**Affective Objectives**

None Identified

**XV. Intravenous Therapy in the Management of Adult Care**

Upon completion of Module XV, the EMT-Basic should be able to:

**Cognitive Objectives**

- 15.1 Given a patient case study or scenario explain the following aspects of patient care in the adult trauma patient
  - 15.1.1 Indications for IV insertion
  - 15.1.2 Contraindications for IV insertion; both patient condition and scene concerns
  - 15.1.3 List appropriate sites for intravenous therapy for an adult trauma patient
  - 15.1.4 Review differences for site selection and over the needle catheter size based on patient condition
  - 15.1.5 State the recommended/desired flow rate
  - 15.1.6 List acceptable techniques for vein distention in an adult trauma patient
  - 15.1.7 Possible complications associated with IV insertion
  - 15.1.8 Review problem solving techniques for possible IV complications
  - 15.1.9 Review equipment necessary for IV site phlebotomy, as dictated by case study/scenario
  - 15.1.10 Indications of fluid overload as a result of IV therapy
  - 15.1.11 Methods of managing a patient with fluid overload as a result of IV therapy
- 15.2 Given a patient case study or scenario explain the following aspects of patient care in the adult medical patient
  - 15.2.1 Indications for IV insertion
  - 15.2.2 Contraindications for IV insertion; both patient condition and scene concerns
  - 15.2.3 List appropriate sites for intravenous therapy for an adult trauma patient

- 15.2.4 Review differences for site selection and over the needle catheter size based on patient condition
- 15.2.5 State the recommended/desired flow rate
- 15.2.6 List acceptable techniques for vein distention in an adult trauma patient
- 15.2.7 List possible complications associated with IV insertion
- 15.2.8 Review problem solving techniques for possible IV complications
- 15.2.9 Review equipment necessary for IV site phlebotomy, as dictated by case study/scenario
- 15.2.10 Indications of fluid overload as a result of IV therapy
- 15.2.11 Methods of managing a patient with fluid overload as a result of IV therapy
- 15.3 Given a patient case study or scenario explain the following aspects of patient care in the adult cardiac arrest patient
  - 15.3.1 Indications for IV insertion
  - 15.3.2 Contraindications for IV insertion; both patient condition and scene concerns
  - 15.3.3 List appropriate sites for intravenous therapy for an adult cardiac arrest patient
  - 15.3.4 Review differences for site selection and over the needle catheter size based on patient condition
  - 15.3.5 State the recommended/desired flow rate
  - 15.3.6 List acceptable techniques for vein distention in an adult cardiac arrest patient
  - 15.3.7 Possible complications associated with IV insertion
  - 15.3.8 Review problem solving techniques for possible IV complications
  - 15.3.9 Review equipment necessary for IV site phlebotomy, as dictated by case study/scenario
  - 15.3.10 Indications of fluid overload as a result of IV therapy
  - 15.3.11 Methods of managing a patient with fluid overload as a result of IV therapy

### **Psychomotor Objectives**

- 15.4 Demonstrate the technique for site selection for venipuncture for an adult patient
- 15.5 Demonstrate the proper aseptic technique for venipuncture
- 15.6 Demonstrate the appropriate IV site phlebotomy techniques
- 15.7 Demonstrate how to appropriately secure an IV
- 15.8 Demonstrate how to regulate volume administration set drip rates

### **Affective Objectives**

- 15.6 Explain how patient condition may alter IV site selection

- 15.7 Explain how patient condition may alter the size and type of IV over the needle catheter and administration set used

**XVI. Intravenous Therapy in the Management of Pediatric Care**

Upon completion of Module XVI, the EMT-Basic should be able to:

**Cognitive Objectives**

- 16.1 Given a patient case study or scenario explain the following aspects of patient care in the pediatric trauma patient
  - 16.1.1 Indications for IV insertion
  - 16.1.2 Contraindications for IV insertion; both patient condition and scene concerns
  - 16.1.3 List appropriate sites for intravenous therapy for an pediatric trauma patient
  - 16.1.4 Review differences for site selection and over the needle catheter size based on patient condition
  - 16.1.5 State the recommended/desired flow rate
  - 16.1.6 List acceptable techniques for vein distention in a pediatric trauma patient
  - 16.1.7 Possible complications associated with IV insertion
  - 16.1.8 Review problem solving techniques for possible IV complications
  - 16.1.9 Review equipment necessary for IV site phlebotomy, as dictated by case study/ scenario
  - 16.1.10 Indications of fluid overload as a result of IV therapy
  - 16.1.11 Methods of managing a patient with fluid overload as a result of IV therapy
- 16.2 Given a patient case study or scenario explain the following aspects of patient care in the pediatric medical patient
  - 16.2.1 Indications for IV insertion
  - 16.2.2 Contraindications for IV insertion; both patient condition and scene concerns
  - 16.2.3 List appropriate sites for intravenous therapy for a pediatric medical patient
  - 16.2.4 Review differences for site selection and over the needle catheter size based on patient conditions
  - 16.2.5 State the recommended/desired flow rate
  - 16.2.6 List acceptable techniques for vein distention in a pediatric medical patient
  - 16.2.7 Possible complications associated with IV insertion
  - 16.2.8 Review problem solving techniques for possible IV complications
  - 16.2.9 Review equipment necessary for IV site phlebotomy, as dictated by case study/scenario
  - 16.2.10 Indications of fluid overload as a result of IV therapy

- 16.2.11 Methods of managing a patient with fluid overload as a result of IV therapy
- 16.3 Given a patient case study or scenario explain the following aspects of patient care in the pediatric cardiac arrest patient
  - 16.3.1 Indications for IV insertion
  - 16.3.2 Contraindications for IV insertion; both patient condition and scene concerns
  - 16.3.3 List appropriate sites for intravenous therapy for pediatric cardiac arrest
  - 16.3.4 Review differences for site selection and over the needle catheter size based on patient condition
  - 16.3.5 State the recommended/desired flow rate
  - 16.3.6 List acceptable techniques for vein distention in a pediatric cardiac arrest patient
  - 16.3.7 Possible complications associated with IV insertion
  - 16.3.8 Review problem solving techniques for possible IV complications
  - 16.3.9 Review equipment necessary for IV site phlebotomy, as dictated by case study/scenario
  - 16.3.10 Indications of fluid overload as a result of IV therapy
  - 16.3.11 Methods of managing a patient with fluid overload as a result of IV therapy

#### **Psychomotor Objectives**

- 16.4 Demonstrate the technique for site selection for venipuncture for a pediatric patient
- 16.5 Demonstrate the proper aseptic technique for venipuncture
- 16.6 Demonstrate appropriate IV site phlebotomy techniques
- 16.7 Demonstrate how to appropriately secure an IV
- 16.8 Demonstrate how to regulate volume administration set drip rates

#### **Affective Objectives**

- 16.9 Explain how patient condition may alter IV site selection
- 16.10 Explain how patient condition may alter the size and type of IV over the needle catheter and administration set used

### **XVII. Documentation**

Upon completion of Module XVII, the EMT-Basic should be able to:

#### **Cognitive Objectives**

- 17.1 Discuss the documentation requirements for establishment of an IV
- 17.2 Describe the components of a written report and information that should be included
- 17.3 Identify the various sections of a written report and how it pertains to the EMT
- 17.4 Describe what information is required in each section of the patient care report and how it pertains to the EMT

- 17.5 Define special considerations concerning patient refusals, specifically with IDDM patients
- 17.6 Describe the legal implications associated with the written report
- 17.7 Discuss local considerations

**Psychomotor Objectives**

- 17.8 Demonstrate different patient care report techniques and formats
- 17.9 Compose an accurate patient care report containing the minimum data set for IV initiation and medication administration

**Affective Objectives**

- 17.10 Recognize the importance of accurate documentation

**XVIII. Blood Glucose Testing and Administration of Intravenous Dextrose**

Upon completion of Module XVIII, the EMT-Basic should be able to:

**Cognitive Objectives**

- 18.1 State the indications for blood glucose testing
- 18.2 State appropriate blood glucose levels
- 18.3 Describe the patient presentation requiring the administration of glucose
- 18.4 State the situations in which physician consultation would be indicated for the administration of Dextrose
- 18.5 Identify the following aspects of Dextrose use in the adult patient
  - 18.5.1 Therapeutic effects
  - 18.5.2 Indications
  - 18.5.3 Contraindications
  - 18.5.4 Side effects
  - 18.5.5 Complications with administration
- 18.6 Identify the following aspects of Dextrose use in the pediatric patient
  - 18.6.1 Therapeutic effects
  - 18.6.2 Indications
  - 18.6.3 Contraindications
  - 18.6.4 Side effects
  - 18.6.5 Complications with administration
- 18.7 Differentiate between hypoglycemia and hyperglycemia
- 18.8 State the local protocols for the administration of Dextrose
- 18.9 Discuss the importance of drawing a tube of blood just prior to the administration of Dextrose

**Psychomotor Objectives**

- 18.10 Demonstrate proficiency in performing and interpreting a blood glucose test

18.11 Demonstrate the appropriate technique for the administration of  
Dextrose

18.12 Demonstrate the appropriate technique for the administration of  
glucose

**Affective Objectives**

None Identified