These Clinical Guidelines have been created using resources that were current as of the "Reviewed" date noted at the beginning of the document. Clinicians should refer to the manufacturer's Prescribing Information (or equivalent) for the most up-to-date information. While CarepathRx has published these Clinical Guidelines after a close review of available literature and a clinical review process, given the evolving nature and complexity of modern pharmaceutical products, CarepathRx does not and cannot warrant or guarantee that these Clinical Guidelines reflect the objectively best or highest standard of care at any given time.

Nothing within these Clinical Guidelines is intended to supersede or interfere with any individual clinician's decision-making or professional judgment with respect to either (1) prescribing or dispensing the drug or product in question or (2) the overall treatment plan for an individual patient.

Blinatumomab (Blincyto) Clinical Guideline for Home Intravenous Therapy

Section: Clinical Guideline
Compliance: ACHC Infusion Pharmacy
ACHC Standards: N/A
URAC Standards: N/A
Policy ID: CG030
Effective: 6/1/2022
Reviewed: 6/1/2025
Revised: 6/1/2025
Approved by, Title and Date Approved: Kathleen Patrick, President 6/1/22, 6/1/25

I. BACKGROUND

Blinatumomab is a bispecific CD19-directed CD3 T-cell engager. Its mechanism of action mediates the production of cytolytic proteins, release of inflammatory cytokines, and proliferation of T cells, causing lysis of CD19-positive cells. Blinatumomab is used in B-Cell acute lymphoblastic leukemia (ALL) that is Philadelphia chromosome-negative. It can also be used in patients with recurred or refractory acute lymphoblastic leukemia. The following outlines the procedures and protocols for coordination of servicing patients in need of outpatient blinatumomab home infusions.

II. PATIENT ACCEPTANCE CRITERIA

A. All candidates for home care service must be evaluated by the clinician(s) and deemed appropriate to receive home care based upon the dispensing pharmacy's admission criteria.

B. Cycles one and two must be initiated in a hospital setting. Subsequent cycles should be initiated in the outpatient setting, but the decision to start a cycle in the home by a field nurse may be determined on a case-by-case basis and reviewed by nursing and pharmacy management. The following criteria will be evaluated:

1. Prescriber preference
2. Allergy profile
3. Age
4. Other relevant social and/or medical history

C. Physician orders for blinatumomab must include:

1. Patient weight and BSA
2. Drug
3. Dose (total dose and BSA-based dose)
4. Route of administration
5. Frequency of administration
6. Emergency medications per protocol
7. Orders for pre-medications
8. Line care protocol
9. Routine lab monitoring, if applicable

D. Venous access must be adequate for administration

E. Baseline labs or tests prior to starting therapy

F. Dispensing pharmacy treatment protocol for anaphylaxis will be instituted as needed unless more comprehensive patient-specific orders are provided by physician. See Appendix A (Nursing CarepathRx policy on *Management of Allergic/Anaphylactic Reactions*)

III. PHARMACOLOGY OVERVIEW

Refer to manufacturer's full Prescribing Information for most up to date information

A. Indications:

1. B-cell precursor acute lymphoblastic leukemia, CD19-positive disease in first or second complete remission with minimal residual disease-positive (0.1% or greater) **(MDR+)**

2. Relapsed or refractor B-cell precursor acute lymphoblastic leukemia, CD19-postive **(R/R)**

3. Philadelphia chromosome-negative relapsed or refractory B- cell precursor acute lymphoblastic leukemia **(Ph-)**

B. Dosing and duration:

1. MDR+:

   a. Body weight <45 kg: 15 mcg/m^2/day (maximum daily dose: 28 mcg/day) continuous IV infusion on days 1 through 28 followed by a 2-week treatment-free interval
   b. Body weight ≥45 kg: 28 mcg/day continuous IV infusion on days 1 through 28 followed by a 2-week treatment-free interval

2. R/R dosing:

   a. Body weight <45 kg

      1) Induction cycle 1: 5 mcg/m^2/day (maximum daily dose: 9 mcg/day) continuous IV infusion on days 1 through 7 and 15 mcg/m^2/day (maximum daily dose: 28 mcg/day) continuous infusion on days 8 through 28, followed by a 2-week treatment-free interval
      2) Cycles 2-5: 15 mcg/m^2/day (maximum daily dose: 28 mcg/day) continuous IV infusion on days 1 through 28 followed by a 2-week treatment-free interval
      3) Continued therapy cycles 6-9: 15 mcg/m^2/day (maximum daily dose: 28 mcg/day) continuous infusion on days 1 through 28 followed by an 8-week treatment-free interval

   b. Body weight ≥45 kg

1) Induction cycle 1: 9 mcg/day continuous IV infusion on days 1 through 7 and 28 mcg/day continuous IV infusion on days 8 through 28, followed by a 2-week treatment-free interval
2) Cycles 2-5: 28 mcg/day continuous IV infusion on days 1 through 28 followed by a 2-week treatment-free interval
3) Continued therapy cycles 6-9: 28 mcg/day continuous IV infusion on days 1 through 28 followed by an 8-week treatment-free interval

3. Ph- dosing:

1. Body weight <45 kg: 15 mcg/m^2/day (maximum daily dose: 28 mcg/day) continuous IV infusion on days 1 through 28 followed by a 2-week treatment-free interval

2. Body weight ≥45 kg: 28 mcg/day continuous IV infusion on days 1 through 28 followed by a 2-week treatment-free interval

C. Dose Adjustment: there are no recommended dose adjustments for baseline renal or hepatic dysfunction. Recommended dose adjustments for toxicities:

Adverse Reaction	Grade	Patient Weight ≥45 kg	Patient Weight <45 kg
Cytokine Release Syndrome (CRS)	Grade 3	Interrupt infusion and administer dexamethasone 8 mg IV or PO every 8 hours for up to 3 days, then taper off over 4 days. Once resolved, restart blinatumomab at 9 mcg/day and increase to 28 mcg/day after 7 days if adverse reaction does not recur.	Interrupt infusion and administer dexamethasone 5 mg/m^2 (max: 8 mg) IV or PO every 8 hours for up to 3 days, then taper off over 4 days. Once resolved, restart blinatumomab at 5 mcg/m^2/day and increase to 15 mcg/m^2/day after 7 days if adverse reaction does not recur.
	Grade 4	Discontinue permanently. Administer dexamethasone as instructed for Grade 3 CRS.	
Neurological Toxicity	Seizure	Discontinue permanently if more than one seizure occurs.	
	Grade 2 Immune Effector Cell-Associated Neurotoxicity Syndrome (ICANS)	Interrupt infusion until ICANS resolves. Administer corticosteroids and manage according to current practice guidelines. Once resolved, restart blinatumomab at 9 mcg/day and increase to 28 mcg/day after 7 days if adverse reaction does not recur.	Interrupt infusion until ICANS resolves. Administer corticosteroids and manage according to current practice guidelines. Once resolved, restart blinatumomab at 5 mcg/m^2/day and increase to 15 mcg/m^2/day after 7 days if adverse reaction does not recur.
	Grade 3 Neurologic Event including ICANS	Interrupt infusion until no more than Grade 1 (mild) and for at least 3 days, then restart blinatumomab at 9 mcg/day and increase to 28 mcg/day after 7 days if adverse reaction does not recur. If the adverse reaction	Interrupt infusion until no more than Grade 1 (mild) and for at least 3 days, then restart blinatumomab at 5 mcg/m^2/day and increase to 15 mcg/m^2/day after 7 days if adverse reaction does not recur. If the adverse

		occurred at 9 mcg/day or if the adverse reaction takes more than 7 days to resolve, discontinue permanently.	reaction occurred at 5 mcg/m^2/day or if the adverse reaction takes more than 7 days to resolve, discontinue permanently.
		If ICANS present, administer corticosteroids and manage according to current practice guidelines.	
	Grade 4 Neurologic Event including ICANS	Discontinue permanently. If ICANS present, administer corticosteroids and manage according to current practice guidelines.	
Other Clinically Relevant Adverse Reactions	Grade 3	Interrupt infusion until no more than Grade 1 (mild), then restart blinatumomab at 9 mcg/day and increase to 28 mcg/day after 7 days if adverse reaction does not recur. If the adverse reaction takes more than 14 days to resolve, discontinue permanently.	Interrupt infusion until no more than Grade 1 (mild), then restart blinatumomab at 5 mcg/m^2/day and increased to 15 mcg/m^2/day after 7 days if adverse reaction does not recur. If the adverse reaction takes more than 14 days to resolve, discontinue permanently.
	Grade 4	Consider discontinuing permanently.	

D. Duration: total duration of therapy is dependent on patient response and adverse reactions. The following durations have been studied:

    1. MDR+: one cycle consists of 42 days (28 days of active treatment, followed by a 14-day treatment-free interval). One course consists of 4 cycles (1 induction cycle, followed by 3 consolidation cycles).

    2. R/R: one cycle consists of either 42 days (28 days of active treatment, followed by a 14-day treatment-free interval) or 84 days (28 days of active treatment, followed by a 56-day treatment-free interval). One course consists of up to 9 cycles (2 induction cycles, followed by 3 consolidation cycles and up to 4 cycles of continued therapy).

    3. Ph-: one cycle consists of 42 days (28 days of active treatment, followed by a 14-day treatment-free interval) for consolidation.

E. Contraindications: blinatumomab is contraindicated in patients with known hypersensitivity to blinatumomab or to any component of the product formulation.

F. Warnings and Precautions:

    1. Cytokine Release Syndrome (CRS): manifestations include fever, headache, nausea, asthenia, hypotension, increased alanine aminotransferase, increased aspartate aminotransferase, increased total bilirubin, and disseminated intravascular coagulation (DIC). Median onset is

2 days after start of the infusion. Consider interruption or discontinuation of blinatumomab infusion if severe CRS occurs.

2. Neurotoxicity, including Immune Effector Cell-Associated Neurotoxicity Syndrome (ICANS): the incidence of neurological toxicities is approximately 65%, and the median time to first event is within 2 weeks of initiation. Grade 3 or higher neurological toxicities, including encephalopathy, convulsions, disorientation and coordination and balance disorders, occurred in approximately 13% of patients. The incidence of ICANS, based on signs and symptoms, was 7.3%. Onset may be concurrent with, following or in the absence of CRS. Treatment with corticosteroids may be required for neurological toxicities. Consider interruption or discontinuation of blinatumomab infusion if severe neurological toxicities occur.
3. Infections: approximately 25% of patients receiving blinatumomab experienced serious infections, including sepsis, pneumonia, bacteremia, opportunistic infections and catheter-site infections. Administer prophylactic antibiotics and employ surveillance testing as appropriate during treatment. If an infection occurs, treat appropriately, including interruption or discontinuation of blinatumomab if needed.
4. Life-threatening or fatal Tumor Lysis Syndrome (TLS): preventive measures, such as pretreatment nontoxic cytoreduction and hydration should be used during blinatumomab treatment. Interruption or discontinuation of blinatumomab may be required.
5. Neutropenia and febrile neutropenia: neutropenia and febrile neutropenia, including life-threatening cases, have occurred. Interruption of infusion is recommended if prolonged neutropenia occurs.
6. Effects on ability to drive and use machines: due to the possibility of neurological events including seizures, patients receiving blinatumomab are at risk for loss of consciousness and should not be driving and engaging in hazardous occupations or activities such as operating heavy or potentially dangerous machinery while blinatumomab is being administered.
7. Elevated liver enzymes: transient elevation in liver enzymes have been observed. Grade 3 or greater elevations in liver enzymes occurred in approximately 7% of patients outside the setting of CRS and resulted in treatment discontinuation in less than 1% of patients. Blinatumomab treatment should be interrupted if transaminases rise to > 5 times the upper limit of normal (ULN) or if total bilirubin rises to > 3 times ULN.
8. Pancreatitis: Fatal cases of pancreatitis in patients receiving blinatumomab plus dexamethasone have been reported in the post marketing setting. Management may require interruption or discontinuation of blinatumomab infusion.
9. Leukoencephalopathy: cranial magnetic resonance imaging (MRI) changes showing leukoencephalopathy have been observed in patients receiving blinatumomab, especially in patients previously treated with cranial irradiation and anti-leukemic chemotherapy.
10. Preparation and administration: follow instructions for preparation and administration strictly to minimize medication errors (including under dose and overdose).
11. Immunization: safety of immunization with live viral vaccines has not been studied during or after blinatumomab administration. Vaccination with live viral vaccines should be avoided for at least 2 weeks prior to, during and until immune recovery after administration of blinatumomab.
12. Benzyl alcohol toxicity in neonates: due to the use of preservatives, preparations containing bacteriostatic saline (including 72, 96 and 168-hour bags) are not recommended for use in any patients weighing less than 5.4 kg.
13. Pregnancy and lactation: blinatumomab may cause fetal harm when administered to a pregnant patient. Pregnant patients should be counseled on the potential risk, and females of reproductive age should be counseled on effective contraception during treatment and for 48 hours after completion of treatment. In the U.S. general population, the estimated

background risk of major birth defects and miscarriage in clinically recognized pregnancies is 2-4% and 15-20%, respectively.

There is no information regarding the presence of blinatumomab in human milk, the effects on the breastfed infant, or the effects of milk production. Because of the potential for serious adverse reactions in breastfed infants, lactating patients receiving blinatumomab should be counseled not to breast during treatment and for 48 hours after completion of treatment.

G. Pharmacokinetics:

1. Distribution: V_z = 5.27 L
2. Elimination:

    a. Mean half-life = 2.20 hours
    b. The metabolic pathway has not been characterized

H. Adverse Reactions (>10%):

1. Cardiovascular: arrhythmia, edema, hypertension, hypotension
2. Dermatologic: rash
3. Endocrine & metabolic: weight gain
4. Gastrointestinal: diarrhea, nausea
5. Hematologic & oncologic: anemia, decreased absolute lymphocyte count, decreased serum immunoglobulins, leukopenia, neutropenia, thrombocytopenia
6. Hepatic: increased serum transaminases
7. Hypersensitivity: CRS
8. Infection: bacterial, fungal infection, opportunistic infection
9. Nervous system: aphasia, chills, headache, insomnia, neurotoxicity
10. Neuromuscular & skeletal: back pain, tremor
11. Respiratory: cough
12. Miscellaneous: fever, infusion related reaction

I. Drug Interactions:

1. CYP450 substrates such as Busulfan: blinatumomab causes a transient elevation of cytokines which may suppress CYP450 enzyme activities and result in increased exposure of CYP450 substrates, especially those with a narrow therapeutic index. Risk of interaction is increased during the first 9 days of the first cycle of blinatumomab and the first 2 days of the second cycle. Monitor for toxicity and/or drug concentrations. Adjust the dose of the concomitant drug as needed.
2. Vaccines (inactivated): vaccine efficacy may be reduced. Complete all age-appropriate vaccinations at least 2 weeks prior to starting an immunosuppressant. If vaccinated during immunosuppressant therapy, revaccinate at least 3 months after immunosuppressant discontinuation
3. Vaccines (live): vaccination with live virus vaccines is not recommended for at least 2 weeks prior to blinatumomab initiation, during treatment, and until immune system recovery following the last cycle of therapy
4. Additional drug-drug interactions may exist. Consult interaction database for patient specific assessment.

IV. ADMINISTRATIVE GUIDELINES

A. Initiation of each cycle will typically occur in the hospital (cycles 1 and 2), or outpatient setting (cycles 3+). Requests for home initiation (cycles 3+) will be reviewed as needed. Premedication is recommended:

1. MDR+:

   a. Hospitalization is recommended for the first 3 days of cycle 1, and the first 2 days of cycle 2.
   b. Premedication:

      1) Adults: prednisone 100 mg IV or equivalent (e.g., dexamethasone 16 mg) 1 hour prior to the start of each blinatumomab cycle.
      2) Pediatrics: dexamethasone 5 mg/m^2 IV or PO, to a maximum dose of 20 mg prior to the start of the first blinatumomab cycle and when restarting an infusion after an interruption of 4 or more hours in the first cycle.

2. R/R:

   a. Hospitalization is recommended for the first 9 days of cycle 1 and the first 2 days of cycle 2.
   b. Premedication:

      1) Adults: dexamethasone 20 mg IV or PO1 hour prior to the start of each blinatumomab cycle, prior to a step dose (e.g., Cycle 1 Day 8), and when restarting an infusion after an interruption of 4 hours or more.
      2) Pediatrics: dexamethasone 5 mg/m^2 IV or orally, to a maximum dose of 20 mg, prior to the start of the first blinatumomab cycle, prior to a step dose (e.g., Cycle 1, Day 8) and when restarting an infusion after an interruption of 4 hours or more in the first cycle.

3. Ph-:

   a. Hospitalization is recommended for the first 3 days of cycle 1, and the first 2 days of cycle 2.

   b. Premedication:

      1) Adults: dexamethasone 20 mg IV 1 hour prior to the start of each blinatumomab cycle.
      2) Pediatrics: dexamethasone 5 mg/m^2 IV or PO, to a maximum dose of 20 mg prior to the start of the first blinatumomab cycle and when restarting an infusion after an interruption of 4 or more hours in the first cycle.

B. A 0.2 micron in-line filter is required for preservative-free preparations (24- and 48-hour bags) only.

C. Do not co-administration with other products in the same IV line. A dedicated IV line is required for administration.

D. **Do not flush infusion line (catheter lumen), particularly when changing infusion bags or at completion of infusion; may result in overdose.**

E. Blinatumomab must be administered using a programmable, lockable, non-elastomeric infusion pump with an alarm.

F. Polyolefin, PVC non-di(2-ethylhexyl)phthalate (non-DEHP) or ethyl vinyl acetate (EVA) infusion bags, cassettes and tubing must be used.

G. Hazardous handling: **It is the responsibility of the dispensing pharmacy to ensure medication handling is in compliance with organizational policies and procedures. This medication meets the definitions of a hazardous drug as outlined by the National Institute for Occupational Safety and Health (NIOSH).**

V. NURSING PROCEDURE

A. Supplies may include but are not limited to:

1. Alcohol Swabs
2. Gloves
3. Tape
4. IV access supplies as applicable
5. Syringes (10 mL) with needles (20 G x 1"), if dexamethasone ordered
6. Sharps container, if dexamethasone ordered
7. Pump pouch (250-500 mL size)
8. Chemotherapy spill kit
9. Chemotherapy gloves, as needed
10. Chemotherapy gown, as needed
11. Chemotherapy prep mat, as needed
12. Chemotherapy precautions teaching sheet
13. Ambulatory infusion pump and supplies:

    a. Batteries for ambulatory pump (Ex: 9 Volt Duracell battery or 4 Double A batteries)
    b. Battery change procedure teaching sheet
    c. Continuous delivery mode teaching sheet
    d. Pump return box

B. Prescription items: (examples below)

1. Blinatumomab compounded bag with tubing (primed with drug)
2. Dexamethasone vials, if ordered
3. 0.9% sodium chloride (50 mL) stock bag for dexamethasone, if ordered
4. 0.9% sodium chloride (50 mL) post-infusion flush bag, if ordered
5. Standard flushes per protocol

C. How Supplied: each blinatumomab package contains one single-dose vial containing 35 mcg blinatumomab, a preservative free, white to off-white lyophilized powder and one single-dose vial containing 10 IV Solution Stabilizer, a sterile, preservative-free colorless to slightly yellow, clear solution.
The pharmacy will provide blinatumomab for home use as compounded sterile preparation per manufacturer specifications in a non-DEHP bag with attached non-DEHP tubing (primed with drug) and closed system transfer device in one of the following sizes:

1. 24-hour bag (preservative-free) with low-volume 0.2-micron tubing with overfill to be administered at a rate of 10 mL/hr. For example, 28 mcg/day dose will be provided as:

    a. Blinatumomab 32.5 mcg (2.6 mL)
    b. IV Solution Stabilizer 5.5 mL
    c. 0.9% NaCl 270 mL

2. 48-hour bag (preservative-free) with low-volume 0.2-micron tubing with overfill to be administered at a rate of 5 mL/hr. For example, 28 mcg/day dose will be provided as:

    a. Blinatumomab 65 mcg (5.2 mL)
    b. IV Solution Stabilizer 5.5 mL
    c. 0.9% NaCl 270 mL

3. 72-hour bag with low-volume tubing with overfill to be administered at a rate of 1.8 mL/hr. For example, 28 mcg/day dose will be provided as:

    a. Blinatumomab 105 mcg (8.4 mL)
    b. Bacteriostatic 0.9% NaCl 45 mL
    c. IV Solution Stabilizer 3.2 mL
    d. 0.9% NaCl 105 mL

4. 96-hour bag with low-volume tubing with overfill to be administered at a rate of 1.8 mL/hr. For example, 28 mcg/day dose will be provided as:

    a. Blinatumomab 130 mcg (10.4 mL)
    b. Bacteriostatic 0.9% NaCl 56 mL
    c. IV Solution Stabilizer 4 mL
    d. 0.9% NaCl 130 mL

5. 168-hour bag with low-volume tubing with overfill to be administered at a rate of 0.6 mL/hr. For example, 28 mcg/day dose will be provided as:

    a. Blinatumomab 210 mcg (16.8 mL)
    b. Bacteriostatic 0.9% NaCl 90 mL
    c. IV Solution Stabilizer 2.2 mL
    d. 0.9% NaCl 1 mL

D. Storage and Handling: hazardous precautions are required.

1. 24- and 48-hour bags (preservative-free): store under refrigeration for up to 8 days. Drug expires after 48 hours at room temperature.
2. 72-, and 96-hr bags: store under refrigeration for up to 10 days. Drug expires after 4 days at room temperature.
3. 168-hr bags: store under refrigeration for up to 10 days. Drug expires after 7 days at room temperature.

E. Procedures for bag change or disconnect:

1. Explain the reasoning for visit and use of blinatumomab.

2. Don chemo gloves and gown. Prepare chemotherapy prep mat.

3. Assess line for signs and symptoms of infection and complete line dressing change when indicated. Notify the ordering physician and pharmacist if line infection suspected. Educate patient on IV-line complications, line access procedures, and what to do if any complications arise. **Do not flush line**, flushing may lead to overdose.

4. Counsel patient on warnings, precautions, and potential side effects including but not limited to: CRS (fever, chills, headache, nausea, fatigue), infusion reactions, infection, low white blood cell count, diarrhea and neurological problems (seizures, dizziness, confusion).

5. Obtain labs, if ordered, from extra lumen of central line or peripherally (do not draw from dedicated blinatumomab lumen).

6. Perform bag change and educate patients against stopping the infusion at any point unless instructed to do so by a healthcare professional. **Do not flush before or after bag change**. In the event of infusion delay or interruption of 4 hours or more, administer corticosteroid prior to blinatumomab infusion as prescribed and directed.

7. After completion of each cycle and disconnect of final blinatumomab bag, the line must be cleared of drug prior to flushing or using IV line. Withdraw drug and blood from blinatumomab-containing lumen or administer 0.9% NaCl hydration flush at a rate equal to or lesser than that of blinatumomab infusion as prescribed and directed.

VI. CLINICAL MONITORING

A. Prior to therapy: CBC and LFTs.

B. During therapy:

1. CBC and LFTs.
2. Signs and symptoms of CRS, infection, neurological toxicity, tumor lysis syndrome

Please refer to the package insert for the most up to date guidance on this medication.

REFERENCES:

Blincyto (blinatumomab) [package insert]. Thousand Oaks, CA: Amgen Inc; 2025.

United States Pharmacopeia (USP). General Chapter, <797> Pharmaceutical Compounding—Sterile Preparations. (2023) USP-NF. Rockville, MD: United States Pharmacopeia. Accessed November 29, 2023.

APPENDIX A: ANAPHYLAXIS KIT INTRUCTIONS

Emergency Medication After Your Infusion

Please call your pharmacy if you have any questions or concerns. In the event of an emergency, always call 911.

Your nurse will tell you when you need to use Emergency Medications.
The epinephrine dose will be noted on the Anaphylaxis Protocol included with your kit.

Start with a clean work surface and clean hands.

Open the supply bag labeled Anaphylaxis Kit Contents.

You will need:

1. **Bag containing Pills** (2 Acetaminophen and 2 Diphenhydramine)
2. **Bag containing Alcohol Prep Pads**
3. **Bag labeled IM Epinephrine**

All other contents will not be needed.

Open the IM Epinephrine Bag

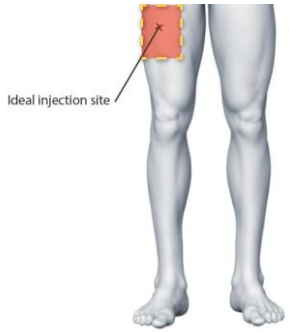
1. **Remove 1 of each item**
    a. 1 -syringe
    b. 1 – brown labeled filter needle (BD Filter Needle)- **for ampule use only**
    c. 1 – black labeled safety needle (Magellan Hypodermic Safety Needle 22G x 1”)
    d. 1 ampule of epinephrine

Prepare IM (intramuscular) injection of Epinephrine:

1. **Attach the brown filtered needle to syringe**
    a. Be careful to not touch the tip of the syringe or the needle.
2. Using an **alcohol swab, wipe the neck of the epinephrine ampule.**
3. Holding the ampule upright, **swirl and flick the ampule until all fluid flows to the bottom chamber** (the top chamber should be empty).
4. Using a new alcohol wipe, grasp the neck of the ampule and with your other hand grasp the bottom chamber of the ampule. **Quickly snap the top of the ampule off, directing the snap way from you.**
5. **Place the tip of the brown filter needle inside the ampule**. Tilting the ampule, **withdraw dose of medication into the syringe** by gently pulling back on the plunger. Be careful to not pull the plunger out of the syringe.
6. Remove the needle from the ampule and h**old the syringe upright** with the needle pointing upward. **Gently tap the side of the syringe to bring any air to the top of the syringe.**
7. **Push the air out of the syringe by gently pushing on the plunger**.
8. Replace the cap on the brown filter needle. Discard remainder in ampule.

9. **Remove the brown filter needle and place the black safety needle onto the syringe.**

Give your IM Epinephrine injection



1. **Grasp your leg muscle at the outer mid-thigh** and **cleanse the area** with a new alcohol wipe.
2. **Push the needle into your leg muscle straight** in at a 90-degree angle.
3. **Inject the medication** by depressing the plunger in a slow and steady motion.
4. **Remove the needle** and wipe the site with the alcohol wipe.
5. May repeat dose every 5 minutes (**maximum 3 doses**) if ordered per protocol.

Take the pills by mouth.

a. 2 – Acetaminophen
b. 2 – Diphenhydramine

Place all trash in the bag the pills came in and take with you when you seek medical care. **Give the bag to the nurse or EMT**, so your doctor will know what medication you already took. They will properly dispose of the syringe and needles.

Call 911 or have someone drive you to the emergency department.