

**REGION I EMERGENCY MEDICAL SERVICES  
STANDING MEDICAL ORDERS  
EMT – Basic**

**SMO: Anaphylaxis and Allergic Reactions**

**Overview:** Allergic reactions can vary in severity from a mild reaction consisting of hives and rash to a severe generalized allergic reaction termed anaphylaxis resulting in cardiovascular and respiratory collapse. Common causes of allergic reactions include: bee/wasp stings, penicillin or other drug allergies and seafood or nuts. Exposures can occur from ingestion, inhalation, injection or absorption through skin or mucous membranes. This protocol is intended to help the EMS responder assess and treat the spectrum of allergic reactions.

**INFORMATION NEEDED**

- Exposure to common allergens (bee stings, drugs, nuts, seafood, medications), prior allergic reactions
- Respiratory: wheezing, stridor, respiratory distress
- Skin: itching, hives, rash
- Other symptoms: nausea, weakness, anxiety

**OBJECTIVE FINDINGS—MILD ALLERGIC REACTION**

- Hives, rash

**TREATMENT**

- Remove etiologic agent if possible or relocate patient
- Ensure patent airway
- Administer oxygen 2-6 L/min via nasal cannula
- Pulse oximetry
- Routine Medical Care
- Transport to hospital

**OBJECTIVE FINDINGS—MODERATE ALLERGIC REACTION**

- Hives, rash
- Mild bronchospasm
- Normotensive

**TREATMENT**

- Remove etiologic agent if possible or relocate patient
- Ensure patent airway
- Administer oxygen 10-15 L/min via nonrebreather mask
- Pulse oximetry
- BVM with High Flow oxygen 15 LPM if patient ventilation inadequate
- Suction as needed for patient secretion
- Routine medical care
- Albuterol** 5 mg total dose via nebulizer, repeat if indicated
- If no response and patient bronchospasm persists or worsens, consult Medical Control for use of **Epi-Pen** 0.3 mg SQ, may repeat in 5 minutes X 1
- Immediate transport to the nearest hospital if < 5 minute transport time or ALS intercept
- Contact of medical control whenever transport time or time to intercept exceeds 5 minutes

**OBJECTIVE FINDINGS—SEVERE ALLERGIC REACTION (ANAPHYLAXIS)**

- Altered mental status
- Hypotension (SBP < 90 and evidence of hypoperfusion)
- Bronchospasm and/or angioedema

**TREATMENT**

- Remove etiologic agent if possible or relocate patient
- Ensure patent airway
- Administer oxygen 10-15 L/min via nonrebreather mask
- Pulse oximetry
- BVM with High Flow oxygen 15 LPM if patient ventilation inadequate
- Suction as needed for patient secretion
- Routine Medical Care
- Epi-Pen 0.3mg SQ**, may repeat in 5 min X 1
- Albuterol** 2.5 mg total dose via nebulizer, repeat prn until relief of symptoms
- Advanced airway management as indicated (Combitube)
- Immediate transport to the nearest hospital if < 5 minute transport time or ILS or ALS intercept
- Contact of medical control whenever transport time or time to intercept exceeds 5 minutes

**Documentation of adherence to protocol:**

- Oxygen given
- Initial level of respiratory distress assessed and noted on chart (mild, moderate or severe)
- Pulse oximetry
- Bronchodilator given as indicated
- \*Epinephrine administered for severe allergic reaction (anaphylaxis)

7/04

Reviewed:

Revised:

EMS/ Region1 SMOs

### Medical Control Contact Criteria

\_\_\_ Contact Medical Control for permission to administer **Epinephrine** in patients who are not in Anaphylactic Shock.

#### PRECAUTIONS AND COMMENTS

- Note that a patient may change rapidly and frequent reassessment is necessary. Inform medical control of significant changes in patient status.
- Epinephrine may cause: anxiety, tremor, palpitations, tachycardia, and headache. In elderly patients, epinephrine administration may precipitate AMI , hypertensive crisis and/or dysrhythmias.
- Edema of any of the soft structures of the upper airway may be lethal. Observe closely, and be anticipate need for ALS intercept.
- Note that if a patient worsens and advances to a more severe category of allergic reaction, i.e. moves from a moderate allergic reaction to a severe one, repeated doses beyond maximum limits of medication are not to be exceeded without permission from medical control. I.e. if the patient receives two doses of epinephrine under the moderate severity protocol and then advances to a severe reaction, the patient should not receive additional epinephrine unless given permission from medical control.
- The decision to administer Epinephrine is made with caution in patients over 40 years of age or with known history of coronary artery disease or hypertension. Consult Medical Control if any question as to the appropriateness in that patient.

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EMS/ Region1 SMOs

**REGION I EMERGENCY MEDICAL SERVICES  
STANDING MEDICAL ORDERS  
EMT – Paramedic**

**SMO: Anaphylaxis and Allergic Reactions**

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**INFORMATION NEEDED**

- Exposure to common allergens (bee stings, drugs, nuts, seafood, medications), prior allergic reactions
- Respiratory: wheezing, stridor, respiratory distress
- Skin: itching, hives, rash
- Other symptoms: nausea, weakness, anxiety

**OBJECTIVE FINDINGS—MILD ALLERGIC REACTION**

- Hives, rash

**TREATMENT**

- Remove etiologic agent if possible or relocate patient
- Ensure patent airway
- Administer oxygen 2-6 L/min via nasal cannula
- Pulse oximetry
- Routine Medical Care
- Establish IV NS
- Diphenhydramine** 25-50 mg IM (or IV)
- Immediate Transport to closest hospital

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EMS/ Region1 SMOs

**OBJECTIVE FINDINGS—MODERATE ALLERGIC REACTION**

- Hives, rash
- Mild bronchospasm
- Normotensive

**TREATMENT**

- Remove etiologic agent if possible or relocate patient
- Ensure patent airway
- Administer oxygen 10-15 L/min via nonrebreather mask
- Pulse oximetry
- BVM with High Flow oxygen 15 LPM if patient ventilation inadequate and advanced airway management.
- Suction as needed for patient secretion
- Routine medical care
- Albuterol** 2.5 mg total dose via nebulizer, repeat if indicated
- IV access
- Diphenhydramine** 50 mg IM or IV
- If no response and patient bronchospasm persists or worsens, Consult Medical Control for use of **Epinephrine** (1:1000) 0.3 mg SQ or **Epi-Pen** 0.3 mg SQ. Consult Medical Control to repeat in 5 min. X 1
- Immediate Transport to closest hospital

**OBJECTIVE FINDINGS—SEVERE ALLERGIC REACTION (ANAPHYLAXIS)**

- Altered mental status
- Hypotension (SBP < 90 and evidence of hypoperfusion)
- Bronchospasm and/or angioedema

**TREATMENT**

- Remove etiologic agent if possible or relocate patient
- Ensure patent airway
- Administer oxygen 10-15 L/min via nonrebreather mask
- Pulse oximetry
- BVM with High Flow oxygen 15 LPM if patient ventilation inadequate and advanced airway management.
- Suction as needed for patient secretion
- Routine Medical Care
- IV access
- Epinephrine** (1:10,000) 0.15 mg slow IVP repeat q 5 min. to maximum of 0.3 mg. If no IV access, **Epinephrine** (1:1000) 0.3 mg SQ *OR* **Epi-Pen** 0.3 mg SQ, may repeat in 5 min.
- Diphenhydramine** 50 mg IV (or IM if can't establish IV access)
- Albuterol** 2.5 mg total dose via nebulizer, repeat prn until relief of symptoms
- Fluid challenge (500cc NS, reassess and repeat if indicated)
- Advanced airway management as indicated
- Immediate Transport to closest hospital

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EMS/ Region1 SMOs

**Documentation of adherence to protocol:**

- Oxygen given
- Pulse oximetry
- Initial level of respiratory distress assessed and noted on chart (mild, moderate or severe)
- Bronchodilator given
- Diphenhydramine given as indicated
- Epinephrine administered for severe (anaphylaxis)

**Medical Control Contact Criteria**

- Contact Medical Control for permission to administer **Epinephrine** in patients who are not in Anaphylactic Shock.

**PRECAUTIONS AND COMMENTS**

- Note that a patient may change rapidly and frequent reassessment is necessary. Inform medical control of significant changes in patient status.
- \*Epinephrine may cause: anxiety, tremor, palpitations, tachycardia, and headache. These may be particularly severe if given IV. In elderly patients, epinephrine administration may precipitate AMI , hypertensive crisis and/or dysrhythmias.
- \*Be sure you are giving the proper dilution of Epinephrine to your patient, and give slowly.
- Edema of any of the soft structures of the upper airway may be lethal. Observe closely, and be prepared for early intubation before swelling precludes this intervention (See Airway Management Protocol).
- Note that if a patient worsens and advances to a more severe category of allergic reaction, i.e. moves from a moderate allergic reaction to a severe one, repeated doses beyond maximum limits of medication are not to be exceeded without permission from medical control. I.e. if the patient receives two doses of epinephrine under the moderate severity protocol and then advances to a severe reaction, the patient should not receive additional epinephrine unless given permission from medical control.
- The decision to administer Epinephrine is made with caution in patients over 40 years of age or with known history of coronary artery disease or hypertension. Consult Medical Control if any question as to the appropriateness in that patient.

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