



EMT-Paramedic Treatment Protocol 4303

Pulmonary Edema

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Patients experiencing pulmonary edema will have rales or crackles on lung exam and JVD and/or peripheral edema and/or frothy sputum. Rales can also be heard in patients with lung infections who are not in pulmonary edema and furosemide is not appropriate treatment for these patients. Patients in severe pulmonary edema may benefit from assistance with positive pressure ventilation.

- A. Perform **MAMP Protocol 4201** as appropriate.
- B. If blood pressure is >90 systolic and patient has rales and JVD:
 - 1. Administer nitroglycerine 0.4 mg (1/150 gr) SL. May repeat q 3-5 minutes X 3 as long as blood pressure remains above 90 systolic.

- 2. **Contact Medical Command** and prepare for transport. If no improvement consider additional NTG **per order of MCP** or treatments below **per order of MCP**.



- 3. If patient **is not** already taking furosemide (*Lasix*), then administer furosemide 40 mg IV **per order of MCP**.
- 4. If patient **is** already taking furosemide, then administer furosemide 80 mg IV **per order of MCP**.
- 5. **If ordered by MCP**, administer morphine sulfate 2 to 4 mg IV.
- 6. **If ordered by MCP**, administer albuterol nebulizer 2.5 mg with oxygen 8 - 10 LPM.
- 7. Transport with **further orders per MCP**.



- C. If blood pressure is <90 systolic and patient has rales and JVD:
 - 1. Expedite transport and monitor vital signs closely.

- 2. Contact Medical Command for **further orders per MCP**.



- D. If blood pressure is <90 systolic, refer to **Shock Protocol 4108 - Section E, Cardiogenic Shock**.