

Figure 1. Pathophysiological Cycle of Acute Decompensated Heart Failure

Patient with Baseline Left Ventricular Dysfunction

Key:

- COPD= Chronic obstructive pulmonary disease
- ↑= increased
- MR= Mitral regurgitation
- LVEDP= Left ventricular end-diastolic pressure

ADDITIONAL HEMODYNAMIC STRESS

- Sleep apnea
- Ischemia
- Concurrent infection
- Hypertensive crisis
- COPD exacerbation
- Salt excess

↑Afterload
↑MR
↑LVEDP

↑ Left Ventricular Dysfunction

HEART FAILURE CASCADE

PHYSIOLOGICAL RESPONSE
↑Sympathetic activity

BREAK CYCLE HERE
Diuretics
Nitroglycerine
Nesiritide

HEMODYNAMIC CONSEQUENCES
↑Systemic blood pressure
↑Pulse rate
Fluid overload

