

**Harvard Medical School Department of
Continuing Education and the Cardiovascular
Division of the Department of Medicine,
Brigham and Women's Hospital**



Cardiology Rounds
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**Cardiac Remodeling and Recovery:
Lessons from Mechanical Ventricular Assist Devices**

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Objectives:

This issue of *Cardiology Rounds* will help readers to:

- achieve an understanding of the current use of mechanical ventricular assist devices (VADs) in the treatment of patients with refractory heart failure
- gain new insights regarding cardiac repair and recovery at the molecular, cellular, and structural levels
- understand how innovative new observations of recovery of ventricular function during the use of left VADs (LVADs) offer potential therapeutic advances.

Test:

1. Pathologic cardiac remodeling can be characterized by:
 - a. increased chamber dimension
 - b. decreased systolic function
 - c. increased myocyte length
 - d. altered gene expression
 - e. all of the above

2. The two types of mechanical VADs currently used are pulsatile and continuous flow.
True False

3. The use of LVADs has been associated with the following changes:
 - a. reduced ventricular chamber size
 - b. reduced ventricular wall stress
 - c. decreased circulating neurohormones and natriuretic peptides
 - d. all of the above

4. The use of LVADs can lead to:
- a. improved contractility of muscle fibers
 - b. reduced contractility
 - c. reduced energy stores
 - d. frequent arrhythmias
5. Cardiac remodeling does not equal functional recovery.
- True False
6. The percentage of patients supported with an LVAD that recover and are able to have the device removed is currently approximately:
- a. 5%-10%
 - b. 10%-20%
 - c. 20%-30%
 - d. 50%
7. The use of LVADs provides a platform to study cardiac remodeling at the:
- a. molecular level
 - b. structural level
 - c. cellular level
 - d. all of the above

To receive AMA category 1 credit, you must correctly answer 60% of the test questions.

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