

## Heart Failure II: How is it Treated? (Pharmacological and Electromechanical Treatment)

The aim of heart failure (HF) treatment is to relieve symptoms, keep your heart strength and avoid disease decompensation and arrhythmias that may put you at risk. In other words, your physician will help you live better and longer. Treatment should always be guided by a specialist in Cardiology, and patient's involvement and adherence to treatment are very important.

### HOW CAN YOU TAKE CARE OF YOURSELF?

Self-care is essential. To that end, it is important that you learn to recognize its symptoms. The first signs of decompensation may include shortness of breath (dyspnea) on minimal exertion or even at rest, the need to sleep in semi-sitting position or with additional pillows to make breathing easier, swelling (edema) in feet and ankles, or waking up more often at night to urinate. Check your weight every day, and remember that quick weight gain is often due to fluid retention. If you experience any of those changes or symptoms, you should visit your doctor as soon as possible.

### WHAT MEDICATIONS SHOULD YOU TAKE?

Medications prescribed by your physician have proved effective to relieve the symptoms, reduce hospitalization and improve survival.

Multiple drugs are always required, so you should be very disciplined and careful in following medical indications. Take your medications as indicated, and write down the time schedule for each medication; use a pillbox and/or set the alarm on your cell phone so that you do not forget to take them. Talk with your doctor if you have any problem or drug intolerance.

You will probably receive a beta-blocker (carvedilol, bisoprolol, nebivolol, or metoprolol) and an ACE inhibitor (angiotensin-converting enzyme inhibitor such as enalapril or similar), which require a progressive dosage. The higher the dose you may receive, the better the long-term outcome. At first, you may notice no improvement, and you may even feel a bit worse. Be patient and follow your doctor's advice; the benefit will soon arrive.

Diuretics are often prescribed to improve symptoms of congestion, edema, and dyspnea. Drugs such as spiro lactone or epleronone may be necessary.

In some cases, digoxin or antiarrhythmic agents are prescribed. Anticoagulant therapy may be necessary to prevent the formation of blood clots in the heart. Certain anticoagulant agents require periodical evaluation by an hematologist, but there are other recent agents that do not require monitoring.

### WHAT IF YOU HAVE OTHER MEDICAL CONDITIONS?

Patients with HF frequently have other conditions such as diabetes, pulmonary disease, kidney failure, anemia, thyroid disorders, or depression. Your cardiologist should know about those conditions and the medication you take. Management and treatment of non-cardiac conditions will result in better HF prognosis.

### WHAT OTHER TREATMENTS ARE AVAILABLE FOR HF?

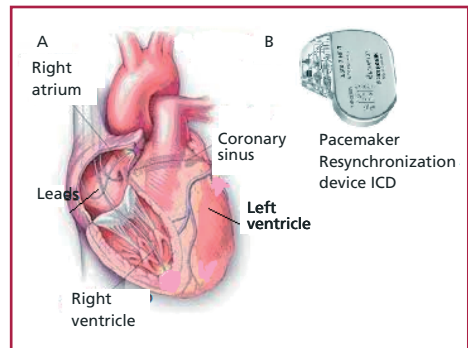
When the propagation of the cardiac electrical impulse is blocked, a pacemaker may be required. Sometimes, the right and left ventricles do not contract simultaneously. In that case, a resynchronization device is required to help the heart contract in a coordinated manner, which will improve its functioning.

Sometimes, in cases of life-threatening arrhythmias, an implantable cardioverter-defibrillator (ICD) is indicated. These devices detect the arrhythmias and deliver energy shocks to interrupt them immediately. Some devices perform both functions: resynchronization device + ICD (Figure 1).

Some patients may require angioplasty or surgery to treat the abnormality caused by HF. In more severe patients, when response to drug therapy is poor, the need for heart transplant is evaluated. In extreme situations, the use of mechanical devices to assist the heart (artificial ventricle) is an option. These devices are recommended for long periods, while waiting for the transplant, or until the condition shows some improvement.

### CONCLUSIONS

The treatment indicated by your cardiologist may be dynamic and submitted to changes. The more you involve in your treatment, the greater the benefit you will get. Knowledge of your condition, positive communication with your physician, and proper self-care will avoid decompensation resulting in frequent hospitalizations, and will improve your quality of life.



**Fig. 1. A.** Intracardiac pacemaker leads. **B.** Combined pacemaker, resynchronization, and implantable cardioverter-defibrillator (ICD) device.

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the patient

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### INFORMATION YOU MAY FIND IN THE WEB

- Argentina Society of Cardiology (Consensus Area): <http://www.sac.org.ar/consensos>
- Barisani JL, Fernández A, Fairman E, Diez M, Thierer J, Nul D y cols. Consenso de diagnóstico y tratamiento de la insuficiencia cardíaca crónica. *Rev Argent Cardiol* 2010; 78:166-81.
- Barisani JL, Fernández A, Fairman E, Diez M, Thierer J, Christen A y cols. Consenso de insuficiencia cardíaca aguda y avanzada. *Rev Argent Cardiol* 2010;78:264-81.
- American Heart Association. [www.heart.org](http://www.heart.org)
- [www.cardiosmart.org/MI-CORAZON?sc\\_lang=es-US](http://www.cardiosmart.org/MI-CORAZON?sc_lang=es-US)

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