

Management of Adults with Symptomatic Heart Failure

The following guideline recommends diagnostic evaluation, education and pharmacologic treatment that support effective patient self-management.

Eligible Population	Key Components	Recommendation and Level of Evidence
Adults with clinical suspicion of heart failure	Initial evaluation	<p>Assessment should include:</p> <ul style="list-style-type: none"> • Thorough history and physical examination [C] • Chest X-ray • 12-lead electrocardiogram • Laboratory tests and other studies should include: CBC, serum electrolytes (including calcium, magnesium), BUN, serum creatinine, blood glucose, liver function tests, TSH, urinalysis [C] • Ejection fraction assessed by either 2-D surface echocardiography or radionuclide ventriculography [C] • Assessment for coronary artery disease risk factors
Adults diagnosed with left ventricular systolic heart failure with current or prior symptoms	Pharmacologic management	<p>Drugs recommended for routine use:</p> <ul style="list-style-type: none"> • ACE inhibitors in all patients, unless contraindicated¹ [A] • Beta-blockers in all stable patients, unless contraindicated^{1,2,3} [A] • Digitalis for treatment of heart failure symptoms, unless contraindicated^{2,4} [A] • Diuretics for evidence of fluid retention [A] <p>Drugs recommended for use in select patients:</p> <ul style="list-style-type: none"> • Spironolactone for recent or current class IV symptoms, preserved renal function and normal potassium concentration [B] • In patients who cannot tolerate ACE inhibitors due to cough or angioedema, angiotensin receptor blockers (ARBs) are recommended [A] • In patients who cannot tolerate ACE inhibitors or ARBs due to hypotension or renal insufficiency, hydralazine and nitrate combination is recommended [B]
	Education, counseling and risk factor modification	<p>Educate patient/family regarding:</p> <ul style="list-style-type: none"> • Daily self monitoring of weight and adherence to recommended patient action plan • Recognition of symptoms and when to seek medical attention • Moderate dietary sodium restriction (e.g., 2000-2500 mg sodium/day) • Regular exercise • Avoid excessive alcohol intake, illicit drug use, and the use of NSAIDS • Smoking cessation • Educational programs and support groups • Vaccination against influenza and pneumococcal disease

¹ Contraindications include: life-threatening adverse reactions (angioedema or anuric renal failure), pregnancy, hypotensive patients at immediate risk of cardiogenic shock, systolic blood pressure < 80 mm Hg, serum creatinine > 3 mg/dL, bilateral renal artery stenosis, or serum potassium > 5.5 mmol/L.

² In general, beta-blockers are used together with an ACE inhibitor and usually digitalis

³ Contraindications include: patients with current or recent fluid retention history, unstable or poorly controlled reactive airway disease, symptomatic bradycardia or advanced heart block (unless treated with a pacemaker), or recent treatment with an intravenous positive inotropic agent

⁴ Contraindications include: significant sinus or atrioventricular block (unless the block has been treated with a permanent pacemaker).

Levels of Evidence for the most significant recommendations: A = randomized controlled trials; B = controlled trials, no randomization; C = observational studies; D = opinion of expert panel

This guideline lists core management steps. It is based on the 2001 American College of Cardiology/American Heart Association Guidelines for the Evaluation and Management of Chronic Heart Failure in the Adult (www.acc.org).

Individual patient considerations and advances in medical science may supersede or modify these recommendations.