

# key points

SELECTED BY

**Dr Peter Savill**

Former GP, Community Cardiology Specialist, Southampton and Mid Hants, UK

**Although patients can present with non-specific** symptoms and minimal clinical signs, generally, in the community, patients with heart failure (HF) present with symptoms of dyspnoea or fluid retention. In order to confirm (or refute) the diagnosis, NICE recommends natriuretic peptide testing (ideally N-terminal pro B-type natriuretic peptide; NT-proBNP) in all patients with suspected HF. An NT-proBNP level  $> 2,000$  ng/L is highly suggestive of HF and NICE recommends echocardiography and specialist review within 2 weeks. Conversely, an NT-proBNP level  $< 400$  ng/L suggests that a diagnosis of HF is unlikely. Patients with an NT-proBNP of 400-2,000 ng/L should have echocardiography and specialist assessment within 6 weeks.

**As well as echocardiography, an ECG should also be** performed at baseline. Other basic tests such as chest X-ray, full blood count, renal, liver and thyroid function, lipids and glycosylated haemoglobin should also be carried out. Those with asymptomatic left ventricular dysfunction are also at risk of developing symptomatic HF and should be treated in a similar manner to symptomatic patients.

**Heart failure with preserved ejection fraction (HFpEF)** patients typically have risk factors such as hypertension, diabetes or obesity. The diagnosis of HFpEF is confirmed by clinical symptoms and signs of HF in conjunction with elevated natriuretic peptides and, importantly, the presence of echocardiographic structural abnormalities such as left ventricular hypertrophy or left atrial dilatation.

**The cornerstone of pharmacological treatment for** heart failure with reduced ejection fraction (HFrEF) involves initiation of renin-angiotensin aldosterone blockade with ACEI or ARB, and beta-blockers, with the addition of mineralocorticoid receptor antagonists if patients remain symptomatic with a reduced ejection fraction. The PARADIGM-HF randomised controlled trial provided overwhelming evidence of a substantial mortality benefit of the angiotensin-neprilysin inhibitor (ARNI) sacubitril/valsartan over the ACEI enalapril. In contrast with HFrEF there are very few evidence-based drug therapies for HFpEF. The main therapeutic approach for patients with HFpEF involves symptom control and relief of congestion with loop diuretics, and treatment of comorbidities such as hypertension and atrial fibrillation.

**In appropriate patients with HFrEF who continue to** have reduced ejection fraction after maximal up-titration of HF therapy, implantable cardioverter-defibrillators may be considered for primary prevention of sudden cardiac death. Additionally, in those patients with left bundle branch block and a broad QRS duration (typically above 120 ms), specialists may consider implantation of a cardiac resynchronisation therapy device.

**HF patients should be offered a personalised, exercise-**based cardiac rehabilitation programme, assuming their condition is stable. This programme should also include a psychological and education component.