



- Approximately 480,000 Australians have heart failure².
- Only 50 percent of patients diagnosed with chronic heart failure will be alive 5 years later^{3, 4}.

The basics of diagnosis and classification of heart failure:

- ✓ **Diagnosis is clinical, based on typical symptoms and signs**
- ✓ **Following clinical diagnosis, heart failure may be classified according to left ventricular ejection fraction (LVEF)**

1. Diagnosis is clinical, based on typical symptoms and signs

Heart failure is a **complex clinical syndrome** with **typical symptoms and signs** that generally occur on **exertion**, but can also occur at **rest** (particularly when **recumbent**). It is secondary to an **abnormality of cardiac structure or function** that **impairs the ability of the heart to fill with blood at normal pressure** or **eject blood sufficient** to fulfil the needs of the metabolising organs.

Symptoms and signs of heart failure

More typical symptoms

Dyspnoea (usually with exertion)
 Orthopnoea
 Paroxysmal nocturnal dyspnoea
 Fatigue

More specific signs

Elevated jugular venous pressure
 Hepatojugular reflux
 Third heart sound
 Laterally displaced apex beat

Less typical symptoms

Nocturnal cough
 Wheeze
 Abdominal bloating
 Anorexia
 Confusion (elderly)
 Depression
 Palpitations
 Dizziness
 Syncope
 Bendopnoea

Less specific signs

Weight gain (>2 kg/week)
 Weight loss (in advanced heart failure)
 Peripheral oedema (ankle, sacrum)
 Pulmonary crackles
 Pleural effusions
 Cardiac murmur
 Tachycardia
 Tachypnoea
 Cheyne–Stokes respiration
 Ascites

2. Following clinical diagnosis, heart failure may be classified according to left ventricular ejection fraction (LVEF)

Heart failure diagnostic criteria

Heart failure with reduced ejection fraction (HFrEF)

Formerly systolic heart failure

- Symptoms ± signs of heart failure
- and**
- LVEF <50%*

**If LVEF mildly reduced (LVEF 41-49%), additional criteria required (e.g. signs of heart failure; diastolic dysfunction with high filling pressure demonstrated by invasive means or echocardiography or biomarker testing)*

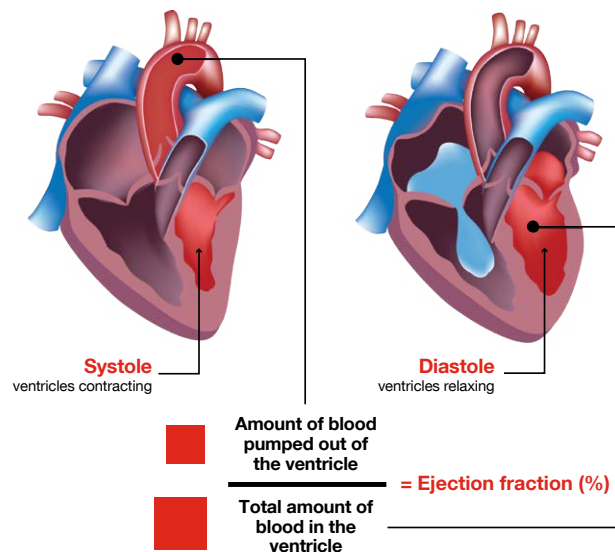
Heart failure with preserved ejection fraction (HFpEF)

Formerly diastolic heart failure

- Symptoms ± signs of heart failure
- and**
- LVEF ≥50%
- and**
- Objective evidence of:
 - Relevant structural heart disease (LV hypertrophy, left atrial enlargement)
- and/or**
- Diastolic dysfunction, with high filling pressure demonstrated by any of the following:
 - invasive means (cardiac catheterisation)
 - echocardiography
 - biomarker (elevated BNP or NT proBNP)
 - exercise (invasive or echocardiography)

BNP, B-type natriuretic peptide; HFpEF, heart failure with preserved ejection fraction; HFrEF, heart failure with reduced ejection fraction; LV, left ventricular; LVEF, left ventricular ejection fraction; NT, N-terminal

Heart failure - ejection fraction



References

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2. Chan YK, et al. BMC Health Serv Res. 2016;16(1):501.
3. Tsutsui H, et al. Circ J. 2007;71(4):449-54.
4. Taylor CJ, et al. Fam Pract. 2017;34(2):161-8.

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