

Adverse drug reactions and heart failure

Medication	Potential adverse effect	Considerations
Angiotensin Converting Enzyme Inhibitors (ACEI) / Angiotensin Receptor Blockers (ARB)	Dry cough ¹	<ul style="list-style-type: none"> • Particularly with ACEI² • Does not contraindicate continued therapy² • If troublesome and persistent, substitution with an ARB may be considered² • Pulmonary congestion due to heart failure should be discounted as cause of the cough prior to discontinuing ACEI²
	Angioedema ¹	<ul style="list-style-type: none"> • May occur years after starting therapy³ • Counsel all patients to recognise and act upon symptoms • ARB may be trialled in patients with history of ACEI related angioedema, with close monitoring due to potential cross-sensitivity¹
	Increase creatinine and potassium ¹	<ul style="list-style-type: none"> • Monitor closely
	Dizziness and hypotension ¹	<ul style="list-style-type: none"> • Counsel patients to reduce risk of falls • Monitor and manage accordingly
Beta-Blockers (BB)	Masking of hypoglycaemia symptoms (eg tachycardia, tremor). Increase incidence and severity of hypoglycaemia. ¹	<ul style="list-style-type: none"> • Not contraindicated in diabetics⁴ • Beta 1 selective BB (eg bisoprolol or metoprolol) may be considered for diabetics¹, especially if at risk of hypoglycaemia
	Sleep disturbance and nightmares ¹	<ul style="list-style-type: none"> • More common in BB with high lipid solubility (eg. carvedilol)⁵ • Consider use of less lipid soluble BB (eg bisoprolol)¹
	Prevention of bronchodilation (beta-2 mediated) ⁶	<ul style="list-style-type: none"> • May be considered contraindication for asthmatics⁷ • Not contraindicated for patients with COPD⁷ • Beta 1 selective BB (eg bisoprolol or metoprolol) may be preferred⁷
	Fatigue ¹	<ul style="list-style-type: none"> • Commonly listed as a potential side effect however only a small increase in fatigue has been associated with BB therapy⁶
	Dizziness and hypotension ¹	<ul style="list-style-type: none"> • Counsel patients • Monitor and manage accordingly

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Diuretics	Inconvenience of frequent voiding may compromise adherence	<ul style="list-style-type: none"> Consider alternate timing of diuretic doses (eg. loop diuretics may be administered in the morning and afternoon to minimise nocturia) Advise patients to take diuretic when in vicinity of bathrooms rather than when travelling
	May precipitate gout ⁵	<ul style="list-style-type: none"> Consider prophylactic gout therapy
Mineralocorticoid Receptor Antagonists (MRA)	Hyperkalaemia (especially for patients with renal impairment or when used concomitantly with ACEI, ARB, potassium sparing diuretics or potassium supplements) ¹	<ul style="list-style-type: none"> Vigilant electrolyte monitoring is required
	Gynaecomastia (men) ^{1,3}	<ul style="list-style-type: none"> Not common Occurs particularly with spironolactone^{1,3} Counsel patients to report symptoms to their doctor

Information within this table only highlights some adverse drug reactions of medicines in heart failure patients. Please refer to a comprehensive reference for a full description.

References

1. *Australian Medicines Handbook* 2012 (online). Adelaide: Australian Medicines Handbook Pty Ltd.
2. *National Prescribing Service*. Medication review for your patients with heart failure 2000.
3. *Micromedex. Healthcare Series* [Internet database]. Greenwood Village, Colo: Thomson Reuters (Healthcare) Inc. Updated periodically.
4. Hunt SA, Abraham WT, Chin MH, Feldman AM, Francis GS, Ganiats TG, et al. 2009 focused update incorporated into the ACC/AHA 2005 *Guidelines for the Diagnosis and Management of Heart Failure in Adults: a report of the American College of Cardiology Foundation/American Heart Association Task Force on Practice Guidelines*: developed in collaboration with the International Society for Heart and Lung Transplantation. *Circulation*. 2009;119(14):e391-479.
5. Sood J. *Focus on how to best carry out a medication review in heart failure*. *Pharmacy in Practice*. 2009;Sept.
6. Podrid P. *Major side effects of beta blockers*. UpToDate. 2013.
7. McMurray JJ, Adamopoulos S, Anker SD, Auricchio A, Bohm M, Dickstein K, et al. *ESC Guidelines for the diagnosis and treatment of acute and chronic heart failure 2012: The Task Force for the Diagnosis and Treatment of Acute and Chronic Heart Failure 2012 of the European Society of Cardiology*. Developed in collaboration with the Heart Failure Association (HFA) of the ESC. *Eur Heart J*. 2012;33(14):1787-847.