

CLINICIAN INFORMATION

Screening for primary aldosteronism – a guide to switching medications

Screening for primary aldosteronism is recommended for patients with:

- Blood pressure \geq 150/100 or treatment-resistant hypertension
- Hypertension and hypokalaemia
- Hypertension and adrenal adenoma
- Hypertension and sleep apnoea
- Hypertension and a family history of early-onset hypertension or stroke at a young age
- A first-degree relative who has primary aldosteronism

Primary aldosteronism is suspected when **plasma aldosterone is normal or high** in the setting of a **low or suppressed renin** concentration, which gives rise to an **elevated aldosterone to renin ratio (ARR)**. However, many antihypertensive medications can affect aldosterone and renin levels.

Antihypertensive medications which may cause false positive or false negative ARR:

<i>Causes of false positive ARR</i>	<i>Causes of false negative ARR</i>
β -blocker (e.g. metoprolol, atenolol) α -methyl dopa Clonidine	Diuretic (e.g. hydrochlorothiazide, frusemide, indapamide) MR antagonist (e.g. spironolactone, eplerenone) ACE inhibitor (e.g. perindopril, ramipril) Angiotensin II receptor blocker (e.g. irbesartan, telmisartan) Dihydropyridine calcium channel blocker (e.g. amlodipine, lercanidipine)

If safe to do so, a clinician may switch their patients' antihypertensives to those less likely to affect aldosterone and renin concentration. The following is a guide to assist clinicians and their patients during the medication switch. It is recommended that the self-titration chart be used for patients who are capable of self-monitoring their blood pressure (BP) at home, and that regular follow-up with the clinician is maintained as required during this period.

How to prioritise medication changes prior to screening for primary aldosteronism:

Must be replaced for accurate screening:

Diuretics (including loop diuretics, thiazide diuretics, and MR antagonists) – *stop for >6 weeks*

Replace wherever possible:

ACE inhibitors and angiotensin receptor blockers – *stop for >2 weeks*

Dihydropyridine calcium channel blockers – *stop for >2 weeks*

Beta blockers – *stop for >2 weeks*

These medications can be stopped at once, and replaced with non-interfering medications for BP control when your patient is investigated for primary aldosteronism (see box below). The patient can be advised to self-titrate medications every few days according to their home-measured BP (see patient info).

Medications that are less likely to affect aldosterone and renin levels:

Verapamil SR*	180-240 mg daily	start with 180 mg $\frac{1}{2}$ daily
Prazosin*	0.5-5 mg BD or TDS	start with 0.5 mg BD
Moxonidine	200-400 mcg daily	start with 200 mcg nocte
Hydralazine	12.5-50 mg BD	start with 12.5 mg BD

*A combination of verapamil and prazosin is often used as verapamil can offset the tachycardia associated with prazosin. Both medications can be up-titrated as tolerated before introducing a third or fourth agent.

PATIENT INFORMATION – SELF TITRATION CHART

Blood Pressure Medicine Changes During Testing for Primary Aldosteronism

You are going to have a blood test for the condition primary aldosteronism. Some medicines can affect the test results. This page explains which medicines should be stopped and which medicines can be taken during the testing period. You need a reliable blood pressure monitor at home to change the medicine doses by yourself, with the support of your doctor. Please consult your doctor if you have difficulty with your blood pressure control.

Stop these medications that you are currently taking:

1. _____ Stop date: _____
2. _____ Stop date: _____
3. _____ Stop date: _____

Prazosin (1mg or 2mg or 5mg tablet), brand name: Minipress

- Start date: _____
- Take ____ tablet(s) once / twice / three times a day
- After ____ days, if blood pressure remains >140/90, increase to ____ tablet(s) once /twice / three times a day
- After another ____ days, if blood pressure remains >140/90, increase to ____ tablet(s) once/ twice / three times a day
- After another ____ days, if blood pressure remains >140/90, increase to ____ tablet(s) once/ twice / three times a day
- Common side effect: lightheaded on standing up

Moxonidine (200 or 400 mcg tablet), brand name: Physiotens

- Start date: _____
- Take ____ tablet(s) once a day at night
- After ____ days, if blood pressure remains >140/90, increase to ____ tablet(s) once a day
- Common side effect: drowsiness (therefore take at night)

Verapamil SR (180 or 240mg tablet), brand name: Isoptin or Cordilox

- Start date: _____
- Take ____ tablet(s) once a day
- After ____ days, if blood pressure remains >140/90, increase to ____ tablet(s) once a day
- Common side effect: constipation, slowing of the heart rate

Other:

Have your next blood test around ___/___/___