



# Monitoring guidance in severe hypertension

Learn how to monitor a patient with severe hypertension in a hospital setting, using practical monitoring information through MedicinesComplete.

Evidence-based, actionable monitoring information to optimise drug treatment



**Drug Monitoring Checker**

Available through

 Medicines  
Complete



# Monitoring guidance in severe hypertension

Using essential knowledge at the point of care



Martha, a 55-year-old woman, has been admitted to hospital with chest pain and initial investigations show that she has severe hypertension. The medical team decide to start Martha on ramipril. After reviewing the medical notes, the ward pharmacist Helen decides to check the appropriate monitoring for Martha and searches 'ramipril' on Drug Monitoring Checker.

Medicines Complete

Alanine aminotransferase

Drug Monitoring Checker  
Publication last updated on 08-Feb-2021 >  
[More information](#)

Which drug do you want to find monitoring information for? ⓘ

ramipril Search →

Ramipril

Using the results on Drug Monitoring Checker, Helen recommends to the team that baseline blood pressure, electrolytes, and renal panel need to be measured before starting ramipril.



**Medicines Complete** Drug Monitoring Checker

Alanine aminotransferase

### Monitoring parameters (3)

- > Blood pressure Oral
- > Electrolytes Oral
- ∨ Renal panel Oral

For more information see [Renal panel](#).

**Before starting treatment**

Yes

**Action**

If renal impairment present, consider specialist advice. **[A]**

If eGFR <30 mL/minute/1.73 m<sup>2</sup>, reduce starting ramipril dose. **[M]**

**After starting treatment**

**Hypertension; Primary and secondary prevention of cardiovascular events**

At 1–2 weeks. Once stable, every 12 months.

1–2 weeks after each dose change.

**Heart failure**

At 1–2 weeks. Once stable, at least every month for 3 months. Then at least every 6 months.

1–2 weeks after each dose change.

**Drug Monitoring Checker** provides those working in primary and secondary care settings with concise, practical monitoring guidance and information. Launching with over 150 drugs and over 20 Parameter Profiles.

## Clear rationale

During the ward round, the junior doctor asks Helen why renal panel needs to be monitored before starting ramipril. Helen consults the 'Rationale' section on Drug Monitoring Checker and finds ramipril can cause renal impairment and the dose is dependent on renal function.

**Medicines Complete** Drug Monitoring Checker

Alanine aminotransferase

**Rationale**

To determine dose.

Ramipril may cause renal impairment, for more information see [Martindale's ADR checker](#) and [Nephrotoxicity](#).

> Further information

Some monitoring parameters have not been included where the evidence is lacking. This tool is not designed to replace clinical experience and decisions on monitoring should always be individualised to the patient. It may be necessary to monitor other parameters than those listed within the tool if considered to be clinically appropriate.



## Actionable advice for results

Helen notices that renal panel and electrolytes need to be monitored 1-2 weeks after starting treatment with ramipril and adds this to the patient's notes. After 1 week, the results find that Martha has a serum potassium of 5.8mmol/L. Helen consults the 'Action' section of Drug Monitoring Checker. She recommends a reduction in ramipril dose and organises the potassium levels to be re-checked in 5-7 days.

**Medicines Complete** | Search: Ramipril

**Drug Monitoring Checker**

**Action**

**Hypertension**

If eGFR decreases by <25%, or serum creatinine increases by <30%, continue ACE inhibitor and recheck levels in 1-2 weeks. [A]

If the decrease in eGFR, or increase in serum creatinine persists, then stop ACE inhibitor or reduce dose and recheck levels in 5-7 days. Add an alternative antihypertensive drug if required. [A]

Updated regularly, **Drug Monitoring Checker** provides detailed information on monitoring parameters, found in Parameter Profiles, designed to help you interpret test results effectively.

## Parameter Profiles to guide interpretation of results

Helen also consults the potassium Parameter Profile to see possible causes for hyperkalaemia.

**Medicines Complete** | Search: Potassium

**Search results for Potassium**

Stedman's Medical Dictionary Definition

**Filter Results**

- Drug Monitoring Checker (5 Results) - Monitoring profile
- All Publications (1175 Results)
- Aglio: Diagnosis and Treatment Guidance (54 Results)
- AHFS Drug Information (346 Results)
- ASHP Injectable Drug Information (199 Results)

**Dosage** [Expand]

Results 1 - 5 of 5, sorted with best match first. 'Potassium' is associated with 'potassium compounds'.

- Potassium** Monitoring profile
- Magnesium** Monitoring profile
- Electrolytes** Monitoring profile
- Renal panel** Monitoring profile
- Bicarbonate** Monitoring profile



**Medicines Complete** Potassium

Drug Monitoring Checker Highlight search

| Subsections            | Related Content |
|------------------------|-----------------|
| Synonyms               |                 |
| Related Parameters     |                 |
| Definition             |                 |
| Purpose                |                 |
| Reference range        |                 |
| <b>Interpretation</b>  |                 |
| Requirements           |                 |
| Additional Information |                 |
| References             |                 |

### Hyperkalaemia

Hyperkalaemia is defined as serum potassium  $\geq 5.5$  mmol/L

- mild: serum potassium 5.5–5.9 mmol/L
- moderate: serum potassium 6.0–6.4 mmol/L
- severe: serum potassium  $\geq 6.5$  mmol/L

The main causes of hyperkalaemia are:

- AKI or CKD
- drugs (e.g. ACE inhibitors, ARBs, NSAIDs)
- tissue breakdown
- metabolic acidosis
- endocrine disorders
- diet

A few days later, Martha is well enough to go home. Whilst Helen is reviewing Martha's discharge notes, she notices there is no documentation regarding ongoing monitoring. Referring to Drug Monitoring Checker guidance, it states that ramipril requires renal panel and electrolytes to be monitored every 12 months and blood pressure to be monitored every 6 to 12 months. Helen adds this to the discharge notes for the GP to organise.



## Drug Monitoring Checker

Authored in collaboration with external experts, Drug Monitoring Checker provides clear, concise, and actionable advice before, during and after treatment. An essential tool to help health professionals save time and make effective drug monitoring decisions at the point of care.

### Access this essential knowledge today

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