## Angiotensin-Converting Enzyme (ACE) Inhibitors for Hypertension

### Generic & Class
- **ACE INHIBITORS**

### Brand & Company
- **Lotensin** (Novartis)
- **Capoten** (Par)
- **Vasotec** (Valeant)
- **Zestril** (AstraZeneca)
- **Univasc** (UCB)
- **Aceon** (Abbott)
- **Accupril** (Pfizer)
- **Altace** (King)

### Strength
- **Benazepril HCl**
  - 5mg, 10mg, 20mg, 40mg
- **Captopril**
  - 12.5mg, 25mg, 50mg, 100mg
- **Enalapril maleate**
  - 2.5mg+, 5mg+, 10mg+, 20mg+
- **Fosinopril sodium**
  - 10mg+, 20mg, 40mg
- **Lisinopril**
  - 5mg+, 10mg, 20mg
- **Moxipril**
  - 7.5mg, 15mg
- **Perindopril**
  - 2mg, 4mg, 8mg
- **Quinapril HCl**
  - 5mg+, 10mg, 20mg, 40mg
- **Ramipril**
  - 1.25mg, 2.5mg, 5mg, 10mg

### Formulations
- **Tabs**
- **Scored tabs**
- **Gel caps**

### Usual Dose
- **Adults**: If not on diuretic: initially 10mg daily. Usual maintenance: 20–40mg daily in 1 or 2 divided doses; usual max 80mg/day. If on diuretic: discontinue diuretic, if possible, 2–3 days before starting; resume diuretic if pressure not controlled with benazepril alone. If diuretic cannot be discontinued: initially 5mg daily. Creatinine clearance <30mL/min/1.73m²: initially 5mg/day; max 40mg/day.
  - **Children**: >6yrs: Initially 0.2mg/kg daily; usual max 0.6mg/kg/day (or 40mg/day).

- **Captopril**: Take 1 hr before meals. Initially 25mg 2–3 times daily. After 1–2 wks may increase to 50mg 2–3 times daily. If control unsatisfactory, see literature. Titrate to usual dose after several days. Monitor closely for 1st 2 wks and if dose increased: max 450mg/day. Renal impairment: see literature.

- **Enalapril maleate**: Adults: If on diuretics or CrCl <30mL/min: suspend diuretic for 2–3 days before starting if possible; resume diuretic if pressure not controlled with fosinopril alone. If diuretic cannot be discontinued: give 10mg and monitor carefully.
  - **Children**: Not recommended.

- **Fosinopril sodium**: Adults: Initially 10mg once daily. Usual maintenance: 20–40mg daily in single or 2 divided doses; max 80mg/day. If on diuretic: suspend diuretic for 2–3 days before starting if possible; resume diuretic if pressure not controlled with fosinopril alone. If diuretic cannot be discontinued: give 10mg and monitor carefully.
  - **Children**: <6yrs (≤50kg): not recommended. >6yrs (>50kg): 5–10mg once daily.

- **Lisinopril**: Adults: Initially and if not on diuretics: 10mg once daily. Usual range: 20–40mg once daily. If on diuretic: suspend diuretic for 2–3 days before starting if possible; resume diuretic if pressure not controlled with lisinopril alone. If diuretic cannot be discontinued: give 10mg and monitor carefully.
  - **Children**: <6yrs or CrCl <30mL/min/1.73m²: not recommended. ≥6yrs: initially 0.07mg/kg (max 5mg) once daily; usual max 0.61mg/kg (40mg) once daily.

- **Moxipril**: Adults: Take 1 hr before meals. Initially and if not on diuretics: 7.5mg once daily; usual range 7.5–30mg/day in 1–2 divided doses; max 30mg/day. If on diuretic: suspend diuretic for 2–3 days before starting if possible; resume diuretic if pressure not controlled by moxipril alone. If diuretic cannot be discontinued: initially 3.75mg once daily. CrCl <40mL/min per 1.73m²: initially 3.75mg once daily; max 15mg/day.
  - **Children**: Not recommended.

- **Perindopril**: Adults: If not on diuretic: initially 4mg once daily. Titrate: max 16mg/day. Usual maintenance 4–8mg as a single daily dose or in two divided doses. If on diuretic: consider reducing diuretic dose prior to starting therapy. Renal impairment: CrCl <30mL/min: not recommended; CrCl >30mL/min: initially 2mg/day: max 8mg/day.
  - **Children**: Not recommended.

- **Quinapril HCl**: Adults: Monotherapy: initially 10–20mg once daily. Usual maintenance: 20–80mg daily in 1–2 divided doses. Elderly: initially 10mg once daily. Patients on diuretic: suspend diuretic for 2–3 days before starting; resume diuretic if BP not controlled by quinapril alone. If diuretic cannot be discontinued, or if creatinine clearance (CrCl) 30–60mL/min: initially 5mg daily. CrCl 10–30mL/min: initially 2.5mg daily. CrCl <10mL/min: not recommended.
  - **Children**: Not recommended.

- **Ramipril**: Adults: Swallow whole. Hypertension: initially 2.5mg once daily; maintenance: 2.5–20mg daily in single or 2 divided doses. May add a diuretic if BP is not controlled. Cardiovascular risk reduction: initially 2.5mg once daily for 1 week, then 5mg once daily for 3 weeks; maintenance 10mg once daily or in 2 divided doses. For both: (CrCl <40mL/min): 1.25mg once daily; max 5mg/day.
  - **Children**: Not recommended.
<table>
<thead>
<tr>
<th>ACE INHIBITORS (continued)</th>
<th>Brand &amp; Company</th>
<th>Strength</th>
<th>Formulations</th>
<th>Usual Dose</th>
<th>Children</th>
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<tbody>
<tr>
<td><strong>trandolapril</strong></td>
<td>Mavik (Abbott)</td>
<td>1mg+, 2mg, 4mg</td>
<td>tabs</td>
<td><strong>Adults:</strong> If not on diuretic: initially 1mg once daily in non-black patients; 2mg in black patients. If on diuretic: suspend diuretic for 2–3 days before starting therapy; resume diuretic if BP not controlled with trandolapril alone. If diuretic cannot be discontinued (supervise closely until stabilized), or in renal impairment (CrCl ≤30mL/min) or hepatic cirrhosis: initially 0.5mg once daily. For all: adjust at 1-week intervals; usual range 2–4mg once daily; usual max 8mg/day; may give in 2 divided doses. <strong>Children:</strong> not recommended.</td>
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<tr>
<td><strong>CALCIUM CHANNEL BLOCKER + ACE INHIBITOR</strong></td>
<td>Amlodipine (as besylate)/benazepril HCl</td>
<td>2.5mg/10mg, 5mg/10mg, 5mg/20mg, 10mg/20mg, 10mg/40mg</td>
<td>caps</td>
<td><strong>Adults:</strong> Not for initial therapy. Titrate components (amlodipine or another dihydropyridine calcium channel blocker, or benazepril or another ACEI). CrCl ≤30mL/min per 1.73m²: not recommended. Hepatic impairment, or small, elderly, or frail patients: initially 2.5mg/10mg strength. <strong>Children:</strong> not recommended.</td>
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<td><strong>trandolapril/verapamil HCl (ext-rel)</strong></td>
<td>Tarka (Abbott)</td>
<td>1mg/240mg, 2mg/180mg, 2mg/240mg, 4mg/240mg</td>
<td>tabs</td>
<td>≥18yrs: Not for initial therapy. Titrate individual components. Take with food. 1 tab daily. <strong>&lt;18yrs:</strong> not recommended.</td>
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<td><strong>ACE INHIBITOR + DIURETIC</strong></td>
<td>Benazepril HCl/hydrochlorothiazide</td>
<td>5mg/6.25mg, 10mg/12.5mg, 20mg/12.5mg, 20mg/25mg</td>
<td>scored tabs</td>
<td><strong>Adults:</strong> To switch from benazepril monotherapy; see literature. Or, titrate individual components. Usual max 20mg/25mg. <strong>Children:</strong> not recommended.</td>
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<td></td>
<td>Captopril/hydrochlorothiazide</td>
<td>25mg/15mg, 25mg/25mg, 50mg/15mg, 50mg/25mg</td>
<td>scored tabs</td>
<td><strong>Adults:</strong> Take 1 hr before meals. As initial therapy; one 25/15 tab daily; adjust at 6 wk intervals. Previously titrated: use same doses as individual components. Usual max 150mg captopril, 50mg hydrochlorothiazide daily. <strong>Children:</strong> see literature.</td>
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<td>Enalapril maleate/hydrochlorothiazide</td>
<td>10mg/25mg</td>
<td>tabs</td>
<td><strong>Adults:</strong> Switching from monotherapy with either component; start with Vaseretic 10/25 once daily, then adjust; max 20mg enalapril/day and 50mg HCTZ/day. Allow 2–3 weeks for titration of HCTZ component. Or, substitute for individually titrated components. <strong>Children:</strong> not recommended.</td>
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<td></td>
<td>Fosinopril/hydrochlorothiazide</td>
<td>10mg/12.5mg, 20mg/12.5mg+</td>
<td>tabs</td>
<td><strong>Adults:</strong> Not for initial therapy. Give once daily. Usual range: fosinopril: 10–20mg; HCTZ: 12.5–50mg. Severe renal impairment (CrCl&lt;30mL/min): not recommended. <strong>Children:</strong> not recommended.</td>
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<td>Lisinopril/hydrochlorothiazide</td>
<td>10mg/12.5mg, 20mg/12.5mg</td>
<td>tabs</td>
<td><strong>Adults:</strong> Not for initial therapy. Usual maintenance: 1–2 tabs of 20-12.5 or 20-25 once daily, or 1 tab of 10-12.5 once daily. <strong>Children:</strong> not recommended.</td>
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<td>Moexipril/hydrochlorothiazide</td>
<td>7.5mg/12.5mg, 15mg/12.5mg, 15mg/25mg</td>
<td>scored tabs</td>
<td><strong>Adults:</strong> Not for initial therapy. Take 1 hour before a meal. Switching from monotherapy with either component: 1 tab once daily; adjust at 2–3 week intervals; usual max 30mg/50mg per day. Or, substitute for individually-titrated components. <strong>Children:</strong> not recommended.</td>
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<td></td>
<td>Quinapril HCl/hydrochlorothiazide</td>
<td>10mg/12.5mg+, 20mg/12.5mg+, 20mg/25mg</td>
<td>tabs</td>
<td><strong>Adults:</strong> Not for initial therapy. Previously titrated: use same doses as individual components. Switching from quinapril monotherapy: initially one Accuretic 10/12.5 tab or one Accuretic 20/12.5 tab once daily; allow 2–3 weeks before increasing hydrochlorothiazide component. Switching from hydrochlorothiazide 25mg/day monotherapy: initially one Accuretic 10/12.5 tab daily or one Accuretic 20/12.5 tab once daily. Adjust based on response and serum potassium. Renal impairment (CrCl ≤30mL/min): not recommended. <strong>Children:</strong> not recommended.</td>
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**NOTES**

± = scored

| (Rev. 2/2013) |