# Moxonidine

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| **Background Information** | Moxonidine can be used for mild to moderate essential or primary hypertension. |
| **BNF therapeutic class** | Centrally acting antihypertensive drugs |
| **Indication** | Treatment of mild to moderate essential hypertension |
| **Dosage and administration** | Adults<br>Treatment must be started with the lowest dosage of Moxonidine.<br><br>This means a daily dose of 200micrograms in the morning.<br><br>If the therapeutic effect is insufficient, the dose can be increased after three weeks to 400micrograms given as a single dose (to be taken in the morning) or as a divided daily dose (morning and evening).<br><br>If the results are still insufficient after a further three weeks, the dosage can be increased further to a maximum of 600micrograms given in divided doses (in the morning and evening).<br><br>A single dose of 400micrograms and a total daily dose of 600micrograms (in divided doses) should not be exceeded.<br><br>In patients with moderate renal dysfunction (GFR above 30 ml/min, but below 60 ml/min), the single dose should not exceed 200micrograms and the daily dose should not exceed 400micrograms of moxonidine.<br><br>As concomitant ingestion of food does not affect the pharmacokinetics of moxonidine, Moxonidine can be taken before, during or after meals. The tablets should be taken with sufficient fluid.<br><br>Elderly<br>Provided that renal function is not impaired, dosage recommendation is the same as for adults<br><br>Children & adolescents under 16 years of age<br>Moxonidine should not be given to children and adolescents under 18 years of age as insufficient therapeutic data are available for this. |
| **Cautions and Contraindications** | **Cautions**<br>Caution should be exercised in patients with severe coronary artery disease; unstable angina; first-degree AV block and moderate heart failure.<br><br>Caution is also advised in the administration of moxonidine to patients with renal impairment as moxonidine is excreted primarily via the kidneys<br><br>Extreme caution is advised when moxonidine is given to patients with severe cerebrovascular insufficiency, recent myocardial infarction or peripheral circulatory disorders.<br><br>**Contraindications**<br>- hypersensitivity to moxonidine or to any of the excipients |

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| | - sick sinus syndrome or sino-atrial block<br>- bradycardia (below 50 beats/minute at rest)<br>- severely impaired renal function (GFR < 30 ml/min, serum creatinine concentration > 160 µmol/l)<br>- history of angioneurotic oedema<br>- 2nd or 3rd degree atrioventricular block<br>- malignant arrhythmia<br>- heart failure<br>- severe coronary artery disease or unstable angina pectoris<br><br>Moxonidine should not be used because of lack of therapeutic experience in cases of:<br>- intermittent claudication<br>- Raynaud's disease<br>- Parkinson's disease<br>- epileptic disorders<br>- glaucoma<br>- depression<br><br>Patients with rare hereditary problems of galactose intolerance, Lapp lactase deficiency or glucose-galactose malabsorption should not take this medicine.<br><br><u>Pregnancy</u><br>There is no adequate data for the use of moxonidine in pregnant women. Studies in animals have shown reproductive toxicity at high dosages. The potential risk for humans is unknown. Moxonidine should not be used during pregnancy unless clearly necessary.<br><br><u>Lactation</u><br>Moxonidine is excreted in the breast milk. Therefore, moxonidine should not be used while breast feeding. If therapy with moxonidine is clearly necessary, breast feeding should be stopped.<br><br><u>Effects on ability to drive and use machines</u><br>No studies on the effects on the ability to drive and use machines have been performed. Somnolence and dizziness have been reported. This should be borne in mind when performing these tasks.<br><br><u>Renal Impairment</u><br>In patients with moderately impaired renal function, the hypotensive effect of Moxonidine should be monitored closely, in particular during the beginning of treatment; in these patients a careful dose titration is necessary. Dosing should be initiated with 200 micrograms daily and can be increased to a maximum of 400 micrograms daily for patients with moderate renal impairment (GFR above 30 ml/min, but below 60 ml/min), if clinically indicated and well tolerated. Contraindicated if less than 30 ml/min.<br><br><u>Withdrawal</u><br>No rebound effect of blood pressure has been observed to date after the discontinuation of treatment with moxonidine. However, it is advisable not to stop taking moxonidine abruptly, but withdrawing it gradually over a period of two weeks. If moxonidine is used in combination with a β-blocker, in case of discontinuing treatment the β-blocker should be stopped first and monoxide not until a few days afterwards to avoid an increased blood pressure counter regulation. |
| **Adverse Drug Reactions** | <u>Common or very common</u><br>drowsiness, headache, dizziness, somnolence, dry mouth, altered thought processes, sleep disturbances, nausea, constipation and other gastrointestinal disorders, asthenia, vasodilation. |

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| | Uncommon<br>depression, anxiety, sedation, oedema of different location, leg weak-ness, angioedema, syncope, fluid retention, anorexia, parotid pain, urinary retention or incontinence, allergic skin reactions, dry itching or burning sensation of the eye, hypotension, orthostatic hypotension, paraesthesia of extremities, Raynaud's syndrome, peripheral circulation disorders, gynaecomasty, impotence and loss of libido.<br><br>Rare<br>hepatic reactions (hepatitis, cholestasis) |
| **Monitoring** | In patients with moderately impaired renal function, the hypotensive effect of Moxonidine should be monitored closely, in particular during the beginning of treatment; in these patients a careful dose titration is necessary. |
| **Interactions** | Concurrent administration of other antihypertensive agents enhances the hypotensive effect of moxonidine.<br><br>Since tricyclic antidepressants may reduce the effectiveness of centrally acting antihypertensive agents, it is not recommended that tricyclic antidepressants be co-administered with moxonidine.<br><br>Moxonidine can potentiate the sedative effect of tricyclic anti-depressants (avoid co-prescribing), tranquillisers, alcohol, sedatives and hypnotics.<br><br>Moxonidine moderately augmented the impaired performance in cognitive functions in subjects receiving lorazepam. Moxonidine may enhance the sedative effect of benzodiazepines when administered concomitantly.<br><br>Moxonidine is excreted through tubular excretion. Interaction with other agents that are excreted through tubular excretion cannot be excluded. |

## Contact names and details

| Contact Name | Telephone number | Email |
|---|---|---|
| Dr Naeem Tahir<br>Consultant Cardiologist | 01226 730000 | **naeem.tahir@nhs.net** |
| Dr Abdul Qadeer Negahban<br>Consultant Cardiologist | 01226 730000 | **a.negahban@nhs.net** |
| Dr Zamvar Deoraj<br>Consultant Cardiologist | 01226 730000 | **deoraj.zamvar@nhs.net** |
| Dr David Robson<br>Consultant Cardiologist | 01226 730000 | **d.robson1@nhs.net** |
| Specialist Cardiac nurses<br>Apollo Court Medical Practice | 01226 209881 | |
| Gillian Turrell<br>Medicines Information Pharmacist | 01226 432857 | **gilliansmith2@nhs.net** |

## References


- BNF Online Moxonidine monograph - https://bnf.nice.org.uk/drug/moxonidine.html Accessed 20/10/2020
- Physiotens Tablets 200 micrograms (Moxonidine) Summary of Product Characteristics. 1 Novemeber 2016. Available at: https://www.medicines.org.uk/emc/product/4140/smpc Accessed: 20/10/2020

***Amber with Guidance****= To be initiated and titrated to a stable dose in secondary care with follow up prescribing and monitoring by primary care where deemed appropriate.*

## ***Development Process***

*This guideline was developed following an AMBER-G (Amber with guidance) classification status of moxonidine for the treatment of severe hypertension by the Barnsley Area Prescribing Committee. This information has been subject to consultation and endorsement by the Area Prescribing Committee on 16th December 2020.*

*This guideline was reviewed and updated in October 2020.*