Contraindications
Do not take Physiotens if you suffer from any of the following conditions:
• allergy (hypersensitivity) to the active ingredient (moxonidine) or to any of the excipients (see section “Excipients” above)
• sick sinus syndrome (heart arrhythmia due to sinus node disease)
• bradycardia (resting heart rate below 50 beats per minute).
• 2nd or 3rd degree AV-block (a heart arrhythmia which slows the heart rate and may make the heart muscle less efficient)
• cardiac insufficiency (a weak heart muscle)

Warnings and special precautions for use
If you have been diagnosed with 1st degree AV block, your doctor will monitor you closely and/or take special precautions while you are on Physiotens to help prevent the development of an excessively slow heart rate (bradycardia).
Your doctor will exercise caution before prescribing Physiotens to you if you suffer from a serious heart vessel disease (coronary artery disease) or unstable chest pain (angina pectoris) because there is only limited experience with Physiotens in people with these conditions. Under these circumstances, you will only receive this medicine if it is deemed absolutely necessary.
Your doctor will also be cautious with the dosage of Physiotens if you suffer from kidney disease, because the active ingredient (moxonidine) is primarily excreted from your body by the kidneys. In general, you will be started on 0.2 mg moxonidine daily and the dose will only be increased (to a maximum of 0.4 mg daily) if it is well tolerated and necessary.
If you are taking a β-blocker concurrently with Physiotens and your doctor decides to discontinue both treatments, the β-blocker will be stopped first and Physiotens only a few days thereafter.

Indications
Physiotens is indicated for the treatment of high blood pressure (hypertension).

Dosage and administration
Always take Physiotens exactly as your doctor has prescribed. If you have any questions, talk to your doctor or pharmacist before taking the medicine. If you forget to take your tablet(s), do not take a double dose to compensate for it.

The standard starting dose of Physiotens is 0.2 mg daily. The maximum daily dose is 0.6 mg, which should be taken as two divided doses. You should never take more than 0.4 mg at a time. The dose and frequency of your prescription may be adjusted by your doctor according to your response to the treatment.

Physiotens can be taken with or without food.
If you suffer from moderate to severe kidney disease (renal impairment) or are undergoing haemodialysis (mechanical cleaning of the blood) you will be prescribed a starting dose of 0.2 mg daily. If necessary and well tolerated your doctor may then increase your daily dose to 0.4 mg.

Due to lack of data on safety and efficacy, Physiotens is not recommended for use in children or adolescents under the age of 18 years.
Even though there is no evidence that stopping Physiotens therapy abruptly causes any secondary effects on blood pressure, it is advisable to do so. Therefore, if your therapy is to be stopped, you will be told how to do so gradually, over a two week period. This product contains lactose. If you suffer from an intolerance to galactose (e.g. Lapp lactase deficiency or glucose-galactose malabsorption) you should not take this medicine.

**Interactions with other medications**

Please tell your doctor or pharmacist if you are taking or have recently taken any other medicines including medicines obtained without a prescription and herbal preparations.

Medicines including other blood pressure medicines, antidepressants, sedatives and tranquilizers, as well as alcohol, can interact with moxonidine. Be sure to tell your doctor if you are taking any of these drugs. Do not drink alcohol while taking Physiotens.

When moxonidine is used together with other medicines that reduce blood pressure (other antihypertensive agents) the medicines do not interact with each other to produce any decrease in blood pressure beyond that of each individual medicine (produces an additive effect).

Tricyclic antidepressants (e.g.: Amitriptyline) may reduce the effectiveness of Physiotens (as well as other centrally acting antihypertensive agents. It is not recommended that these medicines be taken together.

Moxonidine can increase the effect of tricyclic antidepressants, tranquilizers, alcohol, sedatives and hypnotics. These medicines should not be prescribed together with moxonidine.

Moxonidine moderately worsened the impaired performance in cognitive functions (e.g. concentration, memory function in subjects receiving lorazepam. Moxonidine may increase the sedative effect of benzodiazepines (e.g. Valium) when they are taken together.

Moxonidine is excreted through tubular excretion (via the kidneys). Therefore, it is possible that other medicines that are excreted the same way may interact with moxonidine.

**Pregnancy and lactation**

Please tell your doctor or pharmacist if you are taking or have recently taken any other medicines including medicines obtained without a prescription.

**Pregnancy:**

No studies on pregnant women have been performed; therefore no specific data concerning this population group has been collected. However, studies in animals have shown toxic effects to the fetus (embryo-toxicological effects). Although the potential risk for humans is unknown, you should not take Physiotens if you are pregnant unless your doctor has decided it is absolutely necessary.

**Lactation:**

Moxonidine is secreted in breast milk and should therefore not be taken during breast feeding. If your doctor has decided Physiotens therapy is absolutely necessary, you must stop breast feeding your infant.

**Effects on ability to drive and use machines**

No studies on the effects of Physiotens on the ability to drive and/or use machinery have been performed. However, since sleepiness and dizziness have been reported as possible side effects, you should know how this medicine affects you before you perform these tasks.

**Undesirable effects**

Like all medicines, Physiotens may cause side effects. If you notice any side effects not mentioned in this leaflet, or if any of the side effects get serious, inform your doctor or pharmacist immediately.

The most frequent side effects reported by patients taking Physiotens include dry mouth, dizziness, general weakness (asthenia) and sleepiness. These symptoms often decrease after the first few weeks of treatment.

**Undesirable effects by System Organ Class**

(as observed during placebo-controlled clinical trials including 886 patients who were given moxonidine):

The frequencies of study related side effects are ranked according to the following: very common (more than 10 cases in 100 treated patients), common (between 1 and 10 cases in 100 treated patients), uncommon (less than one case in 100 treated patients)
Cardiac disorders:
Uncommon: Slow heart rate (bradycardia)

*Ear and labyrinth disorders:*
Uncommon: Ringing in the ears (tinnitus)

Nervous system disorders:
Common: Headache* (see below), dizziness/vertigo, sleepiness
Uncommon: Fainting (syncope)* (see below)

Vascular disorders
Uncommon: Low blood pressure (hypotension, including orthostatic hypotension*, see below),

Gastrointestinal disorders
Very Common: Dry mouth
Common: Diarrhoea, nausea/vomiting, dyspepsia

Skin and subcutaneous tissue disorders
Common: Rash, itchiness (pruritus)
Uncommon: Sudden swelling of the face, neck or extremities (angioedema)

General disorders and administration site reactions:
Common: Generalized weakness (asthenia)
Uncommon: Generalized limb/body swelling (oedema)

Musculoskeletal and connective tissue disorders
Common: Back pain
Uncommon: Neck pain

Psychiatric disorders
Common: Insomnia
Uncommon: Nervousness

* there was no increase in frequency compared to placebo

Overdose
If you have (or think you have) taken too much Physiotens, call your doctor immediately, or go to the hospital.

Symptoms of overdose
Very few cases of overdose have been reported. However, in one such report, a dose of 19.6 mg was ingested all at once without fatality. Signs and symptoms reported included: Headache, sedation, sleepiness, low blood pressure (hypotension), dizziness, general weakness (asthenia), slow resting heart rate (bradycardia), dry mouth, vomiting, fatigue and stomach (upper abdominal) pain.

In addition, based on a few high dose studies in animals, temporary high blood pressure (hypertension), elevated heart rate (tachycardia), and/or elevated blood sugar (hyperglycaemia) may also occur.

Information for the doctor:
In case of a severe overdose close monitoring of consciousness disturbances and respiratory depression is recommended.

Treatment of overdose
No specific antidote is known.

Information for the doctor:
In case of hypotension, circulatory support with fluids and dopamine administration may be necessary. Bradycardia may be treated with atropine. α-Receptor antagonists may diminish or abolish the paradoxical hypertensive effects of a moxonidine overdose.

Pharmacodynamics
Pharmacotherapeutic group: Imidazoline receptor agonists, moxonidine.

The following is a detailed description of how the active ingredient (moxonidine) of Physiotens works. For clarifications or further information please consult your doctor.

In different animal models, moxonidine has been shown to be a potent antihypertensive agent. Available experimental data suggests that the site of the antihypertensive action of moxonidine is the central nervous system (CNS). Within the brainstem, moxonidine has been shown to selectively stimulate imidazoline receptors. These imidazoline-sensitive receptors are concentrated in the rostral ventrolateral medulla, an area critical to the central control of the peripheral sympathetic nervous system. Stimulation of the imidazoline receptors appears to reduce sympathetic activity and lower blood pressure.

Moxonidine distinguishes itself from other sympatholytic antihypertensives by exhibiting only low affinity for known α2-adrenoceptors, as compared to imidazoline receptors. This low affinity to α2-adrenoceptors may account for a low incidence of sedation and dry mouth with moxonidine.
In humans, moxonidine leads to a reduction of systemic vascular resistance and consequently arterial blood pressure. The antihypertensive effect of moxonidine has been demonstrated in double-blind, placebo controlled, randomized studies. In a therapeutic trial of two months’ duration, moxonidine improved the insulin sensitivity index by 21% in comparison to placebo in obese and insulin resistant patients with moderate hypertension.

**Pharmacokinetics**
The following is a detailed description of how the active ingredient (moxonidine) of Physiotens is processed by your body. For clarifications or further information please consult your doctor.

**Absorption:**
After oral administration of Physiotens, the moxonidine component is rapidly (time to maximum plasma concentration is approximately 1 h) and almost completely absorbed from the upper gastrointestinal tract. The absolute bioavailability is about 88%, indicating no significant first-pass metabolism. Food intake has no influence on the pharmacokinetics of moxonidine.

**Distribution:**
Plasma protein binding, as determined in vitro, was about 7.2%.

**Biotransformation:**
In pooled human plasma samples, only dehydrogenated moxonidine was identified. The pharmacodynamic activity of dehydrogenated moxonidine is about 1/10th that of parent moxonidine.

**Elimination:**
Over a 24-hour period, 78% of the total dose was excreted in urine as parent moxonidine and 13% of the dose was excreted as dehydrogenated moxonidine. Other minor metabolites in urine accounted for approximately 8% of the dose. Less than 1% is eliminated via the faeces. The elimination half lives of moxonidine and its metabolite are approximately 2.5 h and 5 h, respectively.

Pharmacokinetics in hypertensive patients:
In hypertensive patients, no relevant pharmacokinetic changes were observed compared to healthy volunteers.

Pharmacokinetics in the elderly:
Age-related changes in pharmacokinetics have been observed and are most likely due to a reduced metabolic activity and/or slightly higher bioavailability in the elderly. However, these pharmacokinetic differences are not considered to be clinically relevant.

Pharmacokinetics in children:
As Physiotens is not recommended for use in children, no pharmacokinetic studies have been performed in this subpopulation.

Pharmacokinetics in renal impairment:
Elimination of moxonidine is significantly correlated with creatinine clearance. In patients with moderate renal impairment (GFR 30-60 ml/min) steady-state plasma concentrations and terminal half-life are approximately 2 fold and 1.5 fold higher, respectively, compared to hypertensive patients with normal renal function (GFR >90 ml/min). In patients with severe renal impairment (GFR <30 ml/min) steady-state plasma concentrations and terminal half-life are approximately 3-fold higher.

No unexpected drug accumulation after multiple dosing was observed in these patients. In end-stage renal patients (GFR <10 ml/min) undergoing haemodialysis the AUC and terminal half-lives are 6 fold and 4 fold higher, respectively, compared to hypertensive patients with normal renal function. In patients with renal impairment the dosage and frequency of dosage should be adjusted according to the individual’s requirements.

Moxonidine is eliminated to a small extent by haemodialysis.

**Incompatibilities**
Not applicable.

**Shelf life and storage conditions**
3 years
Do not store above 30°C
Store in the original package.
Do not use the medicine after the expiry date stated on the carton.
Keep this medicine out of the reach and sight of children.
Pack sizes
Physiotens comes in packages containing 7, 10, 14, 20, 28, 30, 50, 56, 60, 84, 90, 96, 98, 100, 280, 400, 500 or 600 film-coated tablets (not all pack sizes may be marketed).
The blister packs (bubble cards) are made of PVC/PVDC/Al.

Further information
Any unused product or waste material should be disposed of in accordance with local requirements.
The information in this leaflet is limited. For further information, please contact your doctor or pharmacist.

Date of information
January 2010

Manufactured by:
Rottendorf Pharma GmbH, Germany

Released by:
Abbott Healthcare SAS 01400 Châtillon-sur-Chalaronne, France For: Abbott Products GmbH, Germany