Adverse events should be reported. Reporting forms and information can be found at https://yellowcard.mhra.gov.uk/

Adverse events should also be reported to McNeil Products Limited on 00800 555 22000

Product Name (click hyperlink to go to product)	**PL Number**	**Legal Category**	**RRP (ex-VAT)**
Sudafed Decongestant Liquid	PL 15513/0023	P	100 ml, £3.99
Sudafed Decongestant Tablets	PL 15513/0024	P	12's £4.38
Sudafed Blocked Nose & Sinus Capsules	PL 12063/0067	GSL	16's £4.79
Sudafed Sinus Max Strength Capsules, Hard			16's £4.58
Sudafed Congestion & Headache Relief Max Strength Capsules, Hard			16's £4.58
Sudafed Sinus Pressure & Pain 200mg/30mg film-coated tablets	PL 15513/0396	P	12's £4.71
			24's £7.24
Sudafed Mucus Relief Triple Action Cold & Flu Tablets	PL 12063/0112	GSL	16's £4.83
			16's £4.66
Sudafed Congestion & Headache Relief Day and Night Capsules, hard	PL 12063/0073	GSL	16's £4.83
Sudafed Blocked Nose Spray	PL 15513/0074	GSL	15ml £5.41
Sudafed Sinus-Ease 0.1% Nasal Spray			15ml £5.41
Sudafed Plus Blocked Nose 1mg/50mg/ml Nasal Spray Solution	PL 15513/0407	GSL	10ml £6.66

SUMMARY OF PRODUCT CHARACTERISTICS

1. NAME OF THE MEDICINAL PRODUCT

Sudafed Decongestant Liquid

2. QUALITATIVE AND QUANTITATIVE COMPOSITION

This product contains:

Pseudoephedrine Hydrochloride 30.0 mg per 5 ml

Excipients with known effects:
Sucrose
Methyl Hydroxybenzoate (E218)
Ponceau 4R (E124)

For the full list of excipients, see section 6.1.

3. PHARMACEUTICAL FORM

Liquid for oral administration.

4 CLINICAL PARTICULARS

4.1 Therapeutic indications

For the relief of nasal congestion and congestion of mucous membranes of the upper respiratory tract associated with the common cold.

4.2 Posology and method of administration

Posology
Adults and Children aged 12 years and over:
10 ml elixir every 4-6 hours up to 4 times a day.

Children 6 - 12 years
5 ml elixir every 4-6 hours up to 4 times a day. Not to be used for more than five days without the advice of a doctor. Parents or carers should seek medical attention if the child's condition deteriorates during treatment.

This product may be diluted 1:1 (1 in 2) or 1:3 (1 in 4) with syrup BP. These dilutions are stable for 4 weeks if stored at 25°C.

Children under 6 years
This product is contraindicated in children under the age of 6 years (see section 4.3).

Use in the Elderly
There have been no specific studies of this product in the elderly, experience has indicated that normal adult dosage is appropriate.

Hepatic Dysfunction
Caution should be exercised when administering this product to patients with severe hepatic impairment.

Renal Dysfunction
Caution should be exercised when administering this product to patients with moderate renal impairment.

Do not exceed the stated dose.

Method of Administration
For oral use

4.3 Contraindications

This product is contraindicated in individuals with known hypersensitivity to pseudoephedrine or to any of the excipients listed in section 6.1.

Concomitant use of other sympathomimetic decongestants, beta-blockers (see section 4.5) or monoamine oxidase inhibitors (MAOIs), or within 14 days of stopping MAOI treatment (see section 4.5). The concomitant use of MAOIs may cause a rise in blood pressure and/or hypertensive crisis (see section 4.5).

Cardiovascular disease including hypertension
Diabetes mellitus
Phaeochromocytoma
Hyperthyroidism
Closed angle glaucoma
Severe acute or chronic kidney disease/renal failure

Not to be used in children under the age of 6 years.

4.4 Special warnings and precautions for use

Patients with difficulty in urination and/or enlargement of the prostate, or patients with thyroid disease who are receiving thyroid hormones should not take pseudoephedrine unless directed by a physician.

Caution should be exercised when using the product in the presence of severe hepatic impairment or moderate to severe renal impairment, and in occlusive vascular disease.

If any of the following occur, this product should be stopped

- Hallucinations
- Restlessness
- Sleep disturbances

Severe Skin reactions: Severe skin reactions such as acute generalized exanthematous pustulosis (AGEP) may occur with pseudoephedrine-containing products. This acute pustular eruption may occur within the first 2 days of treatment, with fever, and numerous, small, mostly non-follicular pustules arising on a widespread oedematous erythema and mainly localized on the skin folds, trunk, and upper extremities. Patients should be carefully monitored. If signs and symptoms such as pyrexia, erythema, or many small pustules are observed, administration of this medicine should be discontinued, and appropriate measures taken if needed.

Ischaemic colitis: some cases of ischaemic colitis have been reported with pseudoephedrine. Pseudoephedrine should be discontinued and medical advice sought if sudden abdominal pain, rectal bleeding or other symptoms of ischaemic colitis develop.

Ischaemic optic neuropathy: Cases of ischaemic optic neuropathy have been reported with pseudoephedrine. Pseudoephedrine should be discontinued if sudden loss of vision or decreased visual acuity such as scotoma occurs.

Posterior reversible encephalopathy syndrome (PRES) and reversible cerebral vasoconstriction syndrome (RCVS)
Cases of PRES and RCVS have been reported with the use of pseudoephedrine-containing products (see section 4.8). The risk is increased in patients with severe or uncontrolled hypertension, or with severe acute or chronic kidney disease/renal failure (see section 4.3).
Pseudoephedrine should be discontinued and immediate medical assistance sought if the following symptoms occur: sudden severe headache or thunderclap headache, nausea, vomiting, confusion, seizures and/or visual disturbances. Most reported cases of PRES and RCVS resolved following discontinuation and appropriate treatment.

Each 5 ml of this medicine contains 3.5 g of sucrose. This should be taken into account in patients with diabetes mellitus. Patients with rare hereditary problems of fructose intolerance, glucose-galactose malabsorption or sucrase-isomaltase insufficiency should not take this medicine.

This medicine contains 5 mg benzoic acid in each 5 ml.

This medicine contains methyl hydroxybenzoate (E218) and therefore may cause allergic reactions (possibly delayed).

This medicine contains Ponceau 4R (E124) and therefore may cause allergic reactions.

This medicine contains 3.73 mg propylene glycol in each 5ml.

This medicine contains less than 1 mmol sodium (23 mg) per 5 ml, that is to say essentially 'sodium-free'.

4.5 Interactions with other medicinal products and other forms of interaction

- MAOIs and/or RIMAs: Pseudoephedrine exerts its vasoconstricting properties by stimulating α -adrenergic receptors and displacing noradrenaline from neuronal storage sites. Since monoamine oxidase inhibitors (MAOIs) impede the metabolism of sympathomimetic amines and increase the store of releasable noradrenaline in adrenergic nerve endings, MAOIs may potentiate the pressor effect of pseudoephedrine. This product should not be used in patients taking monoamine inhibitors or within 14 days of stopping treatment as there is an increased risk of hypertensive crisis.
- Moclobemide: Risk of hypertensive crisis.
- Antihypertensives: Because of its pseudoephedrine content, this product may partially reverse the hypotensive action of antihypertensive drugs which interfere with sympathetic activity including bretylium, betanidine, guanethidine, debrisoquine, methyldopa, adrenergic neurone blockers and beta- blockers.
- Cardiac glycosides: Increased risk of dysrhythmias.
- Ergot alkaloids (ergotamine & methysergide): Increased risk of ergotism.
- Appetite suppressants and amphetamine-like psychostimulants: Risk of hypertension.
- Oxytocin – Risk of hypertension.
- Anticholinergic drugs: Enhances effects of anticholinergic drugs (such as Tricyclic antidepressants).
- Anaesthetic agents: Concurrent use with halogenated anaesthetic agents such as chloroform, cyclopropane, halothane, enflurane or isoflurane may provoke or worsen ventricular arrhythmias.

4.6 Fertility, pregnancy and lactation

This product should not be used during pregnancy or lactation unless the potential benefit of treatment to the mother outweighs the possible risks to the developing foetus or breastfeeding infant.

Pregnancy
There are no adequate and well-controlled studies in pregnant women. Systemic administration of pseudoephedrine, up to 50 times the human daily dose in rats and up to 35 times the human daily dosage in rabbits did not produce teratogenic effects.

Breastfeeding
Pseudoephedrine is excreted in breast milk in small amounts, but the effect of this on breast-fed infants is not known. It has been estimated that approximately 0.4 to 0.7% of a single 60 mg dose of pseudoephedrine ingested by a nursing mother will be excreted in the breast milk over 24 hours. Data from a study of lactating mothers taking 60 mg pseudoephedrine every 6 hours suggests that from 2.2 to 6.7% of the maximum daily dose (240 mg) may be available to the infant from a breastfeeding mother.

4.7 Effects on ability to drive and use machines

None known.

4.8 Undesirable effects

Clinical Trial Data

The safety of pseudoephedrine from clinical trial data is based on data from 6 randomised, placebo-controlled single dose clinical trials and 6 randomised, placebo-controlled multiple dose clinical trials for the treatment of nasal congestion with allergic rhinitis or common cold or prevention of sinus symptoms/infection after a natural cold.

Table 1 includes adverse events from clinical trial and post-marketing experience. Adverse events included from clinical trials are those that occurred where greater than one event was reported, and the incidence was greater than placebo and in 1% of patients or more.

Post-marketing Data

Adverse drug reactions (ADRs) identified during post-marketing experience with pseudoephedrine are included in Table 1 below.

The adverse drug reactions are ranked by frequency, using the following convention.

Very common	≥1/10
Common	≥1/100 and <1/10
Uncommon	≥1/1,000 and <1/100
Rare	≥1/10,000 and <1/1,000
Very rare	<1/10,000
Not known	(cannot be estimated from the available data)

Table 1: Adverse Reactions Reported in Clinical Trials and Post-marketing Experience

	Adverse Reactions

System Organ Class	Frequency Category			
	Very Common (≥1/10)	**Common** (≥1/100 to <1/10)	**Rare** ≥1/10,000 to <1/1,000	**Not known**
Immune System Disorders				Hypersensitivity – cross-sensitivity may occur with other sympathomimetics
Psychiatric Disorders		Insomnia Nervousness		Anxiety Euphoric mood Excitability Hallucinations Irritability Paranoid delusions Restlessness Sleep disorder
Nervous System Disorders	Headache	Dizziness		Cerebrovascular accident Paraesthesia Posterior reversible encephalopathy syndrome (PRES) (see section 4.4) Reversible cerebral vasoconstriction syndrome (RCVS) (see section 4.4) Psychomotor hyperactivity Somnolence Tremor
Eye Disorders				Ischaemic optic neuropathy
Cardiac Disorders				Dysrhythmias Myocardial infarction/myocardial ischaemia Palpitations Tachycardia
Vascular Disorders				Hypertension
Gastrointestinal Disorders		Dry mouth Nausea		Ischaemic colitis Vomiting
Skin and Subcutaneous Tissue Disorders				Angioedema Pruritus Rash Severe skin reactions, including acute generalised exanthematous pustulosis (AGEP)

Renal and Urinary Disorders				Dysuria Urinary retention (in men in whom prostatic enlargement could have been an important predisposing factor)

Reporting of suspected adverse reactions

Reporting suspected adverse reactions after authorisation of the medicinal product is important. It allows continued monitoring of the benefit/risk balance of the medicinal product. Healthcare professionals are asked to report any suspected adverse reactions via the Yellow Card Scheme: www.mhra.gov.uk/yellowcard or search for MHRA Yellow Card in the Google Play or Apple App Store.

4.9 Overdose

Symptoms

Overdose may result in:

Hyperglycaemia, hypokalaemia, CNS stimulation, insomnia; irritability, restlessness, anxiety, agitation; confusion, delirium, hallucinations, psychoses, seizures, tremor, intracranial haemorrhage including intracerebral haemorrhage, drowsiness in children, mydriasis, palpitations, tachycardia, reflex bradycardia, supraventricular and ventricular arrhythmias, dysrhythmias, myocardial infarction, hypertension, vomiting, ischaemic bowel infarction, acute renal failure, difficulty in micturition.

Management

Necessary measures should be taken to maintain and support respiration and control convulsions. Catheterisation of the bladder may be necessary. If desired, the elimination of pseudoephedrine can be accelerated by acid diuresis or by dialysis.

5 PHARMACOLOGICAL PROPERTIES

5.1 Pharmacodynamic properties

Sympathomimetics, RO1BA02

Pseudoephedrine has direct and indirect sympathomimetic activity and is an orally effective upper respiratory tract decongestant. Pseudoephedrine is substantially less potent than ephedrine in producing both tachycardia and elevation in systolic blood pressure and considerably less potent in causing stimulation of the central nervous system.

5.2 Pharmacokinetic properties

Pseudoephedrine is rapidly and completely absorbed after oral administration. After an oral dose of 180 mg to man, peak plasma concentrations of 500-900 ng/ml were obtained about 2 hours post dose. The plasma half life was about 5.5 hours and was increased in subjects with alkaline urine and decreased in subjects with acid urine. The only metabolism was n-demethylation which occurred to a small extent. Excretion was mainly via the urine.

5.3 Preclinical safety data

The active ingredient of Sudafed Decongestant Liquid is a well-known constituent of medicinal products and its safety is well documented. The results of pre-clinical studies do not add anything of relevance for therapeutic purposes.

6 PHARMACEUTICAL PARTICULARS

6.1 List of excipients

Citric Acid Monohydrate
Sucrose
Glycerol
Methyl Hydroxybenzoate (E218)
Sodium Benzoate (E211)
Ponceau 4R, (E124)
Flavour, Raspberry Essence No 1NA
(Propylene Glycol E1520, Benzyl
Alcohol, Sodium)
Purified Water

6.2 Incompatibilities

None known

6.3 Shelf life

36 months unopened

6.4 Special precautions for storage

Store below 25°C.
Protect from light.

6.5 Nature and contents of container

100 ml amber glass bottles with a 2 piece or a 3 piece plastic child resistant, tamper evident closure fitted with a polyvinylidene chloride (PVDC) faced wad.
A spoon with a 5ml and 2.5ml measure is supplied with this product.

6.6 Special precautions for disposal

No special requirements for disposal.
Any unused medicinal product or waste material should be disposed of in accordance with local requirements.

7. MARKETING AUTHORISATION HOLDER

McNeil Products Limited
50 – 100 Holmers Farm Way
High Wycombe
Buckinghamshire
HP12 4EG
UK

8. MARKETING AUTHORISATION NUMBER

PL 15513/0023

9. DATE OF FIRST AUTHORISATION/RENEWAL OF THE AUTHORISATION

28 March 1997

10. DATE OF REVISION OF THE TEXT

18 May 2025

SUMMARY OF PRODUCT CHARACTERISTICS

1 NAME OF THE MEDICINAL PRODUCT

Sudafed Decongestant Tablets

2 QUALITATIVE AND QUANTITATIVE COMPOSITION

Pseudoephedrine hydrochloride 60.00 mg.

Excipients with known effects:

Lactose

For full list of excipients, see section 6.1.

3 PHARMACEUTICAL FORM

Film-coated tablets.

Reddish-brown, round, biconvex film-coated tablets, with ‘Sudafed’ on one side.

4 CLINICAL PARTICULARS

4.1 Therapeutic indications

Sudafed Decongestant Tablets is a decongestant of the mucous membranes of the upper respiratory tract, especially the nasal mucosa and sinuses and is indicated for the symptomatic relief of conditions such as allergic rhinitis, vasomotor rhinitis, the common cold and influenza.

4.2 Posology and method of administration

Posology

Adults and Children over 12 years

1 tablet every 4 - 6 hours up to 4 times a day.

Use in the Elderly

There have been no specific studies of Sudafed Decongestant Tablets in the elderly. Experience has indicated that normal adult dosage is appropriate.

Hepatic Dysfunction

Caution should be exercised when administering Sudafed Decongestant Tablets to patients with severe hepatic impairment.

Renal Dysfunction

Caution should be exercised when administering Sudafed Decongestant Tablets to patients with moderate renal impairment.

Method of Administration

For oral use

4.3 Contraindications

Sudafed Decongestant Tablets are contraindicated in individuals with known hypersensitivity to pseudoephedrine or to any of the excipients listed in section 6.1.

Concomitant use of other sympathomimetic decongestants, beta-blockers (see section 4.5) or monoamine oxidase inhibitors (MAOIs), or within 14 days of stopping MAOI treatment (see section 4.5). The concomitant use of MAOIs may cause a rise in blood pressure and/or hypertensive crisis (see section 4.5).

Cardiovascular disease including hypertension

Diabetes mellitus

Phaeochromocytoma

Hyperthyroidism

Closed angle glaucoma

Severe acute or chronic kidney disease/renal failure

4.4 Special warnings and precautions for use

Patients with difficulty in urination and/or enlargement of the prostate, or patients with thyroid disease who are receiving thyroid hormones should not take pseudoephedrine unless directed by a physician.

Caution should be exercised when using the product in the presence of severe hepatic impairment or moderate to severe renal impairment and in occlusive vascular disease.

If any of the following occur, this product should be stopped

• Hallucinations

• Restlessness

• Sleep disturbances

Severe Skin reactions: Severe skin reactions such as acute generalized exanthematous pustulosis (AGEP) may occur with pseudoephedrine-containing products. This acute pustular eruption may occur within the first 2 days of treatment, with fever, and numerous, small, mostly non-follicular pustules arising on a widespread oedematous erythema and mainly localized on the skin folds, trunk, and upper extremities. Patients should be carefully monitored. If signs and symptoms such as pyrexia, erythema, or many small pustules are observed, administration of this medicine should be discontinued, and appropriate measures taken if needed.

Ischaemic colitis: Some cases of ischaemic colitis have been reported with pseudoephedrine. Pseudoephedrine should be discontinued, and medical advice

sought if sudden abdominal pain, rectal bleeding or other symptoms of ischaemic colitis develop.

Ischaemic optic neuropathy: Cases of ischaemic optic neuropathy have been reported with pseudoephedrine. Pseudoephedrine should be discontinued if sudden loss of vision or decreased visual acuity such as scotoma occurs.

Posterior reversible encephalopathy syndrome (PRES) and reversible cerebral vasoconstriction syndrome (RCVS)

Cases of PRES and RCVS have been reported with the use of pseudoephedrine-containing products (see section 4.8). The risk is increased in patients with severe or uncontrolled hypertension, or with severe acute or chronic kidney disease/renal failure (see section 4.3).

Pseudoephedrine should be discontinued and immediate medical assistance sought if the following symptoms occur: sudden severe headache or thunderclap headache, nausea, vomiting, confusion, seizures and/or visual disturbances. Most reported cases of PRES and RCVS resolved following discontinuation and appropriate treatment.

This product contains lactose. Patients with rare hereditary problems of galactose intolerance, total lactase deficiency or glucose-galactose malabsorption should not take this medicine.

4.5 Interaction with other medicinal products and other forms of interaction

- MAOIs and/or RIMAs: Pseudoephedrine exerts its vasoconstricting properties by stimulating α -adrenergic receptors and displacing noradrenaline from neuronal storage sites. Since monoamine oxidase inhibitors (MAOIs) impede the metabolism of sympathomimetic amines and increase the store of releasable noradrenaline in adrenergic nerve endings, MAOIs may potentiate the pressor effect of pseudoephedrine. This product should not be used in patients taking monoamine inhibitors or within 14 days of stopping treatment as there is an increased risk of hypertensive crisis.

- Moclobemide: Risk of hypertensive crisis.

- Antihypertensives: Because of its pseudoephedrine content, this product may partially reverse the hypotensive action of antihypertensive drugs which interfere with sympathetic activity including bretylium, betanidine, guanethedine, debrisoquine, methyldopa, adrenergic neurone blockers and beta-blockers.

- Cardiac glycosides: Increased risk of dysrhythmias.

- Ergot alkaloids (ergotamine & methysergide): Increased risk of ergotism.

- Appetite suppressants and amphetamine-like psychostimulants: Risk of hypertension.

- Oxytocin: Risk of hypertension.

- Anticholinergic drugs: Enhances effects of anticholinergic drugs (such as Tricyclic antidepressants).

- Anaesthetic agents: Concurrent use with halogenated anaesthetic agents such as chloroform, cyclopropane, halothane, enflurane or isoflurane may provoke or worsen ventricular arrhythmias.

4.6 Fertility, pregnancy and lactation

This product should not be used during pregnancy or lactation unless the potential benefit of treatment to the mother outweighs the possible risks to the developing foetus or breastfeeding infant.

Pregnancy

There are no adequate and well-controlled studies in pregnant women.

Systemic administration of pseudoephedrine, up to 50 times the human daily dosage in rats and up to 35 times the human daily dosage in rabbits, did not produce teratogenic effects.

Breastfeeding

Pseudoephedrine is excreted in breast milk in small amounts, but the effect of this on breast-fed infants is not known. It has been estimated that approximately 0.4 to 0.7% of a single 60 mg dose of pseudoephedrine ingested by a nursing mother will be excreted in the breast milk over 24 hours. Data from a study of lactating mothers taking 60 mg pseudoephedrine every 6 hours suggests that from 2.2 to 6.7% of the maximum daily dose (240 mg) may be available to the infant from a breastfeeding mother.

4.7 Effects on ability to drive and use machines

None known.

4.8 Undesirable effects

Clinical Trial Data

The safety of pseudoephedrine from clinical trial data is based on data from 6 randomised, placebo-controlled single dose clinical trials and 6 randomised, placebo-controlled multiple dose clinical trials for the treatment of nasal congestion with allergic rhinitis or common cold or prevention of sinus symptoms/infection after a natural cold.

Table 1 includes adverse events from clinical trial and post-marketing experience. Adverse events included from clinical trials are those that occurred where greater than one event was reported, and the incidence was greater than placebo and in 1% of patients or more.

Post-marketing Data

Adverse drug reactions (ADRs) identified during post-marketing experience with pseudoephedrine are included in Table 1 below.

The adverse drug reactions are ranked by frequency, using the following convention.

Very common	≥1/10
Common	≥1/100 and <1/10
Uncommon	≥1/1,000 and <1/100
Rare	≥1/10,000 and <1/1,000
Very rare	<1/10,000
Not known	(cannot be estimated from the available data)

Table 1: Adverse Reactions Reported in Clinical Trials and Post-marketing Experience

System Organ Class	**Adverse Reactions**			
	Frequency Category			
	Very Common (≥1/10)	**Common** (≥1/100 to <1/10)	**Rare** ≥1/10,000 to <1/1,000	**Not known**
Immune System Disorders				Hypersensitivity – cross-sensitivity may occur with other sympathomimetics
Psychiatric Disorders		Insomnia Nervousness		Anxiety Euphoric mood Excitability Hallucinations Irritability Paranoid delusions Restlessness Sleep disorder
Nervous System Disorders	Headache	Dizziness		Cerebrovascular accident Paraesthesia Posterior reversible encephalopathy syndrome (PRES) (see section 4.4) Reversible cerebral vasoconstriction syndrome (RCVS) (see section 4.4) Psychomotor hyperactivity Somnolence Tremor
Eye Disorders				Ischaemic optic neuropathy
Cardiac Disorders				Dysrhythmias Myocardial infarction/myocardial ischaemia Palpitations Tachycardia
Vascular Disorders				Hypertension

Gastrointestinal Disorders		Dry mouth Nausea		Ischaemic colitis Vomiting
Skin and Subcutaneous Tissue Disorders				Angioedema Pruritus Rash Severe skin reactions, including acute generalised exanthematous pustulosis (AGEP)
Renal and Urinary Disorders				Dysuria Urinary retention (in men in whom prostatic enlargement could have been an important predisposing factor)

Reporting of suspected adverse reactions

Reporting suspected adverse reactions after authorisation of the medicinal product is important. It allows continued monitoring of the benefit/risk balance of the medicinal product. Healthcare professionals are asked to report any suspected adverse reactions via the Yellow Card Scheme: www.mhra.gov.uk/yellowcard or search for MHRA Yellow Card in the Google Play or Apple App Store.

4.9 Overdose

Symptoms

Overdose may result in:

Hyperglycaemia, hypokalaemia CNS stimulation, insomnia; irritability, restlessness, anxiety, agitation; confusion, delirium, hallucinations, psychoses, seizures, tremor, intracranial haemorrhage including intracerebral haemorrhage, drowsiness in children, mydriasis, palpitations, tachycardia, reflex bradycardia, supraventricular and ventricular arrhythmias, dysrhythmias, myocardial infarction, hypertension, vomiting, ischaemic bowel infarction, acute renal failure, difficulty in micturition.

Management

Necessary measures should be taken to maintain and support respiration and control convulsions. Catheterisation of the bladder may be necessary. If desired, the elimination of pseudoephedrine can be accelerated by acid diuresis or by dialysis.

5 PHARMACOLOGICAL PROPERTIES

5.1 Pharmacodynamic properties

Sympathomimetics. R01BA02.

Pseudoephedrine has direct and indirect sympathomimetic activity and is an orally effective upper respiratory tract decongestant.

Pseudoephedrine is substantially less potent than ephedrine in producing both tachycardia and elevation in systolic blood pressure and considerably less potent in causing stimulation of the central nervous system.

5.2 Pharmacokinetic properties

Pseudoephedrine is rapidly and completely absorbed after oral administration. After an oral dose of 180 mg to man, peak plasma concentrations of 500-900 ng/ml were obtained about 2 hours post dose. The plasma half-life was about 5.5 hours and was increased in subjects with alkaline urine and decreased in subjects with acid urine. The only metabolism was N-demethylation which occurred to a small extent. Excretion was mainly via the urine.

5.3 Preclinical safety data

The active ingredient of Sudafed Decongestant Tablets is a well-known constituent of medicinal products and its safety is well documented. The results of pre-clinical studies do not add anything of relevance for therapeutic purposes.

6 PHARMACEUTICAL PARTICULARS

6.1 List of excipients

Lactose monohydrate

Pregelatinised maize starch

Cellulose microcrystalline

Magnesium Stearate

Silica colloidal

Film Coat:

Opadry OY-S-9473

Opadry OY-S-9473 contains:

Hypromellose

Red iron oxide (E172)

Talc

Polyethylene glycol 400

6.2 Incompatibilities

None known.

6.3 Shelf life

3 years

6.4 Special precautions for storage

Store below 30°C.

Store in the original package to protect from moisture.

6.5 Nature and contents of container

12 tablets in PVC/PVDC/Aluminium foil blister packs.

6.6 Special precautions for disposal

No special requirements for disposal.

Any unused medicinal product or waste material should be disposed of in accordance with local requirements.

7 MARKETING AUTHORISATION HOLDER

McNeil Products Limited
50 – 100 Holmers Farm Way
High Wycombe
Buckinghamshire
HP12 4EG
UK

8 MARKETING AUTHORISATION NUMBER(S)

PL 15513/0024

9 DATE OF FIRST AUTHORISATION/RENEWAL OF THE AUTHORISATION

29th September 1998

10 DATE OF REVISION OF THE TEXT

18 May 2025

1. NAME OF THE MEDICINAL PRODUCT

Asda Max Strength Sinus Relief Capsules, Hard
Boots Max Strength Sinus Pressure & Pain Relief Capsules, hard
Superdrug Max Strength Sinus Relief Capsules, Hard
Wilko Max Strength Sinus Relief Capsules, Hard
Sudafed Blocked Nose & Sinus Capsules
Numark Max Strength Sinus Relief Capsules, Hard
Morrisons Max Strength Sinus Relief Capsules
Sudafed Sinus Max Strength Capsules, Hard
Sudafed Congestion & Headache Relief Max Strength Capsules, Hard

2 QUALITATIVE AND QUANTITATIVE COMPOSITION

Active Ingredient	mg/Capsule
Paracetamol	500
Caffeine	25
Phenylephrine Hydrochloride	6.1

For a full list of excipients, see section 6.1

3. PHARMACEUTICAL FORM

Capsule, hard (capsule)

Red/blue hard gelatin capsules containing the drug product, an off-white powder.

4 CLINICAL PARTICULARS

4.1 Therapeutic indications

For the relief of symptoms associated with the pain and congestion of sinusitis, including relief of aches and pains, headache, nasal congestion and lowering of temperature.

4.2 Posology and method of administration

Route of administration: Oral
Swallow whole with water. Do not chew.

For all indications:
Adults, the elderly and children aged 16 years and over:

Two capsules every 4 to 6 hours when necessary to a maximum of 8 capsules (4 doses) in 24 hours.

Dosage should not be continued for longer than 3 days without consulting a doctor.

Children under 16 years:

Not to be used unless recommended by a doctor.

4.3 Contraindications

Paracetamol: Hypersensitivity to paracetamol or any of the other constituents.

Caffeine: Should be given with care to patients with a history of peptic ulcer.

Phenylephrine Hydrochloride: Severe coronary heart disease and cardiovascular disorders. Hypertension. Hyperthyroidism. Contraindicated in patients currently receiving or within two weeks of stopping therapy with monoamine oxidase inhibitors.

Not to be used in children under the age of 16 years.

Avoid in patients with prostatic enlargement.

4.4 Special warnings and precautions for use

Care is advised in the administration of paracetamol to patients with severe renal or severe hepatic impairment. The hazards of overdose are greater in those with non-cirrhotic alcoholic liver disease.

Use with caution in patients with Raynaud's Phenomenon and diabetes mellitus.

The following warnings will appear on the pack: -

CONTAINS PARACETAMOL
Do not take anything else containing paracetamol while taking this medicine.
Talk to a doctor at once if you take too much of this medicine, even if you feel well. Do not take more medicine than the label tells you to. If you do not get better, talk to your doctor.
Keep out of the sight and reach of children.

The Label shall say:

Talk to a doctor at once if you take much of this medicine, even if you feel well.

The Leaflet shall say:

Talk to a doctor at once if you take too much of this medicine even if you feel well. This is because too much paracetamol can cause delayed, serious liver damage. Go to your nearest hospital casualty department. Take your medicine and this leaflet with you.

If you are pregnant or breast-feeding, think you may be pregnant or are planning to have a baby, ask your doctor or pharmacist for advice before taking this medicine.

This medicine contains less than 1 mmol sodium (23 mg) per 2 capsules, that is to say essentially 'sodium-free'.

Cases of high anion gap metabolic acidosis (HAGMA) due to pyroglutamic acidosis have been reported in patients with severe illness such as severe renal impairment and sepsis, or in patients with malnutrition or other sources of glutathione deficiency (e.g. chronic alcoholism) who were treated with paracetamol at therapeutic dose for a prolonged period or a combination of paracetamol and flucloxacillin. If HAGMA due to pyroglutamic acidosis is suspected, prompt discontinuation of paracetamol and close monitoring, is recommended. The measurement of urinary 5-oxoproline may be useful to identify pyroglutamic acidosis as underlying cause of HAGMA in patients with multiple risk factors.

4.5 Interaction with other medicinal products and other forms of interaction

Enzyme-inducing drugs may increase hepatic damage, as does excessive intake of alcohol.
The speed of absorption of paracetamol may be increased by metoclopramide or domperidone and absorption reduced by cholestyramine.
These interactions are considered to be of unlikely clinical significance in acute usage at the dosage regimen proposed.
Medical advice should be sought before taking paracetamol-caffeine-phenylephrine in combination with the following drugs:

Monoamine oxidase inhibitors (including moclobemide)	Hypertensive interactions occur between sympathomimetic amines such as phenylephrine and monoamine Oxidase inhibitors (see contraindications).
Sympathomimetic amines	Concomitant use of phenylephrine with other sympathomimetics amines can increase the risk of cardiovascular side effects (see warnings and precautions).

Beta-blockers and other antihypertensives (including debrisoquine, guanethidine, reserpine, methyldopa)	Phenylephrine may reduce the efficacy of betablocking drugs and antihypertensive drugs. The risk of hypertension and other cardiovascular side effects may be increased (see contraindications).
Tricyclic antidepressants (eg amitriptyline)	May increase the risk of cardiovascular side effects with phenylephrine (see contraindications)
Digoxin and cardiac glycosides	Concomitant use of phenylephrine with digoxin or cardiac glycosides may increase the risk of irregular heartbeat or heart attack
Ergot alkaloids	(ergotamine and methysergide) increased risk of ergotism
Warfarin and other coumarins	The anticoagulant effect of warfarin and other coumarins may be enhanced by prolonged regular daily use of paracetamol with an increased risk of bleeding; occasional doses have no significant effect.

Paracetamol

The speed of absorption of paracetamol may be increased by metoclopramide or domperidone and absorption reduced by colestyramine.

The anticoagulant effect of warfarin and other coumarins may be enhanced by prolonged regular use of paracetamol with increased risk of bleeding; occasional doses have no significant effect.

Drugs which induce hepatic microsomal enzymes, such as alcohol, barbiturates, monoamine oxidase inhibitors and tricyclic antidepressants, may increase the hepatotoxicity of paracetamol, particularly after overdosage. Contraindicated in patients currently receiving or within two weeks of stopping therapy with monoamine oxidase inhibitors because of a risk of hypertensive crisis.

Caution should be taken when paracetamol is used concomitantly with flucloxacillin as concurrent intake has been associated with high anion gap metabolic acidosis due to pyroglutamic acidosis , especially in patients with risk factors (see section 4.4)

Phenylephrine Hydrochloride

Phenylephrine may adversely interact with other sympathomimetics, vasodilators and beta blockers.

4.6 Fertility, pregnancy and lactation

Paracetamol

A large amount of data on pregnant women indicate neither malformative, nor feto/neonatal toxicity. Epidemiological studies on neurodevelopment in children exposed to paracetamol in utero show inconclusive results. If clinically needed, paracetamol can be used during pregnancy however it should be used at the lowest effective dose for the shortest possible time and at the lowest possible frequency.

Paracetamol is excreted in breast milk but not in a clinically significant amount. Available published data do not contraindicate breast feeding.

Caffeine

Taken during pregnancy, it appears that the half-life of caffeine is prolonged. This is a possible contributing factor in hyperemesis gravidarum (morning sickness).

Caffeine appears in breast milk. Irritability and poor sleeping pattern in the infant have been reported.

Phenylephrine Hydrochloride

Due to the vasoconstrictive properties of phenylephrine the product should be used with caution in patients with a history of pre-eclampsia. Phenylephrine may reduce placental perfusion and the product should be used in pregnancy only if the benefits outweigh this risk. There is no information on use in lactation.

4.7 Effects on ability to drive and use machines

None known

4.8 Undesirable effects

The frequency of occurrence of undesirable effect is usually classified as follows: *Very common* (> 1/10)
Common (> 1/100 to < 1/10)
Uncommon (> 1/1,000 to < 1/100)
Rare (> 1/10,000 to 1/1,000)
Very rare (< 1/10,000)
Not known (incidence cannot be assessed on the basis of the available data).

Adverse events of paracetamol from historical clinical trial data are both infrequent and from small patient exposure. Accordingly, events reported from extensive post-marketing experience at therapeutic/labelled dose and considered attributable are tabulated below by system class. Due to limited clinical trial data, the frequency of these adverse events is not known (cannot be estimated from available data), but post-marketing experience indicates that adverse reactions to paracetamol are rare and serious reactions are very rare.

Paracetamol

Body System	**Undesirable effect**
Blood and lymphatic system disorders	Thrombocytopenia Agranulocytosis These are not necessarily causally related to paracetamol.
Immune system disorders	Anaphylaxis Cutaneous hypersensitivity reactions including skin rashes, angiodema and Stevens Johnson syndrome, toxic epidermal necrolysis
Respiratory, thoracic and mediastinal disorders	Bromchospasm*
Hepatobiliary disorders	Hepatic dysfunction
Metabolism and nutrition disorders	High anion gap metabolic acidosis (Frequency Not Known)

* There have been cases of bronchospasm with paracetamol, but these are more likely in asthmatics sensitive to aspirin or other NSAIDs.

Description of selected adverse reactions

High anion gap metabolic acidosis

Cases of high anion gap metabolic acidosis due to pyroglutamic acidosis have been observed in patients with risk factors using paracetamol (see section 4.4). Pyroglutamic acidosis may occur as a consequence of low glutathione levels in these patients.

Caffeine

Adverse reactions identified through post-marketing use with caffeine are listed below. The frequency of these reactions is unknown.

Central Nervous system	Nervousness and anxiety Irritability, Restlessness and Excitability Dizziness

When the recommended paracetamol-caffeine dosing regimen is combined with dietary caffeine intake, the resulting higher dose of caffeine may increase the potential for caffeine-related adverse effects such as insomnia, restlessness, anxiety, irritability, headaches, gastrointestinal disturbances and palpitations.

Phenylephrine

The following adverse events have been observed in clinical trials with phenylephrine and may therefore represent the most commonly occurring adverse events.

Body System	**Undesirable effect**
Psychiatric disorders	Nervousness
Nervous system disorders	Headache, dizziness, insomnia
Cardiac disorders	Increased blood pressure
Gastrointestinal disorders	Nausea, vomiting, diarrhoea

Adverse reactions identified during post-marketing use are listed below. The frequency of these reactions is unknown.

Eye disorders	Mydriasis, acute angle closure glaucoma, most likely to occur in those with closed angle glaucoma
Cardiac disorders	Tachycardia, palpitations

Skin and subcutaneous disorders	Allergic reactions (e.g. rash, urticaria, allergic dermatitis). Hypersensitivity reactions – including cross-sensitivity with other sympathomimetics may occur
Renal and urinary disorders	Dysuria, urinary retention. This is most likely to occur in those with bladder outlet obstruction, such as prostatic hypertrophy.

Very rare cases of serious skin reactions have been reported.

Reporting of suspected adverse reactions
Reporting suspected adverse reactions after authorisation of the medicinal product is important. It allows continued monitoring of the benefit/risk balance of the medicinal product. Healthcare professionals are asked to report any suspected adverse reactions via the Yellow Card Scheme at: www.mhra.gov.uk/yellowcard or search for MHRA Yellow Card in the Google Play or Apple App Store.

4.9 Overdose PARACETAMOL

Liver damage is possible in adults who have taken 10g or more of paracetamol. Ingestion of 5g or more of paracetamol may lead to liver damage if the patient has risk factors (see below).

Risk factors If the patient

a) Is on long term treatment with carbamazepine, phenobarbitone, phenytoin, primidone, rifampicin, St John's Wort or other drugs that induce liver enzymes.

Or

b) Regularly consumes ethanol in excess of recommended amounts.

Or

c) Is likely to be glutathione deplete e.g. eating disorders, cystic fibrosis, HIV infection, starvation, cachexia.

Symptoms

Symptoms of paracetamol overdosage in the first 24 hours are pallor, nausea, vomiting, anorexia and abdominal pain. Liver damage may become apparent 12 to 48 hours after ingestion. Abnormalities of glucose metabolism and metabolic acidosis may occur. In severe poisoning, hepatic failure may progress to encephalopathy, haemorrhage, hypoglycaemia, cerebral oedema, and death. Acute renal failure with acute tubular necrosis, strongly suggested by loin pain, haematuria and proteinuria, may develop even in the absence of severe liver damage. Cardiac arrhythmias and pancreatitis have been reported.

Management

Immediate treatment is essential in the management of paracetamol overdose. Despite a lack of significant early symptoms, patients should be referred to hospital urgently for immediate medical attention. Symptoms may be limited to nausea or vomiting and may not reflect the severity of overdose or the risk of organ damage. Management should be in accordance with established treatment guidelines, see British National Formulary (BNF) overdose section.

Treatment with activated charcoal should be considered if the overdose has been taken within 1 hour. Plasma paracetamol concentration should be measured at 4 hours or later after ingestion (earlier concentrations are unreliable). Treatment with N-acetylcysteine may be used up to 24 hours after ingestion of paracetamol, however, the maximum protective effect is obtained up to 8 hours post-ingestion. The effectiveness of the antidote declines sharply after this time. If required the patient should be given intravenous N-acetylcysteine, in line with the established dosage schedule. If vomiting is not a problem, oral methionine may be a suitable alternative for remote areas, outside hospital. Management of patients who present with serious hepatic dysfunction beyond 24 hours from ingestion should be discussed with the National Poisons Information Service (NPIS) or a liver unit.

CAFFEINE

Doses over 1g are probably necessary to induce toxicity, 2 – 5g to produce severe toxicity and 5 – 10g is likely to be lethal.

Symptoms include: epigastric pain, vomiting, diuresis, tachycardia, CNS stimulation (insomnia, restlessness, excitement, agitation, jitteriness, tremors, convulsions).

No specific antidote is available, reduce or stop dosage and avoid excessive intake of coffee or tea.

PHENYLEPHRINE HYDROCHLORIDE

Severe overdosage may produce hypertension and associated reflex bradycardia. Treatment measures include early gastric lavage and symptomatic and supportive measures. The hypertensive effects may be treated with an alpha-receptor blocking agent (such as phentolamine mesylate 6 – 10 mg) given intravenously, and the bradycardia treated with atropine, preferably only after the pressure has been controlled.

5 PHARMACOLOGICAL PROPERTIES

5.1 Pharmacodynamic properties

Pharmacotherapeutic Group: Other analgesics and antipyretics &

Other cold combination preparations

ATC code: N02BE51

PARACETAMOL

Analgesic:

The mechanism of analgesic action has not been fully determined. Paracetamol may act predominantly by inhibiting a prostaglandin synthesis in the central nervous system (CNS) and to a lesser extent through a peripheral action by blocking pain-impulse generation. The peripheral action may also be due to inhibition of prostaglandin synthesis or to inhibition of the synthesis or actions of other substances that sensitise pain receptors to mechanical or chemical stimulation.

Antipyretic:

Paracetamol probably produces antipyresis by acting on the hypothalamic heat-regulating centre to produce peripheral vasodilation resulting in increased blood flow through the skin, sweating and heat loss. The central action probably involves inhibition of prostaglandin synthesis in the hypothalamus.

CAFFEINE

Central nervous system stimulant – Caffeine stimulates all levels of the CNS, although its cortical effects are milder and of shorter duration than those of amfetamines.

Analgesia Adjunct:

Caffeine constricts cerebral vasculature with an accompanying decrease in cerebral blood flow and in the oxygen tension of the brain. It is believed that caffeine helps to relieve headache by providing a more rapid onset of action and/or enhanced pain relief with lower doses of analgesic. Recent studies with ergotamine indicate that the enhancement of effect by the addition of caffeine may also be due to improved gastrointestinal absorption of ergotamine when administered with caffeine.

PHENYLEPHRINE HYDROCHLORIDE

Sympathomimetic amines, such as phenylephrine, act on alpha-adrenergic receptors of the respiratory tract to produce vasoconstriction, which temporarily reduces the swelling associated with inflammation of the mucous membranes lining the nasal and sinus passages. This allows the free drainage of the sinusoidal fluid from the sinuses.

In addition to reducing mucosal lining swelling, decongestants also suppress the production of mucus, therefore preventing a build up of fluid within the cavities which could otherwise lead to pressure and pain.

5.2 Pharmacokinetic properties

PARACETAMOL

Absorption and Fate

Paracetamol is rapidly absorbed from the gastro-intestinal tract with peak plasma concentrations occurring between 10 and 120 minutes after oral administration. It is metabolised in the liver and excreted in the urine mainly as the glucuronide and sulphate conjugates. Less than 5% is excreted as unchanged paracetamol. The elimination half-life varies from about 1 to 4 hours.

Plasma-protein binding is negligible at usual therapeutic concentrations but increases with increasing concentrations.

A minor hydroxylated metabolite which is usually produced in very small amounts by mixedfunction oxidases in the liver and which is usually detoxified by conjugation with liver glutathione may accumulate following paracetamol overdose and cause liver damage.

CAFFEINE

Absorption and Fate

Caffeine is absorbed readily after oral administration and is widely distributed throughout the body. Caffeine is metabolised almost completely via oxidation, demethylation, and acetylation, and is excreted in the urine as 1-methyluric acid, 1-methylxanthine, 7methylxanthine, 1,7dimethylxanthine (paraxanthine), 5-acetylamino-6-formylamino-3methyluracil (AFMU), and other metabolites with only about 1% unchanged.

PHENYLEPHRINE HYDROCHLORIDE

Absorption and Fate

Phenylephrine has reduced bioavailability from the gastro-intestinal tract owing to irregular absorption and first-pass metabolism by monoamine oxidase in the gut and liver.

5.3 Preclinical safety data

Conventional studies using the currently accepted standards for the evaluation of toxicity to reproduction and development are not available.

6 PHARMACEUTICAL PARTICULARS

6.1 List of excipients

Maize Starch

Croscarmellose Sodium

Sodium Laurilsulfate

Magnesium Stearate

Talc

Gelatin

Titanium Dioxide E171

Quinoline Yellow E104

Patent Blue V E131

Erythrosine E127

Indigo Carmine E132

6.2 Incompatibilities

None known.

6.3 Shelf life

3 years.

6.4 Special precautions for storage

Do not store above 25°C.

6.5 Nature and contents of container

Pack size 12 capsules.

Pack size 16 capsules.

Blister packs comprising either:

250 micron white opaque PVC/30 micron hard temper pyramidal aluminium foil, heat-seal coated, contained in an outer cardboard carton.

OR

250 micron white opaque PVC/9 micron aluminium foil laminated to 35 g/m^2 paper, contained in an outer cardboard carton.

6.6 Special precautions for disposal

None

7 MARKETING AUTHORISATION HOLDER

Wrafton Laboratories Limited
Wrafton
Braunton
Devon
EX33 2DL

8 MARKETING AUTHORISATION NUMBER(S)

PL 12063/0067

9 DATE OF FIRST AUTHORISATION/RENEWAL OF THE AUTHORISATION

10/03/2011

10 DATE OF REVISION OF THE TEXT

25/04/2025

SUMMARY OF PRODUCT CHARACTERISTICS

1. NAME OF THE MEDICINAL PRODUCT

Sudafed Sinus Pressure & Pain 200mg/30mg film-coated tablets

2. QUALITATIVE AND QUANTITATIVE COMPOSITION

Each film-coated tablet contains 200 mg ibuprofen and 30 mg pseudoephedrine hydrochloride.

For the full list of excipients, see section 6.1.

3. PHARMACEUTICAL FORM

Film-coated tablet (Tablet).
Yellow, round, film-coated tablets. Diameter: approx. 11 mm, height: approx. 5 mm.

4. CLINICAL PARTICULARS

4.1 Therapeutic indications

Symptomatic treatment of nasal congestion associated with acute rhinosinusitis suspected to be of viral origin with headache and/or fever.

This product is indicated in adults and adolescents aged 15 years and older.

4.2 Posology and method of administration

Posology

Adults and adolescents aged 15 years and older:
1 tablet (equivalent to 200 mg ibuprofen and 30 mg pseudoephedrine hydrochloride) every 6 hours if necessary.
For more intense symptoms, 2 tablets (equivalent to 400 mg ibuprofen and 60 mg pseudoephedrine hydrochloride) every 6 hours if necessary, to a maximum total daily dose of 6 tablets (equivalent to 1200 mg ibuprofen and 180 mg pseudoephedrine hydrochloride).
The maximum total daily dose of 6 tablets (equivalent to 1200 mg ibuprofen and 180 mg pseudoephedrine hydrochloride) must not be exceeded.

For short-term use.

The lowest effective dose should be used for the shortest duration necessary to relieve symptoms (see section 4.4).

The patient should consult a doctor if symptoms worsen. The maximum duration of treatment is 4 days for adults and 3 days for adolescents aged 15 years and older.

In situations where the symptoms predominantly consist of either pain/fever or nasal congestion, administration of single entity products is to be preferred.

Undesirable effects may be minimised by using the lowest effective dose for the shortest duration necessary to control symptoms (see section 4.4).

Paediatric population
This product is contraindicated in paediatric patients below 15 years of age (see section 4.3).

Method of administration
For oral use.
The tablets should be swallowed whole without chewing with a large glass of water, preferably during meals.

4.3 Contraindications

- Hypersensitivity to the active substance(s) or to any of the excipients listed in section 6.1;
- Patients aged under 15 years;
- Pregnant women during the third trimester of pregnancy (see section 4.6);
- Breast-feeding mothers (see section 4.6)
- Patients who have previously shown hypersensitivity reactions (e.g. bronchospasm, asthma, rhinitis, angioedema or urticaria) in response to acetylsalicylic acid or other non-steroidal anti-inflammatory drugs (NSAIDs);
- History of gastrointestinal bleeding or perforation related to previous NSAIDs therapy;
- Active, or history of recurrent peptic ulcer/haemorrhage (two or more distinct episodes of proven ulceration or bleeding);
- Cerebrovascular or other bleeding;
- Unexplained haematopoietic abnormalities;
- Severe hepatic insufficiency;
- Severe acute or chronic kidney disease/ renal failure;
- Severe heart failure (NYHA Class IV);
- Severe cardiovascular disorders, coronary heart disease (heart disease, hypertension, angina pectoris), tachycardia, hyperthyroidism, diabetes, pheochromocytoma;
- History of stroke or presence of risk factors for stroke (because of the α-sympathomimetic activity of pseudoephedrine hydrochloride);
- Risk of closed-angle glaucoma;
- Risk of urinary retention related to urethroprostatic disorders;
- History of myocardial infarction;
- History of seizures;
- Systemic lupus erythematosus;
- Concomitant use of other vasoconstrictor agents used as nasal decongestants, whether administered orally or nasally (e.g. phenylpropanolamine, phenylephrine and ephedrine), and methylphenidate (see section 4.5);
- Concomitant use of non-selective monoamine oxidase inhibitors (MAOIs) (iproniazid) (see section 4.5) or use of monoamine oxidase inhibitors within the last two weeks.

4.4 Special warnings and precautions for use

Concomitant use of this product with other NSAIDs including cyclo-oxygenase (COX)-2 selective inhibitors should be avoided.

Undesirable effects may be reduced by using the minimum effective dose for the shortest duration necessary to control symptoms (see "Gastro-intestinal effects" and "Cardiovascular and cerebrovascular effects" below).

If symptoms persist beyond the recommended maximum duration of treatment with this medicinal product (4 days for adults and 3 days for adolescents), measures to be taken should be re-evaluated, in particular the possible usefulness of an antibiotic treatment.

Acute rhinosinusitis, suspected to be of viral origin, is defined by moderate intensity, bilateral rhinological symptoms dominated by nasal congestion with serous or puriform rhinorrhea, occurring in an epidemic context. The puriform appearance of rhinorrhea is common and does not systematically correspond to bacterial superinfection.

Sinus pains, during the first days of the illness, are associated with congestion of the sinus mucosa (acute congestive rhinosinusitis) and most often are resolved spontaneously.

In the event of acute bacterial sinusitis, antiobiotic therapy is justified.

Special warnings related to pseudoephedrine hydrochloride:

- The dosage, the recommended maximum duration of treatment (4 days for adults and 3 days for adolescents) and the contraindications must be strictly adhered to (see section 4.8).
- Patients should be informed that treatment must be discontinued if they develop hypertension, tachycardia, palpitations, cardiac arrhythmias, nausea or any neurological signs such as onset or worsening of headache.
- Patients should not exceed the recommended dose and/or the recommended duration of treatment. Increased doses may ultimately produce toxicity. Continuous use can lead to tolerance resulting in an increased risk of overdosing. Depression may follow rapid withdrawal.
- Ischaemic colitis

  Some cases of ischaemic colitis have been reported with pseudoephedrine. Pseudoephedrine should be discontinued, and medical advice sought if sudden abdominal pain, rectal bleeding or other symptoms of ischaemic colitis develop.
- Ischaemic optic neuropathy

  Cases of ischaemic optic neuropathy have been reported with pseudoephedrine. Pseudoephedrine should be discontinued if sudden loss of vision or decreased visual acuity such as scotoma occurs.
- Severe Skin reactions
  Severe skin reactions such as acute generalized exanthematous pustulosis (AGEP) may occur with ibuprofen and pseudoephedrine-containing products. This acute pustular eruption may occur within the first 2 days of treatment, with fever, and numerous, small, mostly non-follicular pustules arising on a widespread oedematous erythema and mainly localized on the skin folds, trunk, and upper extremities. Patients should be carefully monitored. If signs and symptoms such as pyrexia, erythema, or many small pustules are observed, administration of Sudafed Sinus Pressure & Pain 200mg/30mg film-coated tablets should be discontinued and appropriate measures taken if needed.Posterior reversible encephalopathy syndrome (PRES) and reversible cerebral vasoconstriction syndrome (RCVS)

  Cases of PRES and RCVS have been reported with the use of pseudoephedrine containing products (see section 4.8). The risk is increased in patients with severe or uncontrolled hypertension, or with severe acute or chronic kidney disease/renal failure (see section 4.3).

  Pseudoephedrine should be discontinued and immediate medical assistance sought if the following symptoms occur: sudden severe headache or thunderclap headache, nausea, vomiting, confusion, seizures and/or visual disturbances. Most reported cases of PRES and RCVS resolved following discontinuation and appropriate treatment.
-

Before using this medicinal product, patients should consult their doctor in case of:

- Hypertension, heart disease, hyperthyroidism, psychosis or diabetes.
- Concomitant administration of antimigraine agents, especially ergot alkaloid vasoconstrictors (because of

the α-sympathomimetic activity of pseudoephedrine).

- Systemic lupus erythematosus and mixed connective tissue disease – increased risk of aseptic meningitis (see section 4.8).
- Neurological symptoms such as seizures, hallucinations, behavioural disturbances, agitation and insomnia have been described after systemic administration of vasoconstrictors, especially during febrile episodes or on overdose. These symptoms have been more commonly reported in paediatric population.

As a result, it is advisable:

- to avoid administration of this product either in combination with medicines which can lower the epileptogenic threshold, such as terpene derivatives, clobutinol, atropine-like substances and local anaesthetics, or where there is a history of seizures;
- to adhere strictly to the recommended dosage in all cases and to inform the patients about the risks of overdose if this product is taken concomitantly with other medicines containing vasoconstrictors.

Patients with urethroprostatic disorders are more prone to develop symptoms like dysuria and urinary retention.

Elderly patients may be more sensitive to the effects on the central nervous system (CNS).

Precautions for use related to pseudoephedrine hydrochloride:

- In patients undergoing scheduled surgery in which volatile halogenated anaesthetics are to be used, it is preferable to discontinue treatment with this product several days before surgery in view of the risk of acute hypertension (see section 4.5).
- Athletes should be informed that treatment with pseudoephedrine hydrochloride can lead to positive results in doping tests.
- Due to the pseudoephedrine hydrochloride component the following conditions are contraindicated (see section 4.3): Severe cardiovascular disorders, coronary heart disease (heart disease, hypertension, angina pectoris), tachycardia, hyperthyroidism, diabetes, pheochromocytoma, history of stroke or presence of risk factors for stroke, history of myocardial infarction.

<u>Interference with serological testing</u>

Pseudoephedrine has the potential to reduce iobenguane i-131 uptake in neuroendocrine tumors, thus interfering with scintigraphy.

Special warnings related to ibuprofen:

- Bronchospasm may be precipitated in patients suffering from, or with a history of bronchial asthma or allergic disease. The product should not be taken with cases of asthma without prior consultation with a doctor (see section 4.3).
- Ibuprofen may cause a severe allergic reaction, especially in patients allergic to acetylsalicylic acid. Symptoms may include hives, facial swelling, asthma (wheezing), shock, skin reddening, rash or blisters with or without pyrexia or erythema.
- Patients who have asthma associated with chronic rhinitis, chronic sinusitis and/or nasal polyposis have a higher risk of allergic reactions when taking acetylsalicylic acid and/or NSAIDs. Administration of Sudafed Sinus Pressure & Pain 200mg/30mg film-coated tablets may precipitate an acute asthma attack, particularly in some patients who are allergic to acetylsalicylic acid or an NSAID (see section 4.3).
- Hypersensitivity reactions can also progress to Kounis syndrome, a serious allergic reaction that can result in myocardial infarction. Presenting symptoms of such reactions can include chest pain occurring in

association with an allergic reaction to ibuprofen.

- Gastro-intestinal effects:

  Gastro-intestinal bleeding, ulceration or perforation, which can be fatal, has been reported with all NSAIDs at any time during treatment, with or without warning symptoms or a previous history of gastrointestinal events.

  The risk of gastro-intestinal bleeding, ulceration or perforation, which can be fatal, is higher with increasing NSAID doses, in patients with a history of ulcer, particularly if complicated with bleeding or perforation (see section 4.3), and in the elderly. These patients should commence treatment on the lowest dose available. Combination therapy with protective agents (e.g. misoprostol or proton pump inhibitors) should be considered for these patients and also for patients taking concomitant low-dose acetylsalicylic acid or other medicinal products likely to increase gastro-intestinal risk (see below and section 4.5).

  Patients with a history of gastrointestinal toxicity, especially elderly patients, should report any unusual abdominal symptoms (especially gastrointestinal bleeding) particularly in the initial stages of treatment.

  Particular caution is advised in patients receiving concomitant medications which could increase the risk of ulceration or bleeding such as oral corticosteroids, anticoagulants such as warfarin, SSRIs or antiplatelet agents such as acetylsalicylic acid (see section 4.5).

  Treatment with Sudafed Sinus Pressure & Pain 200mg/30mg film-coated tablets should be discontinued immediately if gastro-intestinal bleeding or ulceration occurs. (see section 4.3)

  NSAIDs should be given with care to patients with a history of gastro-intestinal disease (ulcerative colitis, Crohn's disease) as their condition may be exacerbated (see section 4.8).

- Cardiovascular and cerebrovascular effects:

  Clinical studies suggest that use of ibuprofen, particularly at a high dose (2400 mg/day) may be associated with a small increased risk of arterial thrombotic events (for example myocardial infarction or stroke). Overall, epidemiological studies do not suggest that low dose ibuprofen (e.g. ≤ 1200 mg/day) is associated with an increased risk of arterial thrombotic events.

  Patients with uncontrolled hypertension, congestive heart failure (NYHA II-III), established ischaemic heart disease, peripheral arterial disease, and/or cerebrovascular disease should only be treated with ibuprofen after careful consideration and high doses (2400 mg/day) should be avoided.

  Careful consideration should also be exercised before initiating long-term treatment of patients with risk factors for cardiovascular events (e.g. hypertension, hyperlipidaemia, diabetes mellitus, smoking), particularly if high doses of ibuprofen (2400 mg/day) are required.

  Cases of Kounis syndrome have been reported in patients treated with Sudafed Sinus Pressure & Pain 200mg/30mg film-coated tablets. Kounis syndrome has been defined as cardiovascular symptoms secondary to an allergic or hypersensitive reaction associated with constriction of coronary arteries and potentially leading to myocardial infarction.

- Before using this medicinal product, patients should consult their doctor in case of a blood clotting disorder.

- Medication overuse headache (MOH):

  Prolonged use of any type of painkiller for headaches can make them worse. If this situation is experienced or suspected, medical advice should be obtained and treatment should be discontinued. The diagnosis of medication overuse headache (MOH) should be suspected in patients who have frequent or daily headaches despite (or because of) the regular use of headache medications.
- Through concomitant consumption of alcohol, active substance-related undesirable effects, particularly those that concern the gastrointestinal tract or the central nervous system, may be increased on use of NSAIDs.

- Severe cutaneous adverse reactions (SCARs):

  Severe cutaneous adverse reactions (SCARs) including exfoliative dermatitis, erythema multiforme, Stevens-Johnson syndrome (SJS), Toxic Epidermal Necrolysis (TEN), Drug Reaction with Eosinophilia and Systemic Symptoms (DRESS syndrome), and acute generalized exanthematous pustulosis (AGEP), which can be life-threatening or fatal, have been reported in association with the use of ibuprofen (see section 4.8). Most of these reactions occurred within the first month.

  If signs and symptoms suggestive of these reactions appear ibuprofen should be withdrawn immediately, and an alternative treatment considered (as appropriate).

- Masking of symptoms of underlying infections

  can mask symptoms of infection, which may lead to delayed initiation of appropriate treatment and thereby worsening the outcome of the infection. This has been observed in bacterial community acquired pneumonia and bacterial complications to varicella. When Sudafed Sinus Pressure & Pain 200mg/30mg film-coated tablets is administered for fever or pain relief in relation to infection, monitoring of infection is advised. In non-hospitals settings, the patient should consult a doctor if symptoms persist or worsen.

Precautions for use related to ibuprofen:

- Elderly: The pharmacokinetics of ibuprofen is not modified by age; no dose adjustment is necessary in the elderly. However, elderly patients should be carefully monitored as they have an increased frequency of NSAID-related undesirable effects, particularly gastro-intestinal bleeding and perforation, which can be fatal.
- Caution and special monitoring is required when administering ibuprofen to patients with a history of gastro-intestinal disease (such as peptic ulcer, hiatus hernia or gastrointestinal bleeding).
- In the initial stages of treatment, careful monitoring of urine output and renal function is required in patients with heart failure, patients with chronically impaired renal or hepatic function, patients taking diuretics, patients who are hypovolaemic as a result of major surgery and, in particular, elderly patients. There is a risk of renal impairment in dehydrated adolescents.
- Renal tubular acidosis and hypokalaemia may occur following acute overdose and in patients taking ibuprofen products over long periods at high doses (typically greater than 4 weeks), including doses exceeding the recommended daily dose.
- If visual disturbances occur during the course of treatment, a full ophthalmological examination should be carried out.

Excipients

This medicine contains less than 1 mmol sodium (23mg) per tablet, that is to say “sodium free”.

4.5 Interaction with other medicinal products and other forms of interaction

Combination of pseudoephedrine with:	**Possible Reaction**
Non-selective MAOIs (iproniazid):	Paroxysmal hypertension and hyperthermia, which can be fatal. Because of the long duration of action of MAOIs, this interaction can occur up to 15 days after discontinuation of the MAOI.
Other indirectly-acting, orally or nasally administered sympathomimetics or vasoconstrictor agents, α-sympathomimetic drugs, phenylpropanolamine, phenylephrine, ephedrine, methylphenidate:	Risk of vasoconstriction and/or hypertensive crises.

Reversible inhibitors of monoamine oxidase A (RIMAs), linezolid, dopaminergic ergot alkaloids, vasoconstrictor ergot alkaloids:	Risk of vasoconstriction and/or hypertensive crises.
Volatile halogenated anaesthetics:	Perioperative acute hypertension. In scheduled surgery, discontinue treatment with this product several days before.
Guanethidine, reserpine and methyldopa:	Effect of pseudoephedrine may be diminished.
Tricyclic antidepressants:	Effect of pseudoephedrine may be diminished or enhanced.
Digitalis, chinidine or tricyclic antidepressants:	Increased frequency of arrhythmia.

Concomitant use of ibuprofen with:	**Possible Reaction**
Other NSAIDs, including salicylates and COX-2 selective inhibitors:	The concomitant administration of several NSAIDs may increase the risk of gastrointestinal ulcers and bleeding due to a synergistic effect. The concomitant use of ibuprofen with other NSAIDs should therefore be avoided (see section 4.4).
Digoxin:	The concomitant use of this product with digoxin preparations may increase serum levels of these medicinal products. A check of serum-digoxin is not as a rule required on correct use (maximum over 4 days).
Corticosteroids:	Corticosteriods as these may increase the risk of adverse reactions, especially of the gastrointestinal tract (gastrointestinal; ulceration or bleeding) (see section 4.3).
Anti-platelet agents:	Increased risk of gastrointestinal bleeding (see section 4.4).
Acetylsalicylic acid:	Concomitant administration of ibuprofen and acetylsalicylic acid is not generally recommended because of the potential of increased adverse effects. Experimental data suggest that ibuprofen may competitively inhibit the effect of low dose acetylsalicylic acid on platelet aggregation when they are dosed concomitantly. Although there are uncertainties regarding extrapolation of these data to the clinical situation, the possibility that regular, long-term use of ibuprofen may reduce the cardioprotective effect of low-dose acetylsalicylic acid cannot be excluded. No clinically relevant effect is considered to be likely for occasional ibuprofen use (see section 5.1).
Anticoagulants: (e.g.: warfarin, ticlopidine, clopidogrel, tirofiban, eptifibatide, abciximab, iloprost)	NSAIDs as ibuprofen may enhance the effect of anti-coagulants (see section 4.4).
Phenytoin:	The concomitant use of this product with phenytoin preparations may increase serum levels of these medicinal products. A check of serum-phenytoin levels is not as a rule required on correct use (maximum over 4 days).
Selective serotonin reuptake inhibitors (SSRIs):	Increased risk of gastrointestinal bleeding (see section 4.4).

Lithium:	The concomitant use of this product with lithium preparations may increase serum levels of these medicinal products. A check of serum-lithium is not as a rule required on correct use (maximum over 4 days).
Probenecid and sulfinpyrazone:	Medicinal products that contain probenecid or sulfinpyrazone may delay the excretion of ibuprofen.
Diuretics, ACE inhibitors, betareceptor-blockers and angiotensin-II antagonists:	NSAIDs may reduce the effect of diuretics and other antihypertensive medicinal products. In some patients with compromised renal function (e.g. dehydrated patients or elderly patients with compromised renal function) the co-administration of an ACE inhibitor, betareceptor-blockers or angiotensin-II antagonists and agents that inhibit cyclo-oxygenase may result in further deterioration of renal function, including possible acute renal failure, which is usually reversible. Therefore, the combination should be administered with caution, especially in the elderly. Patients should be adequately hydrated and consideration should be given to monitoring of renal function after initiation of concomitant therapy, and periodically thereafter.
Potassium sparing diuretics:	The concomitant administration of this product and potassium-sparing diuretics may lead to hyperkalaemia (check of serum potassium is recommended).
Methotrexate:	The administration of this product within 24 hours before or after administration of methotrexate may lead to elevated concentrations of methotrexate and an increase in its toxic effect.
Ciclosporin:	The risk of a kidney-damaging effect due to ciclosporin is increased through the concomitant administration of certain nonsteroidal anti-inflammatory drugs. This effect also cannot be ruled out for a combination of ciclosporin with ibuprofen.
Tacrolimus:	The risk of nephrotoxicity is increased if the two medicinal products are administered concomitantly.
Zidovudine:	There is evidence of an increased risk of haemarthroses and haematoma in HIV (+) haemophiliacs receiving concurrent treatment with zidovudine and ibuprofen.
Sulphonylureas:	Clinical investigations have shown interactions between nonsteroidal anti-inflammatory drugs and antidiabetics (sulphonylureas). Although interactions between ibuprofen and sulphonylureas have not been described to date, a check of blood-glucose values is recommended as a precaution on concomitant intake.
Quinolone antibiotics:	Animal data indicate that NSAIDs can increase the risk of convulsions associated with quinolone antibiotics. Patients taking NSAIDs and quinolones may have an increased risk of developing convulsions.

Heparins; *Gingko biloba*:	Increased risk of bleeding.

4.6 Fertility, pregnancy and lactation

Pregnancy

The use of this medicinal product is contra-indicated during the third trimester of pregnancy. During the first and second trimester it should only be given if clearly necessary and under supervision of a physician

Pseudoephedrine hydrochloride:

Studies in animals have shown reproductive toxicity (see section 5.3). The use of pseudoephedrine hydrochloride decreases maternal uterine blood flow but clinical data are insufficient with respect to effects on pregnancy.

Ibuprofen:

Inhibition of prostaglandin synthesis may adversely affect the pregnancy and/or the embryo/foetal development.

Data from epidemiological studies suggest an increased risk of miscarriage and of cardiac malformation and gastroschisis after use of prostaglandin synthesis inhibitors in early pregnancy. The risk is believed to increase with dose and duration of therapy.
In animals, administration of a prostaglandin synthesis inhibitor has been shown to result in increased pre- and post-implantation loss and embryo-foetal lethality. In addition, increased incidences of various malformations, including cardiovascular, have been reported in animals given a prostaglandin synthesis inhibitor during the organogenetic period.

From the 20th week of pregnancy onward, ibuprofen use may cause oligohydramnios resulting from foetal renal dysfunction. This may occur shortly after treatment initiation and is usually reversible upon discontinuation. In addition, there have been reports of ductus arteriosus constriction following treatment in the second trimester, most of which resolved after treatment cessation. Therefore, during the first and second trimester of pregnancy, ibuprofen should not be given unless clearly necessary. If ibuprofen is used during the first and second trimester of pregnancy, or by a woman attempting to conceive, the dose should be kept as low and duration of treatment as short as possible. Antenatal monitoring for oligohydramnios and ductus arteriosus constriction should be considered after exposure to ibuprofen for several days from gestational week 20 onward. Ibuprofen should be discontinued if oligohydramnios or ductus arteriosus constriction are found.

During the third trimester of pregnancy, all prostaglandin synthesis inhibitors may expose **the foetus** to:
-cardiopulmonary toxicity (premature constriction/closure of the ductus arteriosus and pulmonary hypertension);
-renal dysfunction, which may progress to renal failure with oligo-hydroamniosis (see above);

the mother and the child, at the end of pregnancy, to:
-possible prolongation of bleeding time, an anti-aggregating effect which may occur even at very low doses
-inhibition of uterine contractions resulting in delayed or prolonged labour.
Consequently, this medicine is contraindicated during the third trimester of pregnancy (see sections 4.3 and 5.3).

Breast-feeding

Measures which must be taken during lactation result from the presence of pseudoephedrine hydrochloride in the medicinal product formulation: pseudoephedrine hydrochloride is excreted in human breast milk. Considering the potential cardiovascular and neurological effects of vasoconstrictors, ingestion of this medicinal product is contra-indicated during lactation.

Fertility:

There is some evidence that drugs which inhibit cyclo-oxygenase/prostaglandin synthesis may cause impairment of female fertility by an effect on ovulation. This is reversible upon withdrawal of treatment.

4.7 Effects on ability to drive and use machines

This product has minor or moderate influence on the ability to drive and use machines. Patients who experience dizziness, hallucinations, unusual headaches and visual or hearing disturbances should avoid driving or using machinery. Single administration or short-term use of this medicine does not usually warrant the adoption of any special precautions.

4.8 Undesirable effects

The most commonly-observed adverse reactions related to ibuprofen are gastrointestinal in nature. Peptic ulcers, perforation or GI bleeding, sometimes fatal, particularly in the elderly, may occur (see section 4.4). Nausea, vomiting, diarrhoea, flatulence, constipation, dyspepsia, abdominal pain, melaena, haematemesis, ulcerative stomatitis, exacerbation of colitis and Crohn's disease (See section 4.4 Special warnings and precautions for use) have been reported following administration. Less frequently, gastritis has been observed. In general, the risk of development of adverse reactions (in particular the risk of development of serious gastrointestinal complications) increases with increasing dose and with increasing duration of treatment administration.

Hypersensitivity reactions have been reported following treatment with ibuprofen. These may consist of:
(a) Non-specific allergic reaction and anaphylaxis
(b) Respiratory tract reactivity comprising of asthma, aggravated asthma, bronchospasm or dyspnoea
(c) Assorted skin disorders, including rashes of various types, pruritis, urticaria, purpura, angioedema and, more rarely, exfoliative and bullous dermatoses (including epidermal necrolysis and erythema multiforme).

In patients with existing auto-immune disorders (such as systemic lupus erythematosus, mixed connective tissue disease) during treatment with ibuprofen, single cases of symptoms of aseptic meningitis, such as stiff neck, headache, nausea, vomiting, fever or disorientation have been observed.

Oedema, hypertension and cardiac failure have been reported in association with NSAID treatment.

Clinical studies suggest that use of ibuprofen, particularly at a high dose (2400 mg/day) may be associated with a small increased risk of arterial thrombotic events (for example myocardial infarction or stroke) (see section 4.4).

The following list of adverse reactions relates to those experienced with ibuprofen and pseudoephedrine hydrochloride at OTC doses, for short-term use. In the treatment of chronic conditions, under long-term treatment, additional adverse reactions may occur.

Patients should be informed that they should stop taking this product immediately and consult a doctor if they experience a serious adverse drug reaction.

<Very common (≥1/10)>
<Common (≥1/100 to <1/10)>
<Uncommon (≥1/1,000 to <1/100)>

<Rare (≥1/10,000 to <1/1,000)>
<Very rare (<1/10,000)>
<not known (cannot be estimated from the available data)>

Infections and infestations	Ibuprofen	Very rare	Exacerbation of infectious inflammations (e.g. necrotizing fasciitis), Aseptic meningitis (stiffness of the neck, headache, nausea, vomiting, fever or disorientation in patients with preexistent autoimmune diseases (Systemic Lupus Erythematosus (SLE), mixed connective tissue disease)
Blood and lymphatic system disorders	Ibuprofen	Very rare	Haematopoietic disorders (anaemia, leucopenia, thrombocytopenia, pancytopenia, agranulocytosis)
Immune system disorders	Ibuprofen	Uncommon	Hypersensitivity reactions with urticaria, pruritus and asthma attacks (with drop in blood pressure)
	Ibuprofen and pseudoephedrine hydrochloride	Very rare	Severe generalised hypersensitivity reactions, signs may be facial oedema, angioedema, dyspnoea, tachycardia, drop in blood pressure, anaphylactic shock
Psychiatric disorders	Ibuprofen	Very rare	Psychotic reactions, depression
	Pseudoephedrine hydrochloride	Common	Insomnia
	Pseudoephedrine hydrochloride	Not known	Agitation, anxiety, hallucination, abnormal behaviour, euphoric mood, nervousness
Nervous system disorders	Ibuprofen	Uncommon	Central nervous disturbances such as headache, dizziness, sleeplessness, agitation, irritability or tiredness
	Pseudoephedrine hydrochloride	Rare	Restlessness, tremor,
	Pseudoephedrine hydrochloride	Not known	Headache, haemorhagic stroke, ischemic stroke, convulsion, somnolence
	Pseudoephedrine hydrochloride	Not known	Posterior Reversible Encephalopathy Syndrome(PRES) (see section 4.4),

			Reversible Cerebral Vasoconstriction Syndrome (RCVS) (see section 4.4)
Eye disorders	Ibuprofen	Uncommon	Visual disturbances
	Pseudoephedrine hydrochloride	Not known	Ischaemic optic neuropathy
Ear and labyrinth disorders	Ibuprofen	Rare	Tinnitus
Cardiac disorders	Ibuprofen	Very rare	Palpitations, heart failure, myocardial infarction
	Ibuprofen	Not known	Kounis syndrome
	Pseudoephedrine hydrochloride	Not known	Palpitations, tachycardia, chest pain, arythmia
Vascular disorders	Ibuprofen	Very rare	Arterial hypertension
	Pseudoephedrine hydrochloride	Not known	Hypertension
Respiratory, thoracic and mediastinal disorders	Pseudoephedrine hydrochloride	Rare	Exacerbation of asthma or hypersensitivity reaction with bronchospasm
Gastrointestinal disorders	Ibuprofen	Common	Gastrointestinal discomfort, dyspepsia, abdominal pain, nausea, vomiting, flatulence, diarrhoea, constipation, minor gastrointestinal blood loss in rare cases leading to anaemia
	Ibuprofen	Uncommon	Gastrointestinal ulcers sometimes with bleeding and/or perforation, gastritis, ulcerative stomatitis, exacerbation of colitis and Crohn's disease (see section 4.4)
	Ibuprofen	Very rare	Oesophagitis, pancreatitis, intestinal diaphragm-like stricture
	Pseudoephedrine hydrochloride	Common	Dry mouth, nausea
	Pseudoephedrine hydrochloride	Not known	Thirst, vomiting, ischaemic colitis
Hepatobiliary disorders	Ibuprofen	Very rare	Hepatic dysfunction, hepatic damage, particularly in long-term therapy, hepatic failure, acute hepatitis
Skin and subcutaneous tissue disorders	Ibuprofen	Uncommon	Various skin rashes
	Ibuprofen	Very rare	Severe cutaneous adverse reactions (SCARs) including Stevens-Johnson syndrome, toxic epidermal necrolysis (Lyell syndrome), Erythema multiforme, exfoliative dermatitis, alopecia, severe skin infections and soft-tissue

			complications in a varicella infection
	Ibuprofen	Not known	Drug reaction with eosinophilia and systemic symptoms (DRESS syndrome), acute generalized exanthematous pustulosis (AGEP)
	Ibuprofen	Not known	Photosensitivity reactions
	Pseudoephedrine hydrochloride	Very Rare	Rash, pruritus
	Pseudoephedrine hydrochloride	Not known	Angioedema, severe skin reaction including acute generalized exanthematous pustulosis (AGEP), urticaria hyperhidrosis
Metabolism and Nutrition Disorders	Ibuprofen	Not known	Decreased Appetite Hypokalaemia*
Renal and Urinary disorders	Ibuprofen	Rare	Kidney-tissue damage (papillary necrosis) and elevated uric acid concentrations in the blood
	Ibuprofen	Very rare	Increase in serum creatinine, oedemas (particularly in patients with arterial hypertension or renal insufficiency), nephrotic syndrome, interstitial nephritis, acute renal insufficiency or failure
	Ibuprofen	Not known	Ureteric colic, dysuria Renal tubular acidosis*
	Pseudoephedrine hydrochloride	Not known	Difficulty in micturition Urinary retention, dysuria

*Renal tubular acidosis and hypokalaemia have been reported in the post-marketing setting typically following prolonged use of the ibuprofen component at higher than recommended doses.

Reporting of suspected adverse reactions

Reporting suspected adverse reactions after authorisation of the medicinal product is important. It allows continued monitoring of the benefit/risk balance of the medicinal product. Healthcare professionals are asked to report any suspected adverse reactions via the Yellow Card Scheme at: www.mhra.gov.uk/yellowcard or search for MHRA Yellow Card in the Google Play or Apple App Store.

4.9 Overdose

The clinical effects of overdose are more likely to be due to the pseudoephedrine hydrochloride rather than ibuprofen in this medicinal product. The effects do not correlate well with the dose taken due to inter-individual sensitivity to sympathomimetic properties.

Overdosage may result in nausea and vomiting.

Symptoms of sympathomimetic effect

CNS depression: e.g. sedation, apnea, cyanosis, coma

CNS stimulation (which is more likely in children): e.g. insomnia, hallucinations, convulsions, tremor, mydriasis, anxiety, agitation.

Besides the symptoms already mentioned as undesirable effects, the following symptoms can occur: hypertensive crisis, cardiac arrhythmias, muscle weakness and tenseness, euphoria, excitement, thirst, chest pain, dizziness, tinnitus, ataxia, blurred vision, hypotension, rhabdomyolysis, hypokalemia, palpitations, hypertension, and ischaemic bowel infarction.

Ibuprofen-related symptoms (in addition to the gastro-intestinal and neurological symptoms already mentioned as undesirable effects)

Drowsiness, nystagmus; tinnitus, hypotension, loss of consciousness, abdominal pain, nausea, vomiting, lethargy, headache, renal failure, renal tubular acidosis, fulminant hepatic failure, bradycardia, tachycardia, atrial fibrillation.

Prolonged use at higher than recommended doses or overdose may result in renal tubular acidosis and hypokalaemia.

In serious poisoning, metabolic acidosis may occur and the prothrombin time/INR may be prolonged, probably due to interference with the actions of circulating clotting factors. Acute renal failure and liver damage may occur.

Therapeutic measures

No specific antidote is available.

Consider oral administration of activated charcoal if the patient presents within one hour of ingestion of a potentially toxic amount.
Electrolytes should be checked and ECG performed. In case of cardiovascular instability and/or symptomatic electrolyte imbalance, symptomatic treatment should be initiated.

Prolonged use at higher than recommended doses may result in severe hypokalaemia and renal tubular acidosis. Symptoms may include reduced level of consciousness and generalised weakness (see section 4.4 and section 4.8).

5. PHARMACOLOGICAL PROPERTIES

5.1 Pharmacodynamic properties

Pharmacotherapeutic group: Cough and cold preparations; other cold preparations.
ATC code: R05X

Pseudoephedrine hydrochloride is a sympathomimetic agent which, when administered systemically, acts as a nasal decongestant.

Ibuprofen is an NSAID belonging to the propionic acid class of drugs. It is an arylcarboxylic acid derivative which has analgesic, antipyretic and anti-inflammatory properties as well as a short-acting inhibitory effect on platelet function. All of these properties are related to its ability to inhibit prostaglandin synthesis.

This product is a combination of a vasoconstrictor (pseudoephedrine hydrochloride) with an analgesic dose of an NSAID (ibuprofen).

Experimental data suggest that ibuprofen may competitively inhibit the effect of low dose acetylsalicylic acid on platelet aggregation when they are dosed concomitantly. Some pharmacodynamic studies show that when single doses of ibuprofen 400 mg were taken within 8 h before or within 30 min after immediate

release acetylsalicylic acid dosing (81 mg), a decreased effect of acetylsalicylic acid on the formation of thromboxane or platelet aggregation occurred. Although there are uncertainties regarding extrapolation of these data to the clinical situation, the possibility that regular, long-term use of ibuprofen may reduce the cardioprotective effect of low-dose acetylsalicylic acid cannot be excluded. No clinically relevant effect is considered to be likely for occasional ibuprofen use (see section 4.5).

5.2 Pharmacokinetic properties

Ibuprofen:
At therapeutic doses, pharmacokinetics of ibuprofen is linear.

Absorption:
Peak serum levels are reached approximately 90 minutes after oral dosing.
With single oral dose administration, peak serum levels in adults, are proportional to the dose (C_{max} 17 ± 3.5 µg/ml for a 200 mg dose and 30.3 ± 4.7 µg/ml for a 400 mg dose). Absorption of ibuprofen is delayed by food ingestion.

Distribution:
Ibuprofen does not accumulate. It is 99% bound to plasma proteins.
In the synovial fluid, ibuprofen is recovered at steady concentrations two to eight hours after dosing, with C_{max} in the synovial fluid being about one third of plasma C_{max}. After administration of a 400 mg ibuprofen dose every 6 hours in breast-feeding women, the amount of ibuprofen recovered in breast milk is less than 1 mg per 24 hours.

Biotransformation:
Ibuprofen does not have any enzyme-inducing effect. It is 90% metabolized and converted into inactive metabolites.

Elimination:
Ibuprofen is mainly excreted via the urine. Ibuprofen is completely excreted within 24 hours, with 10% eliminated unchanged and 90% in the form of inactive metabolites, mainly glucurono-conjugates.
Elimination half-life is approximately 2 hours.

The pharmacokinetic parameters of ibuprofen are only slightly modified in the elderly, in renal failure patients and in patients with hepatic insufficiency. The alterations observed do not require dosage adjustment.

Pseudoephedrine hydrochloride:

When administered by oral route, pseudoephedrine is excreted mainly via the kidney in unchanged form (70 to 90 %).

Elimination half-life depends on urinary pH.

Urine alcalinazation results in an enhanced increase in tubular reabsorption, and consequently the prolongation of the elimination half-life of pseudoephedrine.

5.3 Preclinical safety data

The LD_{50} values for the combination of ibuprofen and pseudoephedrine hydrochloride in acute oral toxicity studies were: 2.40 g/kg for mice and 1.45 g/kg for rats.

No repeated dose toxicity studies on the combination of ibuprofen and pseudoephedrine hydrochloride have been performed.

No mutagenicity was observed with ibuprofen and pseudoephedrine hydrochloride / ibuprofen in combination using the Ames test.

The subchronic and chronic toxicity of ibuprofen in animal experiments showed up mainly in the form of lesions and ulcerations in the gastro-intestinal tract. In studies in rats and mice, no evidence of carcinogenic effects of ibuprofen was found.

Reprotoxicity studies in mice and rats with individual ingredients (~ 100 mg/kg ibuprofen; ~15 mg/kg pseudoephedrine hydrochloride) nor a combination of these revealed no indication of maternal or foetal toxicity or teratogenicity.

At a maternally toxic dose, pseudoephedrine hydrochloride induced foetotoxicity (reduced foetal weight and delayed ossification) in rats. Fertility studies or peri-postnatal studies have not been performed for pseudoephedrine hydrochloride.

Published reproductive toxicity studies on ibuprofen demonstrated an inhibition of ovulation in rabbits and impaired implantation in different animal species (rabbit, rat, and mouse). Studies in rats and rabbits have demonstrated that ibuprofen passes the placenta; for maternally toxic doses, an increased incidence of malformations (e.g. ventricular septal defects) was observed.

The active substance ibuprofen may show an environmental risk for the aquatic environment, especially for fish.

6. PHARMACEUTICAL PARTICULARS

6.1 List of excipients

Tablet Core
Microcrystalline cellulose
Calcium hydrogen phosphate anhydrous
Croscarmellose sodium
Maize starch
Silica, colloidal anhydrous
Magnesium stearate

Tablet Coat
Hypromellose
Macrogol 400
Talc
Titanium dioxide (E171)
Iron oxide yellow (E 172)

6.2 Incompatibilities

Not applicable.

6.3 Shelf life

48 months.

6.4 Special precautions for storage

Do not store above 30ºC.

6.5 Nature and contents of container

Child-resistant PVC/PVDC/aluminium foil blister.

Pack sizes: 10, 12, 20, 24 film-coated tablets

Not all pack sizes may be marketed.

6.6 Special precautions for disposal

Any unused medicinal product or waste material should be disposed of in accordance with local requirements.

7. MARKETING AUTHORISATION HOLDER

McNeil Products Limited
50 – 100 Holmers Farm Way
High Wycombe
Buckinghamshire
HP12 4EG
UK

8. MARKETING AUTHORISATION NUMBER

PL 15513/0396

9. DATE OF FIRST AUTHORISATION/RENEWAL OF THE AUTHORISATION

25 March 2020

10. DATE OF REVISION OF THE TEXT

20 February 2025.

SUMMARY OF PRODUCT CHARACTERISTICS

1 NAME OF THE MEDICINAL PRODUCT

Benylin Mucus Cough & Cold All in One Relief Tablets
Sudafed Mucus Relief Triple Action Cold & Flu Tablets
Benylin Chesty Cough & Cold Tablets

2 QUALITATIVE AND QUANTITATIVE COMPOSITION

Active Ingredient	**mg/Tablet**
Paracetamol	250
Guaifenesin	100
Phenylephrine Hydrochloride	5

For full list of excipients, see section 6.1.

3 PHARMACEUTICAL FORM

Film-coated tablet
White capsule shaped tablet, embossed with "PGP", free from specks and blemishes.

4 CLINICAL PARTICULARS

4.1 Therapeutic indications

For the relief of symptoms associated with colds and flu, including aches and pains, headache, blocked nose and sore throat, chills and chesty cough.

4.2 Posology and method of administration

For oral use. Take tablets with water. Swallow whole, do not chew.

Adults, the Elderly and children aged 12 years and over:

Two tablets. Repeat every four hours as required. Do not take more than 8 tablets (4 doses) in any 24 hour period.
Do not give to children under 12 years, except on medical advice.
Do not take more medicine than the label tells you to.

4.3 Contradictions

Hypersensitivity to paracetamol or any of the other ingredients.

Hepatic or severe renal impairment, hypertension, hyperthyroidism, diabetes, heart disease or those taking tricyclic antidepressants or beta-blocking drugs and those patients who are taking or have taken, within the last two weeks, monoamine oxidase inhibitors (see section 4.5). Avoid in patients with prostatic enlargement.

Use in patients with glaucoma or urinary retention.

Use in patients who are currently receiving other sympathomimetic drugs.

Phaeochromocytoma.

Closed angle glaucoma.

4.4 Special warnings and precautions for use

The physician or pharmacist should check that sympathomimetic containing preparations are not simultaneously administered by several routes i.e. orally and topically (nasal, aural and eye preparations).

Care is advised in the administration of paracetamol to patients with severe renal or hepatic impairment. The hazards of overdose are greater in those with non-cirrhotic alcoholic liver disease.
Patients suffering from chronic cough or asthma should consult a physician before taking this product.

Patients should stop using the product and consult a health care professional if cough lasts for more than 5 days or comes back, or is accompanied by a fever, rash or persistent headache.

Do not take with a cough suppressant.

Medical advice should be sought before taking this product in patients with these conditions: An enlargement of the prostate gland
Occlusive vascular disease (e.g. Raynaud's Phenomenon) Cardiovascular disease
This product should not be used by patients taking other sympathomimetics (such as decongestants, appetite suppressants and amphetamine-like psychostimulants).

Concomitant use of other paracetamol-containing products should be avoided. If symptoms persist consult your doctor.

Use with caution in patients with circulatory disorders such as Raynaud’s Phenomenon. Patients with prostatic hypertrophy may have increased difficulty with micturition.
Sympathomimetic-containing products may act as cerebral stimulants giving rise to insomnia, nervousness, hyperpyrexia, tremor and epileptiform convulsions.

Long term use of the product is not recommended.

Do not take more medicine than the label tells you to. If you do not get better, talk to your doctor.

Keep out of the sight and reach of children.
Do not take with any other flu, cold or decongestant products.
Contains paracetamol. Do not take anything else containing paracetamol while taking this medicine.
Talk to your doctor at once if you take too much of this medicine, even if you feel well. This is because too much paracetamol can cause delayed, serious liver damage.

Cases of high anion gap metabolic acidosis (HAGMA) due to pyroglutamic acidosis have been reported in patients with severe illness such as severe renal impairment and sepsis, or in patients with malnutrition and other sources of glutathione deficiency (e.g. chronic alcoholism) who were treated with paracetamol at therapeutic dose for a prolonged period or a combination of paracetamol and flucloxacillin. If HAGMA due to pyroglutamic acidosis is suspected, prompt discontinuation of paracetamol and close monitoring is recommended. The measurement of urinary 5-oxoproline may be useful to identify pyroglutamic acidosis as underlying cause of HAGMA in patients with multiple risk factors.

4.5 Interaction with other medicinal products and other forms of interaction

PARACETAMOL

The speed of absorption of paracetamol may be increased by metoclopramide or domperidone and absorption reduced by colestyramine.

The anticoagulant effect of warfarin and other coumarins may be enhanced by prolonged regular use of Paracetamol with increased risk of bleeding, occasional doses have no significant effect. The hepato-toxicity of paracetamol may be potentiated by excessive intake of alcohol. Pharmacological interactions involving paracetamol with a number of other drugs have been reported. These are considered to be of unlikely clinical significance in acute use at the dosage regimen proposed. Drugs which induce hepatic microsomal enzymes, such as alcohol, barbiturates, monoamine oxidase inhibitors and tricyclic antidepressants, may increase the hepatotoxicity of paracetamol particularly after overdosage. Contraindicated in patients currently receiving or within two weeks of stopping therapy with monoamine oxidase inhibitors because of a risk of hypertensive crisis.

Caution should be taken when paracetamol is used concomitantly with flucloxacillin as concurrent intake has been associated with high anion gap metabolic acidosis due to pyroglutamic acidosis, especially in patients with risk factors (see section 4.4)

PHENYLEPHRINE HYDROCHLORIDE

Phenylephrine may adversely interact with other sympathomimetics, vasodilators and beta blockers.

Sympathomimetic-containing products should be used with great care in patients suffering from angina and in patients receiving phenothiazines or tricyclic antidepressants.

Sympathomimetic-containing products should be used in caution in patients receiving digitalis, beta-adrenergic blockers, guanethidine, reserpine, methyldopa or anti-hypertensive agents

Concurrent use with halogentated anaesthetic agents such as chloroform, cyclopropane, halothane, enflurane or isoflurane may provoke or worsen ventricular arrhythmias.
Phenylephrine should be used with caution in combination with the following drugs as interactions have been reported:

Monoamine oxidase inhibitors (including moclobemide)	Hypertensive interactions occur between sympathomimetic amines such as phenylephrine and monoamine oxidase inhibitors (see contraindications).
Sympathomimetic amines	Concomitant use of phenylephrine with other sympathomimetic amines can increase the risk of cardiovascular side effects.
Beta-blockers and other antihypertensives (including debrisoquine, guanethidine, reserpine, methyldopa)	Phenylephrine may reduce the efficacy of beta- blocking drugs and antihypertensive drugs. The risk of hypertension and other cardiovascular side effects may be increased.
Tricyclic antidepressants (e.g. amitriptyline)	May increase the risk of cardiovascular side effects with phenylephrine.
Ergot alkaloids (ergotamine and methylsergide)	Increased risk of ergotism
Digoxin and cardiac glycosides	Increase the risk of irregular heartbeat or heart attack

If urine is collected within 24 hours of a dose of this product, a metabolite may cause a colour interference with laboratory determinations of 5 hydroxyindoleacetic acid (5-HIAA) and vanillymandelic acid (VMA).

4.6 Fertility, pregnancy and lactation

PARACETAMOL

A large amount of data on pregnant women indicate neither malformative, nor feto/neonatal toxicity. Epidemiological studies on neurodevelopment in children exposed to paracetamol in utero show inconclusive results. If clinically needed, paracetamol can be used during pregnancy however it should be used at the lowest effective dose for the shortest possible time and at the lowest possible frequency.

This product should not be used during pregnancy without medical advice.

Paracetamol is excreted in breast milk but not in a clinically significant amount. This product should not be used whilst breast feeding without medical advice

GUAIFENESIN

The safety of guaifenesin in pregnancy and lactation has not been fully established but this constituent is not thought to be hazardous. However the product should only be used in pregnancy when considered essential by the doctor.

PHENYLEPHRINE HYDROCHLORIDE

Due to the vasconstrictive properties of Phenylephrine, the product should be used with caution in patients with a history of pre-eclampsia. Phenylephrine may reduce placental perfusion and the product should be used in pregnancy only if the benefits outweigh this risk. There is no information on use in lactation.
The safety of phenylephrine during pregnancy has not been established.
Phenylephrine is excreted in breast milk but not in a clinically significant amount.

This product should not be used whilst breast feeding without medical advice.

4.7 Effects on ability to drive and use machines

None known.

Patients should be advised not to drive or operate machinery if affected by dizziness.

4.8 Undesirable effects

The active ingredients are usually well tolerated in normal use.

PARACETAMOL

Very rare cases of serious skin reactions have been reported.

Adverse events from historical clinical trial data are both infrequent and from small patient exposure. Events reported from extensive post-marketing experience at therapeutic/labelled dose and considered attributable are tabulated below by MedDRA System Organ Class. Due to limited clinical trial data, the frequency of these adverse events is not known (cannot be estimated from available data), but post-marketing

experience indicates that adverse reactions to paracetamol are rare and serious reactions are very rare.

Body System	**Undesirable effect**
Blood and lymphatic system disorders	Thrombocytopenia
	Agranulocytosis
	These are not necessarily causally related to paracetamol
Immune system disorders	Anaphylaxis
	Cutaneous hypersensitivity reactions including skin rashes, angioedema and Stevens Johnson syndrome, toxic epidermal necrolysis
Respiratory, thoracic and mediastinal disorders	Bronchospasm*
Hepatobiliary disorders	Hepatic dysfunction
Gastrointestinal disorders	Acute pancreatitis
Metabolism and nutrition disorders	High anion gap metabolic acidosis**

* There have been cases of bronchospasm with paracetamol, but these are more likely in asthmatics sensitive to aspirin or other NSAIDs.
** Frequency "Not known" (cannot be estimated from the available data)

Description of selected adverse reactions

High anion gap metabolic acidosis

Cases of high anion gap metabolic acidosis due to pyroglutamic acidosis have been observed in patients with risk factors using paracetamol (see section 4.4). Pyroglutamic acidosis may occur as a consequence of low glutathione levels in these patients.

GUAIFENESIN

The frequency of these events is unknown but considered likely to be rare.

Body System	**Undesirable effect**
Immune system disorders	Allergic reactions, angioedema, anaphylactic reactions
Respiratory, thoracic and mediastinal disorders	Dyspnoea*
Gastrointestinal disorders	Nausea, vomiting, abdominal discomfort,
Skin and subcutaneous disorders	Rash, urticaria

PHENYLEPHRINE HYDROCHLORIDE

The following adverse events have been observed in clinical trials with phenylephrine and may therefore represent the most commonly occurring adverse events.

Body System	**Undesirable effect**
Psychiatric disorders	Nervousness, irritability, restlessness, and excitability
Nervous system disorders	Headache, dizziness, insomnia
Cardiac disorders	Increased blood pressure
Gastrointestinal disorders	Nausea, Vomiting, diarrhoea

Adverse reactions identified during post-marketing use are listed below. The frequency of these reactions is unknown but likely to be rare.

Eye disorders	Mydriasis, acute angle closure glaucoma, most likely to occur in those with closed angle glaucoma
Cardiac disorders	Tachycardia, palpitations
Skin and subcutaneous disorders	Allergic reactions (e.g. rash, urticaria, allergic dermatitis). Hypersensitivity reactions including cross-sensitivity with other sympathomimetics may occur.
Renal and urinary disorders	Dysuria. Urinary retention. This is more likely to occur in men with an enlarged prostate.

Reporting of suspected adverse reactions
Reporting suspected adverse reactions after authorisation of the medicinal product is important. It allows continued monitoring of the benefit/risk balance of the medicinal product. Healthcare professionals are asked to report any suspected adverse reactions via the Yellow Card Scheme at: www.mhra.gov.uk/yellowcard or search for MHRA Yellow Card in the Google Play or Apple App Store.

4.9 Overdose

PARACETAMOL

Liver damage is possible in adults who have taken 10 g or more of paracetamol. Ingestion of 5 g or more of paracetamol may lead to liver damage if the patient has risk factors (see below).

Risk Factors

If the patient

a) is on long term treatment with carbamazepine, phenobarbital, phenytoin, primidone, rifampicin, St John's Wort or other drugs that induce liver enzymes.

or

b) Regularly consumes ethanol in excess of recommended amounts.

or

c) Is likely to be glutathione deplete e.g. eating disorders, cystic fibrosis, HIV infection, starvation, cachexia.

Symptoms

Symptoms of paracetamol overdosage in the first 24 hours are pallor, nausea, vomiting, anorexia and abdominal pain. Liver damage may become apparent 12 to 48 hours after ingestion. Abnormalities of glucose metabolism and metabolic acidosis may occur. In severe poisoning, hepatic failure may progress to encephalopathy, haemorrhage, hypoglycaemia, cerebral oedema, and death. Acute renal failure with acute tubular necrosis, strongly suggested by loin pain, haematuria and proteinuria, may develop even in the absence of severe liver damage. Cardiac arrhythmias and pancreatitis have been reported.

Management

Immediate treatment is essential in the management of paracetamol overdose. Despite a lack of significant early symptoms, patients should be referred to hospital urgently for immediate medical attention. Symptoms may be limited to nausea or vomiting and may not reflect the severity of overdose or the risk of organ damage. Management should be accordance with established treatment guidelines, see British National Formulary (BNF) overdose section.

Treatment with activated charcoal should be considered if the overdose has been taken within one hour. Plasma paracetamol concentration should be measured at four hours or later after ingestion (earlier concentrations are unreliable). Treatment with N-acetylcysteine, may be used up to 24 hours after ingestion of paracetamol, however, the maximum protective effect is obtained up to eight hours post-ingestion.

The effectiveness of the antidote declines sharply after this time. If required the patient should be given intravenous N-acetylcysteine, in line with the established dosage schedule. If vomiting is not a problem, oral methionine may be a suitable alternative for remote areas, outside hospital. Management of patients who present with serious hepatic dysfunction beyond 24 hours from ingestion should be discussed with the National Poisons Information Service (NPIS) or a liver unit.

GUAIFENESIN

Symptoms and signs
Very large doses of guaifenesin can cause nausea and vomiting.

Treatment

Vomiting should be treated by fluid replacement and monitoring of electrolytes if indicated.

PHENYLEPHRINE HYDROCHLORIDE

Symptoms and signs
Phenylephrine overdosage is likely to result in effects similar to those listed under adverse reactions. Additional symptoms may include hypertension and possibly reflux bradycardia. In severe cases confusion, hallucinations, seizures and arrhythmias may occur. However the amount required to produce serious phenylephrine toxicity would be greater than required to cause paracetamol-related toxicity.

Treatment

Treatment should be as clinically appropriate. Severe hypertension may need to be treated with an alpha blocking drug such as phentolamine.

5 PHARMACOLOGICAL PROPERTIES

5.1 Pharmacodynamic properties

Pharmacotherapeutic Group:	Other analgesics and antipyretics & Other cold combination preparations
ATC code:	N02B E51

Paracetamol is an analgesic and antipyretic.
Guaifenesin is an expectorant.
Phenylephrine Hydrochloride is a sympathomimetic decongestant.

The active ingredients are not known to cause sedation.

5.2 Pharmacokinetic properties

Paracetamol is rapidly absorbed from the gastrointestinal tract. It is metabolised in the liver and excreted in the urine, mainly as the glucuronide and sulphate conjugates.

Guaifenesin is rapidly absorbed after oral administration. It is rapidly metabolised by oxidation to β-(2 methyoxy-phenoxy) lactic acid, which is excreted in the urine.

Phenylephrine hydrochloride is irregularly absorbed from the gastrointestinal tract and undergoes first-pass metabolism by monoamine oxidase in the gut and liver; orally administered phenylephrine thus has reduced bioavailability. It is excreted in the urine almost entirely as the sulphate conjugate.

5.3 Preclinical safety data

Conventional studies using the currently accepted standards for the evaluation of toxicity to reproduction and development are not available.

6 PHARMACEUTICAL PARTICULARS

6.1 List of excipients

Core:
Microcrystalline cellulose
Stearic acid
Povidone

Film Coat:
Hypromellose
Polyethylene glycol

6.2 Incompatibilities

None known

6.3 Shelf life

3 years.

6.4 Special precautions for storage

Do not store above 25°C.

6.5 Nature and contents of container

Child Resistant PVC/Al blister.

Pack sizes: 8, 12 and 16 tablets.

6.6 Special precautions for disposal

None

7 MARKETING AUTHORISATION HOLDER

Wrafton Laboratories Limited (T/A Perrigo)
Braunton
Devon
EX33 2DL

8 MARKETING AUTHORISATION NUMBER(S)

PL 12063/0112

9 DATE OF FIRST AUTHORISATION/RENEWAL OF THE AUTHORISATION

21/11/2024

10 DATE OF REVISION OF THE TEXT

14/06/2025

SUMMARY OF PRODUCT CHARACTERISTICS

1 NAME OF THE MEDICINAL PRODUCT

Asda Max Strength Cold & Flu Day & Night Capsules, hard
Benylin Cold & Flu Day & Night Max Strength Capsules, hard
Morrisons Day & Night Max Strength Cold & Flu Capsules, hard
Paramed Max Strength Cold & Flu Day & Night Capsules, hard
Superdrug Max Strength Cold & Flu Day & Night Capsules, hard
Tesco Health Max Strength Cold & Flu Day & Night Capsules, hard
Wilko Max Strength Cold & Flu Day & Night Capsules, hard
Boots Max Strength Cold & Flu Relief Day & Night Capsules, hard
Numark Max Strength Cold & Flu Day & Night Capsules, hard
Sudafed Mucus Relief Day & Night Capsules, hard
Sudafed Congestion & Headache Relief Day and Night Capsules, hard
Sainsbury's Healthcare Max Strength Cold & Flu Day & Night Capsules, hard
Health Essentials Max Strength Cold & Flu Day & Night Capsules, hard
Galpharm Day & Night Max Strength, Cold & Flu Relief Capsules
Essential Waitrose & Partners Max Strength Cold & Flu Day & Night Capsules, hard
Optipharma Max Strength Cold & Flu Day & Night Capsules, hard

2 QUALITATIVE AND QUANTITATIVE COMPOSITION

DAY CAPSULE

Active Ingredient	**mg/Capsule**
Paracetamol	500
Caffeine	25
Phenylephrine Hydrochloride	6.1

NIGHT CAPSULE

Active Ingredient	**mg/Capsule**
Paracetamol	500
Phenylephrine Hydrochloride	6.1

For a full list of excipients, see section 6.1.

3. PHARMACEUTICAL FORM

Capsule, hard (capsule)

Red/yellow (Day) and dark blue/light blue (Night) hard gelatin capsules containing the drug products, which are off-white powders.

4 CLINICAL PARTICULARS

4.1 Therapeutic indications

DAY CAPSULE
For the relief of symptoms associated with the common cold and influenza, including relief of aches and pains, sore throat, headache, fatigue and drowsiness, nasal congestion and lowering of temperature.

NIGHT CAPSULE
For the relief of symptoms associated with the common cold and influenza, including relief of aches and pains, sore throat, headache, nasal congestion and lowering of temperature.

4.2 Posology and method of administration

This product is contraindicated in patients with severe renal impairment (see sections 4.3 and 4.4)

Paracetamol should with caution in the following situations, (see section 4.4)

4.3 Contraindications

This product is contraindicated in case of:

- Hypersensitivity to the active substances (paracetamol, phenylephrine, caffeine) or any of the other excipients listed in section 6.1.
- Patients currently receiving or within two weeks of stopping therapy with monoamine oxidase inhibitors.
- Hypertension.
- Cardiovascular disorders
- Severe hepatic impairment
- Severe renal impairment
- Hyperthyroidism.
- Diabetes mellitus
- Pheochromocytoma
- Use in patients receiving therapy with tricyclic antidepressants or beta-blockers (see section 4.5)
- Angle closure glaucoma
- Use in patients who are currently receiving other sympathomimetics (such as decongestants, appetite suppressants, amphetamine-like psychostimulants)

  Avoid in patients with prostatic enlargement.

4.4 Special warnings and precautions for use

Underlying liver disease increases the risk of paracetamol-related liver damage. Paracetamol should be administered with caution to patients with renal impairment and mild or moderate hepatic impairment. Patients who have been diagnosed with liver or kidney impairment must seek medical advice before taking this medication. The hazards of overdose are greater in those with non-cirrhotic alcoholic liver disease.

This medicine should be administered only with particular caution under the following circumstances:

- Gilbert's Syndrome (familial non-haemolytic jaundice)
- Glucose-6-phosphate dehydrogenase deficiency
- Haemolytic anaemia
- Glutathione deficiency
- Dehydration
- Urinary retention
- Occlusive vascular disease (e.g., Raynaud's syndrome)

Hepatotoxicity at therapeutic doses of paracetamol

Cases of paracetamol induced hepatotoxicity, including fatal cases, have been reported in patients taking paracetamol at doses within the therapeutic range. These cases were reported in patients with one or more risk factors for hepatotoxicity including low body weight (<50 Kg), renal and hepatic impairment, chronic alcoholism, concomitant intake of hepatotoxic drugs and in acute and chronic malnutrition (low reserves of hepatic glutathione). Paracetamol should be administered with caution to patients with these risk factors. Caution is also advised in patients on concomitant treatment with drugs that induce hepatic enzymes and in conditions which may predispose to glutathione deficiency (see sections 4.2, 4.5 and 4.9).

Doses of paracetamol should be reviewed at clinically appropriate intervals and patients should be monitored for emergence of new risk factors for hepatotoxicity which may warrant dosage adjustment.

Prolonged use of any type of painkiller for headaches can make them worse. If this situation is experienced or suspected, medical advice should be obtained and treatment should be discontinued. The diagnosis of medication overuse headache should be suspected in patients who have frequent or daily headaches despite (or because of) the regular use of headache medications.

Precaution should be observed in patients with asthma who are sensitive to acetylsalicylic acid since mild bronchospasms are reported in association with paracetamol (cross reaction).

Patients should be advised not to take other paracetamol containing products, cold and flu medicines or cough medicines concurrently. Immediate medical advice should be sought in the event of overdosage even if the patient feels well because the risk of irreversible liver damage (see section 4.9).

Cases of high anion gap metabolic acidosis (HAGMA) due to pyroglutamic acidosis have been reported in patients with severe illness such as severe renal impairment and sepsis or in patients with malnutrition or other sources of glutathione deficiency (e.g., chronic alcoholism) who were treated with paracetamol at therapeutic dose for a prolonged period or a combination of paracetamol and flucloxacillin. If HAGMA due to pyroglutamic acidosis is suspected, prompt discontinuation of paracetamol and close monitoring is recommended. The measurement of urinary 5-oxoproline may be useful to identify pyroglutamic acidosis as underlying cause of HAGMA in patients with multiple risk factors.

Excessive intake of caffeine (e.g., coffee, tea and some canned drinks) should be avoided while taking this product (see section 4.9).

Should be given with care to patients with a history of peptic ulcer. This medicine contains less than 1 mmol sodium (23 mg) per capsule, that is to say essentially 'sodium-free'.

4.5 Interaction with other medicinal products and other forms of interaction

Concomitant use of other paracetamol-containing products, cold and flu medicines or cough medicines should be avoided.

Paracetamol

The speed of absorption of paracetamol may be increased by metoclopramide or domperidone and absorption reduced by colestyramine.

The anticoagulant effect of warfarin and other coumarins may be enhanced by prolonged regular use of paracetamol with increased risk of bleeding; occasional doses have no significant effect.

Drugs which induce hepatic microsomal enzymes, such as alcohol, barbiturates, monoamine oxidase inhibitors and tricyclic antidepressants, may increase the hepatotoxicity of paracetamol, particularly after overdosage.

In concomitant treatment with probenecid, the dose of paracetamol should be reduced since probenecid reduces the clearance of paracetamol by 50% since it prevents the conjugation of paracetamol with glucuronic acid.

There is limited evidence suggesting that paracetamol may affect chloramphenicol pharmacokinetics.

Caution should be taken when paracetamol is used concomitantly with flucloxacillin as concurrent intake has been associated with high anion gap metabolic acidosis due to pyroglutamic acidosis, especially in patients with risk factors (see section 4.4)

Phenylephrine Hydrochloride

Phenylephrine may adversely interact with below drugs. Medical advice should be sought before taking these:

- Sympathomimetics: Concomitant administration of phenylephrine with sympathomimetic amines may increase the risk of cardiovascular side effects. Concomitant use is contraindicated (see section 4.3)
- Vasodilators
- Beta blockers and other antihypertensive agents (including debrisoquin, guanethidine, reserpine, methyldopa): Phenylephrine may reduce the efficacy of beta-blockers and antihypertensive agents. The risk of hypertension and other cardiovascular side effects may be increased. Concomitant use with beta blockers is contraindicated (see section 4.3)
- Digoxin and cardiac glycosides: Concomitant use of phenylephrine may increase the risk of irregular heartbeat or heart attack.
- Monoamine oxidase inhibitors: Hypertensive interactions occur between sympathomimetic amines such as phenylephrine and monoamine oxidase inhibitors. Concomitant use is contraindicated (see section 4.3)
- Tricyclic antidepressants (e.g., amitriptyline): Concurrent administration with phenylephrine may increase the risk of cardiovascular side effects. Concomitant use is contraindicated (see section 4.3)
- Ergot alkaloids (e.g., ergotamine and methysergide): Concomitant use of phenylephrine may cause increased risk of ergotism.

Caffeine

Caffeine, a CNS stimulant, has an antagonistic effect towards the action of sedative and tranquilizers. Caffeine may enhance the tachycardia effect of some decongestants.

4.6 Fertility, pregnancy and lactation

Pregnancy

This medicinal product is contraindicated during pregnancy. Based on human experience, phenylephrine hydrochloride causes congenital malformation when administered during pregnancy. It has also been shown to have possible associations with foetal hypoxia.

Phenylephrine should not be used during pregnancy.

A large amount of data on pregnant women indicates no malformative nor feto/neonatal toxicity of paracetamol. Epidemiological studies on neurodevelopment in children exposed to paracetamol in utero show inconclusive results.

If clinically needed, paracetamol can be used during pregnancy however it should be used at the lowest effective dose for the shortest possible time and at the lowest possible frequency.

The safety of this medicine during pregnancy has not been established but in view of a possible association of foetal abnormalities with exposure to phenylephrine, the product should be avoided during pregnancy. In addition, because phenylephrine may reduce placental perfusion, the product should not be used in patients with a history of preeclampsia.

Taken during pregnancy, it appears that the half-life of caffeine is prolonged. This is a possible contributing factor in hyperemesis gravidarum (morning sickness). In pregnancy a total daily consumption above 200 mg caffeine per day could possibly increase the risk of spontaneous abortion and low birth weight.

Lactation
The safety of this medicine during lactation has not been established.

This medicinal product should not be used whilst breastfeeding without medical advice.

Phenylephrine may be excreted in breast milk. Paracetamol is excreted in breast milk but not in a clinically significant amount. Available published data do not contraindicate breast feeding.

Caffeine appears in breast milk. Irritability and poor sleeping pattern in the infant have been reported.

Fertility
There are no available human data regarding the influence of this medicine on fertility.

4.7 Effects on ability to drive and use machines

This medicinal product has minor influence on the ability to drive and use machines. Patients should be advised not to drive or operate machinery if affected by dizziness

4.8 Undesirable effects

Adverse reactions reported from extensive post-marketing experience are tabulated below by System Organ Class and frequency. The following convention has been utilised for the classification of undesirable effects: very common (≥1/10), common (≥1/100, <1/10), uncommon (≥1/1,000, <1/100), rare (≥1/10,000, <1/1000), very rare (<1/10,000), not known (cannot be estimated from available data).

Paracetamol

System Organ Class	Undesirable effect	Frequency
Blood and lymphatic system disorders	There have been reports of blood dyscrasias including thrombocytopenia, leukopenia, pancytopenia, neutropenia and agranulocytosis, but these were not necessarily causally related to paracetamol.	Very rare
Immune system disorders	Anaphylaxis	Very rare
	Allergies (not including angioedema)	Rare
Respiratory, thoracic and mediastinal disorders	Bronchospasms in patients sensitive to aspirin and other NSAIDs	Very rare
Hepatobiliary disorders	Hepatic dysfunction	Very rare
Skin and subcutaneous tissue disorders	Cutaneous hypersensitivity reactions including skin rashes, pruritus, sweating, purpura, urticaria and angioedema.	Very rare
	Very rare cases of serious skin reactions have been reported.	Very rare
	Toxic epidermal necrolysis (TEN), drug-induced dermatitis, Stevens-Johnson syndrome (SJS), Acute Generalized exanthematous pustulosis (AGEP)	
Renal and urinary disorder	Sterile pyuria	Very rare
Metabolism and nutrition disorders	High anion gap metabolic acidosis	Not known

Description of selected adverse reactions *High anion gap metabolic acidosis*

Cases of high anion gap metabolic acidosis due to pyroglutamic acidosis have been observed in patients with risk factors using paracetamol (see section 4.4). Pyroglutamic acidosis may occur as a consequence of low glutathione levels in these patients.

Caffeine **(Day capsules only)**

System Organ Class	Undesirable effect	Frequency
Psychiatric disorders	Insomnia	Not known
Nervous system disorders	Nervousness Dizziness	Not known
Gastrointestinal disorders	Nausea	Not known

Phenylephrine Hydrochloride

System Organ Class	Undesirable effect	Frequency
Immune system disorders	Allergic reactions	Rare
Psychiatric disorders	Nervousness, insomnia	Not Known
Nervous system disorders	Headache, dizziness	Not known
Eye disorders	Mydriasis, acute angle closure glaucoma, most likely to occur in those with closed angle glaucoma	Rare
Cardiac disorders	Palpitations, tachycardia or reflex bradycardia	Rare
	Elevated blood pressure, cardiac arrythmias	Not known
Gastrointestinal disorders	Nausea, vomiting, diarrhoea	Not known
Skin and subcutaneous disorders	Rash, urticaria, allergic dermatitis	Rare
	Tingling and coolness of the skin	Not known
Renal and urinary disorders	Dysuria, urinary retention. This is most likely to occur in men with an enlarged prostate.	Not known

Reporting of suspected adverse reactions

Reporting suspected adverse reactions after authorisation of the medicinal product is important. It allows continued monitoring of the benefit/risk balance of the medicinal product. Healthcare professionals are asked to report any suspected adverse reactions via the Yellow Card Scheme at: www.mhra.gov.uk/yellowcard or search for MHRA Yellow Card in the Google Play or Apple App Store.

4.9 Overdose

Paracetamol

There is a risk of poisoning, particularly in elderly subjects, in young children, in

patients with liver disease, in cases of chronic alcoholism, in patients with chronic malnutrition. Overdosing may be fatal in these cases. Symptoms generally appear within the first 24 hours and comprise: nausea, vomiting, anorexia, pallor, and abdominal pain.

An overdose of paracetamol, administered as a single dose, in adults or children can induce complete and irreversible liver cell necrosis resulting in hepatocellular insufficiency, metabolic acidosis and encephalopathy, which may lead to coma and death.

Simultaneously, increased levels of hepatic transaminases (AST, ALT), lactate dehydrogenase and bilirubin are observed together with increased prothrombin levels that may appear 12 to 48 hours after administration.

Liver damage is likely in adults who have taken more than the recommended amounts of paracetamol. It is considered that excess quantities of toxic metabolite (usually adequately detoxified by glutathione when normal doses of paracetamol are ingested), become irreversibly bound to liver tissue.

Some patients may be at increased risk of liver damage from paracetamol toxicity.

Risk Factors

If the patient

a) Is on long term treatment with carbamazepine, phenobarbitone, phenytoin, primidone, rifampicin, St John's Wort or other drugs that induce liver enzymes.

Or

b) Regularly consumes ethanol in excess of recommended amounts.

Or

c) Is likely to be glutathione deplete e.g., eating disorders, cystic fibrosis, HIV infection, starvation, cachexia.

Symptoms

Symptoms of paracetamol overdosage in the first 24 hours are pallor, nausea, vomiting, anorexia and abdominal pain. Liver damage may become apparent 12 to 48 hours after ingestion. Abnormalities of glucose metabolism and metabolic acidosis may occur. In severe poisoning, hepatic failure may progress to encephalopathy, haemorrhage, hypoglycaemia, cerebral oedema, and death. Acute renal failure with acute tubular necrosis, strongly suggested by loin pain, haematuria and proteinuria, may develop even in the absence of severe liver damage. Cardiac arrhythmias and pancreatitis have been reported.

Management

Immediate treatment is essential in the management of paracetamol overdose. Despite a lack of significant early symptoms, patients should be referred to hospital urgently for immediate medical attention. Symptoms may be limited to nausea or vomiting and may not reflect the severity of overdose or the risk of organ damage. Management should be in accordance with established treatment guidelines, see British National Formulary (BNF) overdose section.

Treatment with activated charcoal should be considered if the overdose has been taken within 1 hour. Plasma paracetamol concentration should be measured at 4

hours or later after ingestion (earlier concentrations are unreliable). Treatment with N-acetylcysteine may be used up to 24 hours after ingestion of paracetamol, however, the maximum protective effect is obtained up to 8 hours post-ingestion. The effectiveness of the antidote declines sharply after this time. If required the patient should be given intravenous N-acetylcysteine, in line with the established dosage schedule. If vomiting is not a problem, oral methionine may be a suitable alternative for remote areas, outside hospital. Management of patients who present with serious hepatic dysfunction beyond 24 hours from ingestion should be discussed with the National Poison Information Service (NPIS) or a liver unit.

Caffeine **(Day capsules only)**
Overuse of this product, defined as consumption of quantities in excess of the recommended dose, or consumption for a prolonged period of time, may lead to physical or psychological dependency. Doses over 1g are probably necessary to induce toxicity, 2 – 5g to produce severe toxicity and 5 – 10g is likely to be lethal. It must be noted that for clinically significant symptoms of caffeine overdose to occur with this product, the amount ingested would be associated with serious paracetamol related toxicity.
Symptoms include: epigastric pain, vomiting, diuresis, tachycardia or cardiac arrhythmia, CNS stimulation (insomnia, restlessness, excitement, agitation, jitteriness, tremors, convulsions).
No specific antidote is available, reduce or stop dosage and avoid excessive intake of coffee or tea.

Phenylephrine Hydrochloride
Phenylephrine overdosage is likely to result in effects similar to those listed under adverse reactions. Additional symptoms may include irritability, restlessness, hypertension and possibly reflex bradycardia.
Severe overdosage may produce confusion, hallucinations, seizures and arrythmyias, hypertension and associated reflex bradycardia. However, the amount required to produce serious phenylephrine toxicity would be greater than required to cause paracetamol-related liver toxicity.

Symptoms should be treated according to established guidelines, as appropriate. Severe hypertension may be treated with an alpha-receptor blocking agent (such as phentolamine mesylate 6 – 10 mg) given intravenously.

5 PHARMACOLOGICAL PROPERTIES

5.1 Pharmacodynamic properties

Pharmacotherapeutic Group: Other analgesics and antipyretics Anilides, paracetamol combinations excluding psycholeptics.

ATC code: NO2B E51

Paracetamol

Analgesic:

The mechanism of analgesic action has not been fully determined. Paracetamol may act predominantly by inhibiting a prostaglandin synthesis in the central nervous system (CNS) and to a lesser extent through a peripheral action by blocking pain impulse generation. The peripheral action may also be due to inhibition of

prostaglandin synthesis or to inhibition of the synthesis or actions of other substances that sensitise pain receptors to mechanical or chemical stimulation.

Antipyretic:
Paracetamol probably produces antipyresis by acting on the hypothalamic heat regulating centre to produce peripheral vasodilation resulting in increased blood flow through the skin, sweating and heat loss. The central action probably involves inhibition of prostaglandin synthesis in the hypothalamus.

Caffeine **(Day capsules only)**
Central nervous system stimulant – Caffeine stimulates all levels of the CNS, although its cortical effects are milder and of shorter duration than those of amphetamines. Caffeine possesses a weak diuretic action.

Analgesia Adjunct:
Caffeine constricts cerebral vasculature with an accompanying decrease in cerebral blood flow and in the oxygen tension of the brain. It is believed that caffeine helps to relieve headache by providing a more rapid onset of action and/or enhanced pain relief with lower doses of analgesic. Recent studies with ergotamine indicate that the enhancement of effect by the addition of caffeine may also be due to improved gastrointestinal absorption of ergotamine when administered with caffeine.

Phenylephrine Hydrochloride
Sympathomimetic amines, such as phenylephrine, act on alpha-adrenergic receptors of the respiratory tract to produce vasoconstriction, which temporarily reduces the swelling associated with inflammation of the mucous membranes lining the nasal and sinus passages. This allows the free drainage of the sinusoidal fluid from the sinuses.

In addition to reducing mucosal lining swelling, decongestants also suppress the production of mucus, therefore preventing a build-up of fluid within the cavities which could otherwise lead to pressure and pain.

5.2 Pharmacokinetic properties

Paracetamol

Absorption
Paracetamol is rapidly absorbed from the gastro-intestinal tract with peak plasma concentrations occurring between 10 and 60minutes after oral administration depending on pharmaceutical form.

Distribution
Paracetamol is relatively uniformly distributed throughout most body fluids and exhibits variable protein binding.

Metabolism
Paracetamol is metabolised in the liver and excreted in the urine mainly as the glucuronide and sulphate conjugates. Less than 5% is excreted as

unchanged paracetamol. The elimination half-life varies from about 1 to 4 hours.

Plasma-protein binding is negligible at usual therapeutic concentrations but increases with increasing concentrations.

A minor hydroxylated metabolite, N-acetyl-p-benzoquinoneimine, which is usually produced in very small amounts by mixed-function oxidases in the liver and which is usually detoxified by conjugation with liver glutathione may accumulate following paracetamol overdose and cause liver damage.

Elimination
Less than 5% is excreted as unmodified paracetamol; the elimination half-life varies from 1 to 4 hours. Elimination is essentially through the urine. 90% of the ingested dose is eliminated via the kidneys within 24 hours, principally as glucuronide (60-80%) and sulphate conjugates (20-30%). In cases of renal failure (GFR≤50ml/min), the elimination of paracetamol is slightly delayed, the elimination
half-life ranging from 2 to 5.3 hours. For the glucuronide and sulphate conjugates, the elimination rate is 3 times slower in subjects with severe renal impairment than in healthy subjects.

Caffeine **(Day capsules only)**

Absorption
Caffeine is absorbed readily after oral administration and is widely distributed throughout the body. Maximum plasma concentrations are achieved within one hour and the plasma half-life is about 4.9 hours, but there are large inter-individual and intra-individual differences ranging between 1.9 – 12.2 hours.

Distribution
Caffeine administered orally is practically fully bioavailable and distributes into all body fluids. The mean plasma protein binding of caffeine is 35%. Maximum plasma concentrations are reached after 30 – 40 minutes.

Biotransformation
Caffeine is metabolised almost completely in the liver via oxidation, demethylation, and acetylation, and is excreted in the urine as 1-methyluric acid, 1-methylxanthine, 7-methylxanthine, 1,7-dimethylxanthine (paraxanthine),
5-acetylamino- 6-formylamino-3methyluracil (AFMU), and other metabolites with only about 1% unchanged.

Elimination
Caffeine and its metabolites are primarily eliminated by the

kidneys. Phenylephrine Hydrochloride

Absorption
Phenylephrine has reduced bioavailability from the gastro-intestinal tract owing to irregular absorption and the first-pass metabolism (see below).

Metabolism
Phenylephrine undergoes first-pass metabolism by monoamine oxidase in the gut and liver.

Elimination
Phenylephrine hydrochloride is excreted in the urine almost entirely as the sulphate conjugate.

5.3 Preclinical safety data

This medicine has a well-established safety profile. For paracetamol, conventional studies using the currently accepted standards for the evaluation of toxicity to reproduction and development are not available.

6 PHARMACEUTICAL PARTICULARS

6.1 List of excipients

Day Capsule
Maize starch
Croscarmellose sodium
Sodium laurilsulfate
Magnesium stearate
Talc

Capsule:
Gelatin
Titanium dioxide E171
Quinoline yellow E104
Patent blue V E131
Erythrosine E127

Night Capsule
Maize starch
Croscarmellose sodium
Sodium laurilsulfate
Magnesium stearate
Talc

Capsule:
Gelatin
Titanium dioxide E171
Erythrosine E127
Indigo carmine E132

6.2 Incompatibilities

None known.

6.3 Shelf life

36 months.

6.4 Special precautions for storage

Do not store above 25°C.

6.5 Nature and contents of container

Blister packs of white opaque 250 micron PVC/30 micron hard temper pyramidal aluminium foil, heat-seal coated, contained in an outer cardboard carton.

Pack sizes:

16 capsules comprising two blisters each containing 6 red/yellow Day capsules and 2 light blue/dark blue Night capsules.

6.6 Special precautions for disposal

None.

7 MARKETING AUTHORISATION HOLDER

Wrafton Laboratories Limited
Wrafton
Braunton
Devon
EX33 2DL

8 MARKETING AUTHORISATION NUMBER(S)

PL 12063/0073

9 DATE OF FIRST AUTHORISATION/RENEWAL OF THE AUTHORISATION

15/11/2024

10 DATE OF REVISION OF THE TEXT

17/04/2025

SUMMARY OF PRODUCT CHARACTERISTICS

Product Summary

1. NAME OF THE MEDICINAL PRODUCT

Non-Drowsy Sudafed Decongestant Nasal Spray
Sudafed Blocked Nose Spray
Sudafed Mucus Relief 0.1% Nasal Spray
Sudafed Sinus-Ease 0.1% Nasal Spray

2. QUALITATIVE AND QUANTITATIVE COMPOSITION

This product is an aqueous solution of Xylometazoline Hydrochloride 0.1% w/v presented in a metered-dose pack, delivering 0.14 ml per actuation.

Excipients with known effect:
Benzalkonium chloride 0.196 mg/ml

For the full list of excipients, see section 6.1.

3. PHARMACEUTICAL FORM

Aqueous solution

4. CLINICAL PARTICULARS

4.1 Therapeutic indications

This product is indicated for the symptomatic relief of nasal congestion associated with the common cold, influenza, sinusitis, allergic and non-allergic rhinitis, and other upper respiratory tract allergies.

4.2 Posology and method of administration

Posology
Adults and children 12 years and over:

One spray to be expressed into each nostril 2-3 times daily, as necessary.
Maximum daily dose: 3 sprays in 24 hours.

Use for more than seven consecutive days is not recommended, [See section 4.4].

Children under 12 years:

Do not give to children under 12 years of age.

The Elderly

Experience has indicated that normal adult dosage is appropriate, [See section 5.2].

Hepatic/renal dysfunction

Normal adult dosage is appropriate, [See section 5.2].

Method of administration
Nasal

4.3 Contraindications

Hypersensitivity to the active substance or to any of the excipients listed in section 6.1.

Children under 12 years of age.

This product is contraindicated in individuals who are taking or have taken monoamine oxidase inhibitors within the preceding two weeks.

This product is contraindicated in individuals with hypophysectomy or surgery exposing dura mater.

4.4 Special warnings and precautions for use

There is minimal systemic absorption with topically applied imidazoline sympathomimetics such as xylometazoline, however, this product should be used with caution in patients suffering coronary artery disease, hypertension, hyperthyroidism or diabetes mellitus. Patients with long QT syndrome treated with xylometazoline may be at increased risk of serious ventricular arrhythmias.

This medicine is intended for short term use only. Prolonged treatment may lead to reactive hyperemia of the nasal mucosa.

This rebound effect may lead to nasal congestion or nasal obstruction during continued use or after discontinuation, resulting in repeated or even continuous use of the medicine by the patient (see section 4.8).

This medicine contains 1.96 mg benzalkonium chloride in each 10 ml, and 2.94 mg benzalkonium chloride in each 15 ml, which is equivalent to 0.196 mg/ml of product. Benzalkonium chloride may cause irritation or swelling inside the nose, especially if used for a long time. Long-term use may cause oedema of the nasal mucosa.

4.5 Interactions with other medicinal products and other forms of interaction

Due to the low systemic absorption of xylometazoline when administered intra-nasally, interaction with drugs administered via other routes is considered unlikely.

No interaction studies have been performed.

4.6 Fertility, pregnancy and lactation

Pregnancy

There are no adequate and well-controlled studies in pregnant women. This product should not be used during pregnancy unless the potential benefit of treatment to the mother outweighs the possible risks to the developing foetus.

Lactation

It is not known whether xylometazoline or its metabolites are excreted in human milk. This product should not be used during lactation unless the potential benefit to the mother outweighs the possible risks to the nursing infant.

4.7 Effects on ability to drive and use machines

It is not known if xylometazoline has an effect on the ability to drive and use machines.

4.8 Undesirable effects

Adverse Drug Reactions (ADRs) identified during clinical trials and post-marketing experience with xylometazoline are listed below by System Organ Class (SOC). The frequencies are defined in accordance with current guidance, as:

Very common ≥1/10
Common ≥1/100 and < 1/10
Uncommon ≥1/1,000 and <1/100
Rare ≥1/10,000 and <1/1,000
Very rare <1/10,000
Not known (cannot be estimated from the available data)

ADRs are presented by frequency category based on 1) incidence in adequately designed clinical trials or epidemiology studies, if available or 2) when incidence is unavailable, frequency category is listed as Not known.

System Organ Class (SOC)	**Frequency**	**Adverse Drug Reaction (Preferred Term)**
Nervous System Disorders	Rare Not known	Headache Burning sensation mucosal
Respiratory, Thoracic and Mediastinal Disorders	Uncommon	Epistaxis
	Not known	Nasal discomfort Nasal dryness Nasal pruritus Rhinalgia Sneezing
Gastrointestinal Disorders	Rare	Nausea
General Disorders and Administration Site Conditions	Not known	Rebound effect

Reporting of suspected adverse reactions:
Reporting suspected adverse reactions after authorisation of the medicinal product is important. It allows continued monitoring of the benefit/risk balance of the medicinal product. Healthcare professionals are asked to report any suspected adverse reactions via the Yellow Card Scheme at: www.mhra.gov.uk/yellowcard or search for MHRA Yellow Card in the Google Play or Apple App Store.

4.9 Overdose

Symptoms

Systemic action is unlikely when applied nasally due to the local vasoconstriction that inhibits absorption. If systemic absorption does occur xylometazoline as an α_2-adrenergic agonist could be expected to produce effects similar to those of clonidine with a short lived rise in blood pressure, followed by more prolonged hypotension and sedation.

Management

Treatment of overdose should be supportive.

5. PHARMACOLOGICAL PROPERTIES

5.1 Pharmacodynamic properties

Pharmacotherapeutic group: Nasal preparations, sympathomimetics, plain; ATC code: R01AA07It acts directly on □-adrenoreceptors but does not act on ß-receptors. When used topically as a nasal decongestant, xylometazoline acts rapidly and provides long-lasting relief. Onset of action is within minutes, the decongestant effect being prolonged and lasting for up to 10 hours.

5.2 Pharmacokinetic properties

Absorption, Distribution, Biotransformation and Elimination

Little information is available concerning the absorption, distribution, Biotransformation and elimination of xylometazoline in man. Absorption into the nasal mucosal tissues is rapid.

Pharmacokinetics in Renal/Hepatic Impairment

There have been no specific studies of this product or xylometazoline in hepatic or renal impairment.

Pharmacokinetics in the Elderly

There have been no specific clinical studies of this product or xylometazoline in the elderly.

5.3 Preclinical safety data

Mutagenicity
There is insufficient information available to determine whether xylometazoline has mutagenic potential.

Carcinogenicity
There is insufficient information available to determine whether xylometazoline has carcinogenic potential.

Teratogenicity
There is insufficient information available to determine whether xylometazoline has teratogenic potential.

Fertility
No studies have been conducted in animals to determine whether xylometazoline has the potential to impair fertility. There is no information on the effects of this product on fertility.

6. PHARMACEUTICAL PARTICULARS

6.1 List of excipients

Benzalkonium chloride solution
Disodium edetate
Sodium dihydrogen phosphate dihydrate
Sodium monohydrogen phosphate dihydrate
Sodium chloride
Sorbitol solution, 70% (Non crystalline)
Purified water

6.2 Incompatibilities

Not applicable

6.3 Shelf life

Unopened: 3 years.
Opened: 20 weeks after first opening, discard the bottle even if there is solution remaining.

6.4 Special precautions for storage

Do not store above 25°C.

6.5 Nature and contents of container

Amber glass bottle of either 10 ml or 15 ml nominal fill volume.

The bottle is sealed with an integral snap-on metered 0.14 ml pump consisting of a white plastic actuator and natural polyethylene pull-off overcap.

6.6 Special precautions for disposal

No special requirements.

Any unused product or waste material should be disposed of in accordance with local requirements.

7. MARKETING AUTHORISATION HOLDER

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UK

8. MARKETING AUTHORISATION NUMBER

PL 15513/0074

9. DATE OF FIRST AUTHORISATION/RENEWAL OF THE AUTHORISATION

21/April/1999

10. DATE OF REVISION OF THE TEXT

22 Dec 2022

SUMMARY OF PRODUCT CHARACTERISTICS

1. NAME OF THE MEDICINAL PRODUCT

Sudafed Plus Blocked Nose 1mg/50mg/ml Nasal Spray Solution

2. QUALITATIVE AND QUANTITATIVE COMPOSITION

Each ml of nasal spray, solution, contains 1 mg xylometazoline hydrochloride and 50 mg dexpanthenol.

One spray contains 0.1 ml of nasal spray, solution, containing 0.1 mg xylometazoline hydrochloride and 5.0 mg dexpanthenol.

For the full list of excipients, see section 6.1.

3. PHARMACEUTICAL FORM

Nasal spray, solution.
Clear, colourless to slightly yellowish solution.

4. CLINICAL PARTICULARS

4.1 Therapeutic indications

This product is indicated for adults and children 12 years and older:

- For the symptomatic relief of nasal congestion associated with the common cold, influenza, sinusitis, allergic and non-allergic rhinitis (vasomotor rhinitis), other upper respiratory tract allergies (see section 5.1).

4.2 Posology and method of administration

Posology

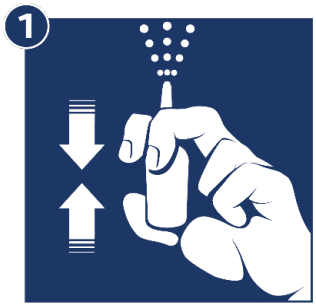
Adults and children 12 years and over:
One spray into each nostril up to 3 times a day, as necessary.
Maximum daily dose: 3 sprays in 24 hours.

The dosage depends on individual sensitivity and clinical efficacy.
Use for more than seven consecutive days is not recommended (See section 4.4). Do not exceed the recommended dose.

Children under 12 years:
Do not give to children under 12 years of age.

For hygienic reasons and to avoid infections, each spray bottle should only be used by the same person.

Method of administration: Nasal
First the protective cap should be removed from the sprayer.
Before the first use the spray head should be pressed five times away from the face until a fine spray appears. If the spray has not been used for a long period of time the head should be pressed two times away from the face before use.



The sprayer tip should be inserted as upright as possible into one nostril and the spray head should be pressed once. Patient should gently inhale through the nose while spraying. If necessary, the procedure should be repeated for the other nostril.

After each use, the sprayer tip should be wiped with a paper tissue and the cap placed back on the sprayer.

4.3 Contraindications

Hypersensitivity to the active substances or to any of the excipients listed in section 6.1.
Contraindicated in children under 12 years of age.
Concomitant use of other sympathomimetic decongestants.
Cardiovascular disease including hypertension.
Phaeochromocytoma.
Diabetes Mellitus
Hyperthyroidism
Closed angle glaucoma.
Contraindicated in individuals who are taking beta blockers (see section 4.5).

Inflammation of the skin and/or mucosa of the nasal vestibule.
Contraindicated in individuals with dry inflammation of the nasal mucosa (rhinitis sicca).
Contraindicated in individuals who are taking or have taken monoamine oxidase inhibitors within the preceding two weeks (see section 4.5).
Contraindicated in individuals with a history of transsphenoidal hypophysectomy or other surgical interventions which expose the dura mater.

4.4 Special warnings and precautions for use

There is minimal systemic absorption with topically applied imidazoline sympathomimetics such as xylometazoline.

This medicinal product may be used only after a careful assessment of the risks and benefits in cases of:
- increased intraocular pressure
- porphyria
- prostate hyperplasia.

Use during chronic rhinitis may only be carried out under medical supervision owing to the danger of the atrophy of the nasal mucosa.

Use with caution in occlusive vascular disease.

Patients with long QT syndrome treated with xylometazoline may be at increased risk of serious ventricular arrhythmias.

This medicine is intended for short term use only. Prolonged treatment may lead to reactive hyperaemia of the nasal mucosa. This rebound effect may lead to nasal congestion or nasal obstruction during continued use or after discontinuation, resulting in repeated or even continuous use of the medicine by the patient (See section 4.8).

Keep away from the eyes.

In case of misuse or use of excessive amounts of the spray, the absorption of xylometazoline can cause systemic adverse effects (cardiovascular and neurological adverse effects) (see sections 4.8 and 4.9).

If any of the following occur, use of Sudafed Plus Blocked Nose Spray should be stopped:
- Hallucinations
- Restlessness
- Sleep disturbances

4.5 Interaction with other medicinal products and other forms of interaction

Xylometazoline hydrochloride
Due to low systemic absorption of xylometazoline when administered intra-nasally, interaction with drugs administered via other routes is unlikely. No interaction studies

have been performed. However, concomitant use with antihypertensive agents (e.g. methyldopa) should be avoided due to the potential effect of Xylometazoline to increase blood pressure.

Concomitant use with medicines which potentially increase blood pressure (e. g. doxapram, ergotamin, oxytocin, or tricyclic antidepressants) should be avoided as the vasopressor effect may be increased.

Concomitant use with sympathomimetics (e.g.: pseudoephedrine, ephedrine, phenylephrine, oxymetazoline, xylometazoline, tramazoline, naphazoline) can lead to additive effects on the cardiovascular system and central nervous system.

MAOIs and/or RIMAs: should not be given to patients treated with MAOIs or within 14 days of stopping treatment: increased risk of hypertensive crisis

Moclobemide: risk of hypertensive crisis

Antihypertensives (including adrenergic neurone blockers and beta-blockers). Sudafed Plus Blocked Nose Spray may block the hypotensive effects.

Cardiac glycosides: increased risk of arrhythmias.

Ergot alkaloids (ergotamine and methysergide): increased risk of ergotism.

Appetite suppressants and amphetamine-like psychostimulants: risk of hypertension.

Dexpanthenol
None known.

4.6 Fertility, pregnancy and lactation

Pregnancy
This medicine should not be used during pregnancy, as there is not sufficient data available concerning the use of xylometazoline hydrochloride by pregnant women.

Breast-feeding
This medicine should not be used during the lactation period since it is not known whether xylometazoline hydrochloride is excreted in the breast milk.

Fertility
There is no data on the influence of this medicine on fertility.

4.7 Effects on ability to drive and use machines

This product is not expected to adversely affect the ability to drive and use machines.

4.8 Undesirable effects

The following definitions apply to the incidence of the undesirable effects:
- Very common (≥ 1/10)

- Common (≥ 1/100 to < 1/10)
- Uncommon (≥ 1/1,000 to < 1/100)
- Rare (≥ 1/10,000 to < 1/1,000)
- Very rare (< 1/10,000)
- Not known (cannot be estimated from the available data)

Tabulated list of adverse reactions

	Uncommon	**Rare**	**Very rare**	**Not known**
Immune system Disorders	hypersensitivity reaction (angioedema, skin rash, pruritus)			
Psychiatric disorders, especially with prolonged and/or heavy use**.**			restlessness, insomnia, hallucinations and paranoid delusions.	irritability, anxiety, excitability
Nervous system Disorders			fatigue (drowsiness, sedation), headache, convulsions	
Cardiac disorders, especially with prolonged and/or heavy use		palpitations, tachycardia, hypertension	arrhythmias	
Respiratory, thoracic and mediastinal disorders			rebound congestion (rhinitis medicamentosa) - especially with prolonged and/or heavy use, nosebleed	Sneezing, burning, irritation and dryness of the nasal mucosa.
Gastrointestinal disorders				Nausea

General disorders and administration site conditions				Tolerance with diminished effect (especially with prolonged and/or heavy use.)

Reporting of suspected adverse reactions
Reporting of suspected adverse reactions after authorisation of the medicinal product is important. It allows continued monitoring of the benefit/risk balance of the medicinal product. Healthcare professionals are asked to report any suspected adverse reactions via the Yellow Card Scheme at: www.mhra.gov.uk/yellowcard or search for MHRA Yellow Card in the Google Play or Apple App Store.

4.9 Overdose

Xylometazoline hydrochloride
The clinical picture of intoxication with imidazole derivatives can be diverse, as phases of stimulation may alternate with periods of suppression of the central nervous system and cardiovascular system. An overdose results mainly in central nervous effects: convulsions and coma, bradycardia, apnoea, hypertension and also hypotension.

Symptoms of CNS stimulation are anxiety, agitation, hallucinations and convulsions.

Symptoms of CNS suppression are decreased body temperature, lethargy, drowsiness and coma.

The following additional symptoms may occur: miosis, mydriasis, diaphoresis, fever, pallor, cyanosis, nausea, tachycardia, bradycardia, cardiac arrhythmia, cardiac arrest, hypertension, shock-like hypotension, pulmonary oedema, respiratory disorders and apnoea.

In cases of severe overdose, intensive inpatient treatment is indicated. The administration of medicinal charcoal (absorbent), sodium sulphate (laxative) or gastric lavage (in the case of large quantities) should be performed immediately, as xylometazoline can be rapidly absorbed. In order to lower blood pressure, a non-selective alpha-adrenergic blocking agent can be given.

Vasopressor agents are contraindicated. If necessary, the following measures should be taken: fever reduction, anti-convulsive therapy and oxygen inhalation.

Dexpanthenol
Pantothenic acid and its derivatives, such as dexpanthenol, have very low toxicity. No measures are required in cases of overdose.

5. PHARMACOLOGICAL PROPERTIES

5.1 Pharmacodynamic properties

Pharmacotherapeutic group: Nasal preparations; decongestants and other nasal preparations for topical use; sympathomimetics, combinations excl. corticosteroids.
ATC code: R01AB06.

A rhinological agent is a combination of an alpha-sympathomimetic with a vitamin analogue for topical application to the nasal mucosa. Xylometazoline has vasoconstrictor properties and thereby causes decongestion of the blocked nose. Dexpanthenol is a derivative of the vitamin pantothenic acid, whose properties are the promotion of wound healing and protection of the mucosa.

Xylometazoline hydrochloride
Xylometazoline hydrochloride, an imidazole derivative, is an alpha -adrenergic sympathomimetic. It has a vasoconstrictor effect and thus reduces mucosal swelling. The onset of action is usually observed within 5 to 10 minutes and is evident from easier nasal breathing due to reduced mucosal swelling and improved secretion flow. Xylometazoline has a prolonged decongestant effect, lasting for up to 10 hours.

Dexpanthenol
Dexpanthenol (D- (+)-pantothenyl alcohol) is the alcoholic analogue of pantothenic acid and, due to intermediate transformation, possesses the same biological efficacy as pantothenic acid. It is bound to the right-handed D-configuration. Pantothenic acid and its salts are water-soluble vitamins which are involved as coenzyme A in numerous metabolic processes, such as the promotion of protein and corticoid synthesis and antibody production. Coenzyme A is also involved, amongst other things, in the formation of lipids via which the skin fat fulfils an important protective function, as well as for the acetylation of amino sugars that help to form various mucopolysaccharides.

Dexpanthenol induces a gene expression profile consistent with a wound healing response in human epithelium, which may support healing of the nasal mucosa in the target populations described in section 4.1. In rats with dexpanthenol deficiency, the application of dexpanthenol to the skin had a trophic effect. When used externally, dexpanthenol/panthenol can compensate for the increased pantothenic acid requirement of the damaged skin or mucous membrane.

5.2 Pharmacokinetic properties

Xylometazoline hydrochloride
Occasionally, in the case of intranasal administration, the absorbed amount of xylometazoline hydrochloride can be sufficient to induce systemic effects, e.g. on the central nervous system and the cardiovascular system.

No data is available from pharmacokinetic studies on humans for xylometazoline hydrochloride.

Dexpanthenol
Dexpanthenol is dermally absorbed and oxidised enzymatically in the organism, as well as in the skin, to pantothenic acid. The vitamin is transported in protein-bound form in the plasma. Pantothenic acid is incorporated as a key component in coenzyme A, which occurs ubiquitously in the organism. More detailed studies on the metabolism in the skin and mucous membranes are not available. 60-70% of an orally delivered dose of dexpanthenol is excreted in the urine, 30-40% in the faeces.

5.3 Preclinical safety data

Non-clinical safety data revealed no special hazard for humans based on conventional studies of safety pharmacology, repeated-dose toxicity, genotoxicity, carcinogenic potential and toxicity to reproduction.

6. PHARMACEUTICAL PARTICULARS

6.1 List of excipients

Potassium dihydrogen phosphate
Disodium phosphate dodecahydrate
Water for injections

6.2 Incompatibilities

Not applicable.

6.3 Shelf life

30 months

After first opening of the container, the product should be used within 3 months.

6.4 Special precautions for storage

Do not store above 25°C.
For storage conditions after first opening of the medicinal product, see section 6.3.

6.5 Nature and contents of container

White HDPE plastic bottle with 10 ml fill volume.

The bottle is sealed with a snap-one metered 0.1 ml PP/PE/Steel pump with a white PP actuator and a HDPE pull-off cap.

6.6 Special precautions for disposal and handling

No special requirements for disposal.
Any unused medicinal product or waste material should be disposed of in accordance with local requirements.

7. MARKETING AUTHORISATION HOLDER

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United Kingdom

8. MARKETING AUTHORISATION NUMBER(S)

PL 15513/0407

9. DATE OF FIRST AUTHORISATION/RENEWAL OF THE AUTHORISATION

9th February 2021

10. DATE OF REVISION OF THE TEXT

06 May 2025