Nicorette 15mg Inhalator

Summary of Product Characteristics Updated 14-Jan-2020 | McNeil Products Ltd

1. Name of the medicinal product

Nicorette® 15mg Inhalator / Boots NicAssist 15 mg Inhalator.

2. Qualitative and quantitative composition

Nicotine 15mg per cartridge.

For a full list of excipients see section 6.1

3. Pharmaceutical form

Inhalation cartridge for oromucosal use.

A white to slightly coloured porous plug in a sealed, transparent plastic tube.

4. Clinical particulars

4.1 Therapeutic indications

Nicorette Inhalator relieves and/or prevents craving and nicotine withdrawal symptoms associated with tobacco dependence. It is indicated to aid smokers wishing to quit or reduce prior to quitting, to assist smokers who are unwilling or unable to smoke, and as a safer alternative to smoking for smokers and those around them.

Nicorette Inhalator is indicated in pregnant and lactating women making a quit attempt.

4.2 Posology and method of administration

Adults and Children over 12 years of age

Nicorette Inhalator should be used whenever the urge to smoke is felt or to prevent cravings in situations where these are likely to occur.

Smokers willing or able to stop smoking immediately should initially replace all their cigarettes with the Inhalator and as soon as they are able, reduce the number of cartridges used until they have stopped completely.

Smokers aiming to reduce cigarettes should use the Inhalator, as needed, between smoking episodes to prolong smoke-free intervals and with the intention to reduce smoking as much as possible.

As soon as they are ready smokers should aim to quit smoking completely.

Maximum daily dose: 6 cartridges.

When making a quit attempt behavioural therapy, advice and support will normally improve the success rate. Those who have quit smoking, but are having difficulty discontinuing their Inhalator are recommended to contact their pharmacist or doctor for advice.

Each cartridge can be used for approximately eight 5-minute sessions, with each cartridge lasting approximately 40 minutes of intense use. The more the subject is able to use the inhalator, the easier it will be to achieve maximum reduction of cigarettes and/or quit smoking completely.

Method of administration

The cartridge is inserted into the mouthpiece according to the instructions.

When a patient draws air into the mouth through the mouthpiece, nicotine is vaporised and absorbed by the buccal mucosa. Minimal nicotine reaches the lungs. The amount of nicotine from a puff is less than that from a cigarette. To compensate for less nicotine delivery from a puff it is necessary to inhale more often than when smoking a cigarette.

The number of cartridges, frequency, puffing/inhalation time and technique does vary between individuals.

The actual time that the cartridge is active depends on the intensity of use. After about 40 minutes of intense use the maximal dose is achieved and it is about then that the nicotine amounts released from the cartridge begin to fall away, such that the cartridge is rejected by the user.

4.3 Contraindications

Hypersensitivity to any component of the inhalator.

Nicorette Inhalator is contraindicated in children under the age of 12 years.

4.4 Special warnings and precautions for use

Any risks that may be associated with NRT are substantially outweighed by the well established dangers of continued smoking.

A risk-benefit assessment should be made by an appropriate healthcare professional for patients with the following conditions:

Underlying cardiovascular disease: In stable cardiovascular disease this product presents a lesser hazard than continuing to smoke. However dependent smokers currently hospitalised as a result of myocardial infarction, unstable or worsening angina including Prinzmetal's angina, severe dysrhythmia or CVA and who are considered to be haemodynamically unstable and/or who have uncontrolled hypertension should be encouraged to stop smoking with non-pharmacological interventions. If this fails, this product may be considered, but as data on safety in this patient group are limited, initiation should only be under medical supervision.

Diabetes mellitus: Patients with diabetes mellitus should be advised to monitor their blood sugar levels more closely than usual when smoking is stopped and NRT is initiated as reductions in nicotine induced catecholamine release can affect carbohydrate metabolism.

*GI disease:*Nicotine may exacerbate symptoms in patients suffering from oesophagitis, gastritis or peptic ulcers and NRT preparations should be used with caution in these conditions. Ulcerative stomatitis has been reported.

Renal or hepatic impairment: This product should be used with caution in patients with moderate to severe hepatic impairment and/or severe renal impairment as the clearance of nicotine or its metabolites may be decreased with the potential for increased adverse effects.

Danger in children: Doses of nicotine tolerated by adult and adolescent smokers can produce severe toxicity in children that may be fatal. Products containing nicotine should not be left where they may be misused, handled or ingested by children. If a child swallows, chews or sucks on the nicotine cartridge (used as well as unused) there is a risk of poisoning in the child.

Phaeochromocytoma and uncontrolled hyperthyroidism: As nicotine causes release of catecholamines, this product should be used with caution in patients with uncontrolled hyperthyroidism or phaeochromocytoma.

Transferred dependence: Transferred dependence is rare and is both less harmful and easier to break than smoking dependence.

Stopping smoking: Polycyclic aromatic hydrocarbons in tobacco smoke induce the metabolism of drugs metabolised by CYP 1A2 (and possibly by CYP 1A1). When a smoker stops smoking, this may result in slower metabolism and a consequent rise in blood levels of such drugs. This is of potential clinical importance for products with a narrow therapeutic window, e.g. theophylline, clozapine and ropinirole.

Lung Disease: Patients with obstructive lung disease may find use of the Inhalator difficult. Nicotine Gum, Patch, Nasal Spray or Sublingual tablet may be preferred in such cases. This product should be used with caution in patients with chronic throat disease and bronchospastic disease.

Allergic reactions: Susceptibility to angioedema and urticaria.

Potential choking hazard: This product contains some small parts. Any unused cartridges should remain in the cartridge tray to minimise the risk of swallowing.

4.5 Interaction with other medicinal products and other forms of interaction

No clinically relevant interactions between nicotine replacement therapy and other drugs have definitely been established. However nicotine may possibly enhance the haemodynamic effects of adenosine i.e. increase in blood pressure and heart rate and also increase pain response (angina-pectoris type chest pain) provoked by adenosine administration.

4.6 Fertility, pregnancy and lactation

Pregnancy

Stopping smoking is the single most effective intervention for improving the health of both the pregnant smoker and her baby, and the earlier abstinence is achieved the better. Ideally smoking cessation during pregnancy should be achieved without NRT. Nicotine passes to the foetus and affects its breathing movements and circulation. The effect on the circulation is dose-dependent. However, if the mother cannot (or is considered unlikely to) quit without

pharmacological support, NRT may be used as the risk to the foetus is lower than that expected with smoking tobacco. Stopping completely is by far the best option but if this is not achievable this product may be used in pregnancy as a safer alternative to smoking. Because of the potential for nicotine-free periods, intermittent dose forms are preferable, but patches may be necessary if there is significant nausea and/or vomiting. If patches are used they should, if possible, be removed at night when the foetus would not normally be exposed to nicotine.

Use of nicotine by the pregnant smoker should only be initiated after advice from a health care professional.

Lactation

Nicotine should be avoided during breast-feeding. The relatively small amounts of nicotine found in breast milk during NRT use are less hazardous to the infant than second-hand smoke. Intermittent dose forms would minimize the amount of nicotine in breast milk and permit feeding when levels were at their lowest.

Use of the nicotine by breast feeding smokers should only be initiated after advice from a health care professional. Women should take the product as soon as possible after breastfeeding.

Fertility

In females tobacco smoking delays time to conception, decreases in-vitro fertilization success rates, and significantly increases the risk of infertility.

In males tobacco smoking reduces sperm production, increases oxidative stress, and DNA damage. Spermatozoa from smokers have reduced fertilizing capacity.

The specific contribution of nicotine to these effects in humans is unknown.

4.7 Effects on ability to drive and use machines

This medicinal product has no or negligible influence on the ability to drive and use machines.

4.8 Undesirable effects

Effects of smoking Cessation

Some symptoms may be related to nicotine withdrawal associated with stopping smoking. These can include; irritability/aggression, dysphoria/depressed mood, anxiety, restlessness, poor concentration, increased appetite/weight gain, urges to smoke (cravings), night-time awakenings/sleep disturbance, decreased heart rate, dizziness, presyncopal symptoms, cough, constipation, gingival bleeding or nasopharyngitis.

Increased frequency of aphthous ulcer may occur after abstinence from smoking. The causality is unclear.

Adverse Drug Reactions

This product may cause adverse reactions similar to those associated with nicotine given by other means, including smoking, and these are mainly dose-dependent. At recommended doses this product has not been found to cause any serious adverse effects. Excessive use of Nicorette Inhalator by those who have not been in the habit of inhaling tobacco smoke could possibly lead to nausea, faintness or headaches.

Most of the undesirable effects reported by the patient occur during the first weeks after starting treatment. About 40% of users experience mild local reactions such as cough and irritation in the mouth and throat however most subjects adapt to this with ongoing use.

Allergic reactions (including symptoms of anaphylaxis) can occur during the use of this product.

The adverse reactions observed in patients treated with oral nicotine formulations during clinical trials and post-marketing experience are listed below by system organ class (SOC).

Frequencies are defined in accordance with current guidance, as: Very common (≥1/10); common (≥1/100, <1/10); uncommon (≥1/1 000, <1/100); rare (≥1/10 000, <1/1 000); very rare (<1/10 000),Not known - cannot be estimated from the available data.

System Organ Class	Incidence	Reported Adverse Event
Immune System Disorders	Common Not known	Hypersensitivity[a] Anaphylactic reaction[a]
Psychiatric disorders	Uncommon	Abnormal dreams[c]

Nervous System Disorders	Very Common Common Common Common Common	Headache[a#] Burning sensation* Dizziness Dysgeusia Paraesthesia[a]
Eye Disorders	Not known Not known	Blurred Vision Lacrimation increased
Cardiac Disorders	Uncommon Uncommon Very Rare	Palpitations[a] Tachycardia[a] Reversible atrial fibrillation
Vascular Disorders	Uncommon Uncommon	Flushing[a] Hypertension[a]
Respiratory, Thoracic and Mediastinal Disorders	Common Very Common Common Uncommon Uncommon Uncommon Uncommon Uncommon	Cough** Throat irritation** Nasal Congestion Bronchospasm Dysphonia Dyspnoea[a] Sneezing Throat tightness
Gastrointestinal Disorders	Very Common Very Common Very Common Common Common Common Common Common Common Common Uncommon Uncommon Uncommon Uncommon Rare Rare Rare Not known	Nausea[a] Stomatitis Hiccups[****] Abdominal pain Diarrhoea[***] Dry mouth Dyspepsia Flatulence Salivary hypersecretion Vomiting[a] Eructation Glossitis Oral mucosal blistering and exfoliation Paraesthesia oral[***] Dysphagia Hypoaesthesia oral[***] Retching Dry throat

	Not known Not known	Gastrointestinal discomfort[a] Lip pain
Skin and Subcutaneous Tissue Disorders	Uncommon Uncommon Uncommon Uncommon Not known Not known	Hyperhidrosis[a] Pruritus[a] Rash[a] Urticaria[a] Angioedema[a] Erythema[a]
Musculoskeletal and Connective Tissue Disorders	Uncommon Not known	Pain in Jaw[b] Muscle tightness[b]
General Disorders and Administration Site Conditions	Common Uncommon Uncommon Uncommon	Fatigue[a] Asthenia[a] Chest discomfort and pain[a] Malaise[a]

a Systemic effects; b Tightness of jaw and pain in jaw with nicotine gum formulation

c Identified only for formulations applied during the night

* At the application site

**Higher frequency observed in clinical studies with inhaler formulation.

***Reported the same or less frequently than placebo

**** Higher frequency observed in clinical studies with mouth spray formulation

Although the frequency in the active group is less than that of the placebo group, the frequency in the specific formulation in which the PT was identified as a systemic ADR was greater in the active group than the placebo group.

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: Symptoms of overdose with nicotine from this product may occur in smokers who have previously had a low nicotine intake from cigarettes or if other sources of nicotine are used concomitantly with this product.

Acute or chronic toxicity of nicotine in man is highly dependent on mode and route of administration. Adaptation to nicotine (e.g. in smokers) is known to significantly increase tolerability compared with non-smokers. The minimum lethal dose of nicotine in a non-tolerant man has been estimated to be 40 to 60mg. Symptoms of acute nicotine poisoning include nausea, vomiting, increased salivation, abdominal pain, diarrhoea, sweating, headache, dizziness, disturbed hearing and marked weakness. In extreme cases, these symptoms may be followed by hypotension, rapid or weak or irregular pulse, breathing difficulties, prostration, circulatory collapse and terminal convulsions.

Management of an overdose: All nicotine in-take should stop immediately and the patient should be treated symptomatically. Artificial respiration should be instituted if necessary. Activated charcoal reduces the gastro-intestinal absorption of nicotine.

Doses of nicotine that are tolerated by adult smokers during treatment may produce severe symptoms of poisoning in children and may prove fatal. Suspected nicotine poisoning in a child should be considered a medical emergency and treated immediately.

5. Pharmacological properties

5.1 Pharmacodynamic properties

Pharmacotherapeutic Group: Drug for treatment of addiction.

ATC Code: N07B A01

Nicorette Inhalator facilitates uptake of nicotine through the buccal mucosa into the venous circulation. The amount taken up alleviates the craving symptoms caused by the absence of nicotine from smoking.

Increased appetite is a recognised symptom of nicotine withdrawal and post-cessation weight gain is common. Clinical trials have demonstrated that Nicotine Replacement Therapy can help control weight following a quit attempt.

5.2 Pharmacokinetic properties

The following information is based on data derived from Nicorette 10mg Inhalator:

Nicotine given i.v. has a volume of the distribution of 2 or 3 l/kg with a half life of 1-2 hours. Average plasma clearance is about 1-2 l/min mainly in the liver. More than 20 metabolites are known, all less active than nicotine: cotinine, with a half life of 15-20 hours and concentrations ten times that of nicotine is the main one.

Plasma binding of nicotine below 5% means significant displacement of drugs or nicotine is unlikely. Nicotine is excreted in the urine principally as cotinine (15%), 3-hydroxycotinine (45%), nicotine (10%).

Most inhaled nicotine is absorbed via the buccal mucosa. Forced rapid inhalation over 20 minutes, results in a wide range of nicotine doses (1.3-6.2 mg). On average 2 mg of nicotine is released during 20 minutes of intensive use. Uptake is slow and free of the peaks resultant from cigarette smoking. In normal use, plasma levels of 6-8ng/ml nicotine are obtained – about one third that from smoking, which is equivalent to an hourly 2mg nicotine chewing gum.

When used like a cigarette the inhalator on average delivers 1mg in 80 puffs (e.g. 8 puffs per minute for 10 minutes). When used in this way this results in, a degree of nicotine substitution of about 50% compared to hourly smoking. Peak plasma levels occur within 15 minutes after the end of inhalation. Forced rapid inhalation for 20 minutes per hour for 12 hours achieved steady state plasma levels of 20-25ng/ml.

Ambient temperature affects volatilisation of nicotine, the biologically available dose rising by 35% for each 10°C above 20°C. Use below 15°C is not recommended.

Because the pattern of use if decided by the patient up to a limit of 6 cartridges per day to relieve craving, therapeutic levels of nicotine are individual, dictated by the level of dependence.

5.3 Preclinical safety data

None stated.

6. Pharmaceutical particulars

6.1 List of excipients

Levomenthol

Porous plug of polyethylene

6.2 Incompatibilities

Not applicable

6.3 Shelf life

36 months.

Once inserted into the mouthpiece the cartridge should be disposed of within 48 hours even if it has not been used.

6.4 Special precautions for storage

Store below 25°C.

This product works best at room temperature. In cold conditions (below 15°C) the nicotine evaporates less readily and it will be necessary to inhale more frequently, whilst in warm conditions (above 30°C) nicotine will evaporate more readily and inhalation should be less frequent to avoid overdose.

6.5 Nature and contents of container

Polypropylene mouthpiece with acrylonitrile / methacrylate copolymer cartridges containing polyethylene porous plugs with polyester / aluminium foil seals.

The cartridges are provided in a PVC tray which is sealed with aluminium foil.

Pack sizes:

4 cartridges with 1 inhalator mouthpiece

20 cartridges with 1 inhalator mouthpiece

36 cartridges with 1 inhalator mouthpiece

Not all pack sizes may be marketed.

6.6 Special precautions for disposal and other handling

Potential choking hazard: This product contains some small parts. Any unused cartridges should remain in the cartridge tray to minimise the risk of swallowing.

Because of residual nicotine, used cartridges may be a hazard to children, animals and fish and so should never be thrown away or left lying around. They should be kept in the case and disposed of with household rubbish.

7. Marketing authorisation holder

McNeil Products Limited

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SL6 3UG

UK

8. Marketing authorisation number(s)

PL 15513/0358

9. Date of first authorisation/renewal of the authorisation

03 June 2011

10. Date of revision of the text

30 December 2019

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