## Physician's Prescribing Information

# SEPTANEST N and SEPTANEST SP

The format and contents of this leaflet were determined, checked and approved by the Israeli Ministry of Health

**Septanest N** contains articaine hydrochloride 4% with 1/200 000 epinephrine (adrenaline)
**Septanest SP** contains articaine hydrochloride 4% with 1/100 000 epinephrine (adrenaline)

**Local Anaesthetic for dental Use**

**Clinical pharmacology:** Septanest (articaine hydrochloride) is a local anaesthetic that has the reversible effect of blocking the conduction of painful sensations. Septanest decreases nerve conduction by diminishing the sodium ion influx during the action potential period. The epinephrine is a vasoconstrictor added to Septanest to slow down the passage into the general circulation and thus ensure the prolonged maintenance of an active tissue concentration. The anaesthesia is obtained rapidly (1 to 3 minutes) and lasts from 45 to 75 minutes per cartridge.

Injected in the mouth by the submucosal route with a solution containing 1/200 000 epinephrine, articaine reaches the blood concentration peak about 17 minutes after the injection .The half-life elimination is very short : about 25 minutes. Articaine is excreted mainly through the urine with total elimination of 76 % and 89 % following intramuscular and intravenous administration, respectively. Two unidentified metabolites of articaine are detected in the urine following intramuscular injection accounting for 87 % and 2 % of the administered dose. No metabolites are detected in the blood following intravenous administration.

**Indications and clinical use:** Septanest (articaine hydrochloride) is indicated for infiltration anaesthesia and nerve block anaesthesia in clinical dentistry. This includes local or loco-regional dental anaesthesia suitable for operations such as: single extractions, with no complications; multiple extractions ; extractions of impacted teeth; trephinement; apical resections; removal of cysts; alveolectomies ; preparation of cavity; biopulpectomies; and maxillo-facial surgery. Septanest is also suitable for muco-gingival operations and other surgical operations on the bone when long lasting ischaemia and analgesia are required.

**Contraindications:** Septanest (articaine hydrochloride) is contraindicated in patients with known allergies to dental anaesthetics. Septanest is also contraindicated in patients with sepsis near the proposed injection site, severe shock, paroxysmal tachycardia, frequent arrhythmia, neurological disease, severe hypertension or in patients with asthma who may have bronchospastic allergic reactions induced by sulphites.

Since Septanest contains epinephrine the caution required of any vasoconstrictor drug is in order.
Septanest is also contraindicated in patients with:
- Paroxysmal tachycardia or high-frequency, continuous arrhythmia ;
- Pronounced coronary insufficiency ;
- Severe hypertension (high blood pressure) ;
- Thyrotoxicosis (hyperactivity of the thyroid) ;
- Narrow-angle glaucoma ;
- Decompensated diabetic metabolic condition ;
- Pheochromocytoma ;
- Cerebrovascular insufficiency.

**Warnings:** Septanest, along with other local anaesthetics, is capable of producing methaemoglobinaemia. The clinical signs of methaemoglobinaemia are cyanosis of the nail beds and lips, fatigue and weakness. If methaemoglobinaemia does not respond to administration of oxygen, administration of methylene blue intravenously 1 to 2 mg/kg body weight over a 5 minute period is recommended.

Septanest (articaine hydrochloride) must be used with particular caution in the event of:
- Severe impairment to the renal or hepatic function ;
- Angina pectoris (tightness in the chest) ;
- Arteriosclerosis (vascular sclerosis) ;
- Injection into an inflamed (infected) area ;
- Considerably impaired blood coagulation ;
- Epilepsy ;
- Impaired respiratory function.

Septanest contains sulphites which can cause or aggravate anaphylactic-type reactions.

Intravascular injection is strictly contraindicated : therefore, it is imperative to ensure that the needle being used for the injection does not go into a vessel.

Toxic reactions may occur in the case of overdosage or accidental intravenous injection.

**Precautions:**
**General:** Each time a local anaesthetic is used, anti-convulsant medicines (benzodiazepines or barbiturates which can be injected), myorelaxants, atropine and vasopressors, resuscitating equipment (in particular a source of oxygen) enabling artificial ventilation, should be available. The safety and effectiveness of local anaesthetics depend upon proper dosage, correct technique, adequate precautions, and readiness for emergencies. In persons with known or suspected drug allergies or sensitivities to amide-type local anaesthetics, Septanest should be given cautiously.

The following precautions apply to all anaesthetics : avoid injection into an inflamed or infected area. Injections should always be made slowly with frequent aspirations in order to verify the absence of intravascular injection. The lowest dosage (volume and concentration) that produces the desired results should be used to avoid high plasma levels and serious systemic side effects. The actual dosage and maximum dosage must be individualized, based on the age, size, and physical status of the patient and the expected rate of systemic absorption from the injection site. In highly vascular tissue, absorption is greater than other areas. Avoid excessive premedication with sedatives, tranquilizers, and anti-emetic agents, especially in small children and elderly patients.

**Patients with Special Diseases and Conditions:** In patients with peripheral vascular disease or injection into areas with limited blood supply, the use of a local anaesthetic containing a vasoconstrictor should be made with caution.

Due to the presence of epinephrine, Septanest is not advised for diabetic subjects.

It is strongly recommended to question the patient to find out his background, ongoing treatment, possible allergic antecedents. Allergic-type reactions, including nausea, diarrhea, wheezing respirations, acute asthmatic attacks, impaired consciousness, or shock may occur in patients with bronchial asthma due to hypersensitivity to the sulfite component.

**Use in Pregnancy:** Safe use of local anaesthetics during pregnancy prior to labor has not been established with respect to adverse effects on fetal development. Careful consideration should be given before administering these drugs in pregnant women.

**Use in Children:** The use of Septanest in children under the age of 4 years is not recommended. (See **Dosage and Administration**).

**Drug Interactions:** In patients receiving MAO inhibitors or tricyclic antidepressants, extreme care should be used with solutions containing a vasoconstrictor, e.g. epinephrine, because prolonged hypertension may result.

Concurrent use or immediately following the administration of chloroform, halothane, cyclopropane, trichloroethylene or related anaesthetics may sensitize the heart to epinephrine and may cause dose-related cardiac arrhythmias.

**Adverse reactions:** Reactions to Septanest (articaine hydrochloride) are characteristic of amide-type local anaesthetics.

Adverse reactions of this group of drugs are generally dose-related and may result from high plasma concentrations of anaesthetic caused by inadvertent intravascular administration, overdosage, or rapid absorption from the injection site as well as reduced patient tolerance, idiosyncrasy, or hypersensitivity.

High plasma concentrations of anaesthetic affect the central nervous system and cardiovascular system. Generally, high plasma concentrations of the drug initially produce CNS stimulatory effects manifested by anxiety, apprehension, restlessness, nervousness, disorientation, confusion, dizziness, blurred vision, tremors, twitching, shivering and seizures, followed by CNS depression manifested by drowsiness, unconsciousness, and respiratory arrest. Nausea, vomiting, chills, miosis and tinnitus may also occur.

The adverse cardiovascular effects are depressant and include myocardial depression, cardiac arrythmias, hypotension, cardiovascular collapse, cardiac arrest, and tachypnea, then bradypnea, which could lead to apnea.

Allergic reactions may be manifested by dermatologic reactions, edema, urticaria and other allergy symptoms.

**Symptoms and treatment of overdosage:** The type of toxic reaction is unpredictable and depends on factors such as dosage, rate of absorption and clinical status of patient. Two types of reactions that effect stimulation and/or depression of the central cortex and medulla may result from systemic absorption.

Slow onset symptoms following overdose include stimulation leading to nervousness, dizziness, blurred vision, nausea, tremors, convulsions, hypotention, cardiovascular depression and respiratory arrest.

Rapid onset symptoms following overdose include depression leading primarily to respiratory arrest, cardiovascular collapse and cardiac arrest. Since cardiac arrest symptoms may occur rapidly and with little warning, treatment should be readily available.

**Treatment:**
Toxic effects require symptomatic treatment, there is no specific cure:
1) For all symptoms: secure and maintain a patent airway, administer oxygen.
2) Circulatory depression: immediately resuscitate with oxygen and intravenously administer a vasopressor agent to maintain blood pressure. Cardiac massage or external cardiac stimulation is indicated if cardiac arrest occurs.
3) For convulsions that do not respond to respiratory support, administration of curare-like drugs, e.g. succylnicholine chloride, 40 mg intravenously or ultra-short acting barbiturates such as thiopental, 30 to 50 mg per minute. Since barbiturates may cause circulatory depression, succinylcholine chloride is preferred. I.V. muscle relaxants and barbiturates should only be administered by those familiar with their use.

**Dosage and administration:**
Septanest N (articaine 4 % with 1/200 000 epinephrine)
Septanest SP (articaine 4 % with 1/100 000 epinephrine)
As with all local anaesthetics the dosage varies and depends upon the area to be anaesthetized, the vascularity of the tissues, the number of numeral segments to be blocked, individual tolerance and the technique of anaesthesia.

**Adults:** • For most common operations, one infiltration with 1.7 mL Septanest is sufficient. In all cases, the injection must be administered slowly (About 1 mL/min). • For an infiltration in the interdental septum, a quantity of 0.3 to 0.5 mL is indicated as generally sufficient.

Do not exceed the equivalent of 7 mg/kg articaine hydrochloride body weight which corresponds, for a subject weighing 60 Kg, to 6 standard 1.7 mL cartridges. The duration of anaesthesia during which an operation can be performed using Septanest N is up to 45 minutes. The duration of anaesthesia during which an operation can be performed using Septanest SP is up to 75 minutes. The lowest dosage needed to provide effective anaesthesia should be administered.

**Children:** For septanest N and Septanest SP use in children under 4 years of age is not recommended. The quantity to be injected should be determined by the age of the child and the size of the operation. Do not exceed the equivalent of 7 mg articaine hydrochloride per kilogram of body weight.

**Composition per 1 ml – SEPTANEST N:**
Articaine Hydrochloride … 40 mg
Epinephrine Ttartrate ( = Adrenaline Tartrate) … 0.009 mg
corresponding in Adrenaline as base … 0.005 mg
Excipients: Sodium Chloride, Sodium Metabisulphite, Sodium Edetate, Sodium Hydroxide Solution, Water for Injections
Formulated without Parahydroxybenzoates

**Composition per 1 ml – SEPTANEST SP:**
Articaine Hydrochloride … 40 mg
Epinephrine Tartrate ( = Adrenaline Tartrate) … 0.018 mg
corresponding in Adrenaline as base … 0.010 mg
Excipients: Sodium Chloride, Sodium Metabisulphite, Sodium Edetate, Sodium Hydroxide Solution, Water for Injections
Formulated without Parahydroxybenzoates

**Storage:** Store below 25°C. Protected from light. Do not freeze.
**Presentation:** both products are available in 1.7 mL glass cartridges, box of 50 cartridges.
**Israeli Drug Registration Number:** Septanest N – 121.48.30084.00 ; Septanest SP – 121.52.30088.00
**Manufacturer:** Specialite SEPTODONT, France
**Marketing Authorizatio Holder & Importer:** A. Levy Dental Co. Ltd., VAT# 51-091776-8, 27 Kalisher street, Tel-Aviv 65165 (Israel)
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