

Calcitonin (Salmon)

Nasal Spray

CITONAP 200

FOR INTRNASAL USE ONLY

Shake gently before use.

Each spray delivers	
Calcitonin (Salmon) BP	200IU
(synthetic origin)	
Each ml contains:	
Calcitonin (Salmon) BP	2200IU
(synthetic origin)	
Preservatives:	
Benzalkonium Chloride IP	0.01 %w/v
Phenyl Ethyl Alcohol USP	0.2% w/v
Aqueous Base	q.s.

Chemistry:

Calcitonin is a polypeptide hormone secreted by the parafollicular cells of the thyroid gland in mammals and by the ultimobranchial gland of birds and fish. Calcitonin-Salmon Nasal Spray is a synthetic polypeptide of 32 amino acids in the same linear sequence that is found in calcitonin of salmon origin

Category: Antiparathyroid hormone

Description

For 3.7ml: Clear colourless liquid filled in transparent glass vials crimped with nasal spray pumps and fitted with an actuator and a cap.

Pharmacology

Calcitonin is a calcitropic hormone, which inhibits bone resorption by a direct action on osteoclasts. By inhibiting osteoclast activity via its specific receptors, salmon calcitonin decreases bone resorption. Calcitonin markedly reduces bone turnover in conditions with an increased rate of bone resorption such as osteoporosis. The absence of mineralisation defect with calcitonin has been demonstrated by bone

histomorphometric studies both in man and in animals.

In pharmacological studies, calcitonin has been shown to have analgesic activity in animal models. Intranasal calcitonin produces a clinically relevant biological response in humans, as shown by an increase in the urinary excretion of calcium, phosphorus, and sodium (by reducing their tubular re-uptake) and a decrease in the urinary excretion of hydroxyproline. Long-term administration of intranasal calcitonin significantly suppresses biochemical markers of bone turnover such as serum C-telopeptides (sCTX) and skeletal isoenzymes of alkaline phosphatase. Intranasal calcitonin results in a statistically significant 1-2% increase in lumbar spine Bone Mineral Density (BMD), which is evident from year 1 and is sustained for up to 5 years. Hip BMD is preserved.

Pharmacokinetic Actions

The bioavailability of a 200 IU dose relative to parenteral administration is between 2 and 15%. Intranasal calcitonin is absorbed rapidly through the nasal mucosa and peak plasma concentrations are attained within the first hour of administration (median about 10 minutes). The half-life of elimination has been calculated to be around 20 minutes and no evidence of accumulation was observed with multiple dosing. Doses higher than the recommended dose result in higher blood levels (as shown by an increase in AUC) but relative bioavailability does not increase. As is the case with other polypeptide hormones, there is very little value in monitoring plasma levels of salmon Calcitonin since these are not directly predictive of the therapeutic response. Hence, Calcitonin activity is to be evaluated by using clinical parameters of efficacy. Plasma protein binding is 30 to 40%.

Indications

Treatment of established post-menopausal osteoporosis in order to reduce the risk of vertebral fractures. A reduction in hip fractures has not been demonstrated.

Dosage and Administration

The recommended dosage of intranasal Calcitonin for the treatment of established post-menopausal osteoporosis is 200 IU once a day. Use of intranasal Calcitonin is recommended in conjunction with an adequate calcium and vitamin D intake. Treatment is to be administered on a long-term basis.

It is recommended to administer Calcitonin (Salmon) Nasal Spray per actuation to alternating nostrils.

Contraindications

Hypersensitivity to Calcitonin or to any of the Excipients of the formulation. Calcitonin is also contraindicated in patients with hypocalcaemia.

Special warning and Precaution

Nasal examinations are to be performed before treatment begins and in the case of nasal complaints, medication should not be started. If severe ulceration of the nasal mucosa occurs (e.g. penetration below the mucosa or association with heavy bleeding), intranasal Calcitonin is to be discontinued. In case of mild ulceration, medication is to be interrupted temporarily until healing occurs. Because Calcitonin is a peptide, the possibility of systemic allergic reactions exists and allergic-type reactions including isolated cases of anaphylactic shock have been reported in patients receiving intranasal Calcitonin. In patients with suspected sensitivity to Calcitonin, skin testing is to be considered prior to treatment. The preservative (Benzalkonium chloride) can cause swelling of the nasal mucosa, especially during long-term use. If such a reaction (i.e. persistent nasal congestion) is suspected, the use of another dosage form should be considered.

Interactions

Concomitant use of Calcitonin and lithium may lead to a reduction in plasma lithium concentrations. The dose of lithium may need to be adjusted.

Pregnancy and Lactation

As intranasal Calcitonin is indicated for postmenopausal women, no studies have been carried out in pregnant women or nursing mothers. Therefore, intranasal Calcitonin is not to be administered to such patients. However, animal studies have shown no embryo toxic and teratogenic potential.

It is not known whether salmon Calcitonin is excreted into human breast milk. In animals, salmon Calcitonin has been shown to decrease lactation and to be excreted in milk.

Effect to Drive and use the machine

No studies exist on the effects of Calcitonin (Salmon) Nasal Spray on the ability to drive and use machines. Calcitonin (Salmon) Nasal Spray may cause fatigue, dizziness and visual disturbances which may impair the patient's reactions. Patients must therefore be warned that these effects may occur, in which case they should not drive or use machines.

Adverse Reactions

The most frequently observed undesirable effects are local reactions such as rhinitis and nasal discomfort. They are generally mild and rarely require discontinuation of the treatment.

Adverse reactions have been ranked under headings of frequency using the following convention: very common ($\geq 1/10$); common ($\geq 1/100, <1/10$); uncommon ($\geq 1/1,000, <1/100$); rare ($\geq 1/10,000, <1/1,000$); very rare ($<1/10,000$), not known (cannot be estimated from the available data).

Common: Dizziness, headache, Rhinitis ulcerative, sinusitis, epistaxis, Pharyngitis, Nausea, diarrhoea, abdominal pain, Flushing, Fatigue, Arthralgia.

Uncommon: Visual disturbance, Cough, Vomiting, Pruritus, Hypertension, Hypersensitivity reactions.

Overdosage

Nausea, vomiting, flushing and dizziness are known to be dose dependent when calcitonin

is administered parenterally. Single doses (up to 10,000 IU) of salmon calcitonin have been administered parenterally without adverse effects other than nausea and vomiting, and exacerbation of pharmacological effects. Such events might therefore also be expected to occur in association with an overdose of intranasal calcitonin. However, intranasal calcitonin has been administered at up to 1600 IU as a single dose and up to 800 IU per day for three days without causing any serious adverse event. If symptoms of overdose appear, treatment is to be symptomatic.

Packing

Calcitonin (Salmon) Nasal Spray 200 IU is supplied in a 6ml glass vial fitted with a white rubberized atomizing pump, white nasal adapter, and white dust cover in a box with patient's instructions for use. Each bottle contains a net fill of 3.7ml. Each Spray Delivers 200 IU of Calcitonin (Salmon) through the nasal adapter.

Storage: Store Unopened bottle in refrigerator at a temperature 2°C - 8°C. Protect from freezing. Once opened the bottle may be stored at room temperature below 25°C in an upright position for upto 4 weeks.

Keep out of reach of children.

Shelf Life

Unopened: 24 Months
After opening: Should be used within 4 weeks.

Last Update: August 2011

Manufactured by:
SAYA MEDICA LIMITED
At: 508, G.I.D.C. Estate,
Wadhwan City-363 035,
Dist.: Surendranagar, Gujarat, INDIA.
www.savaglobal.com

Patient Information Leaflet

Calcitonin (Salmon) Nasal Spray

CITONAP 200

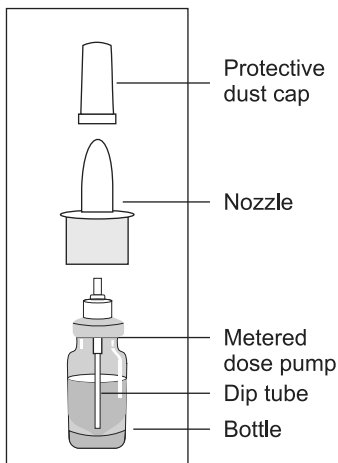
30

METERED DOSES



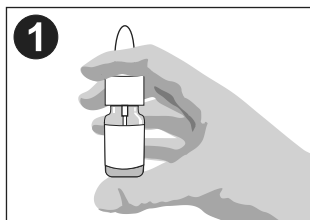
Before using your **CITONAP 200 Nasal Spray** read this leaflet carefully and follow the instructions.

Parts of the Nasal Spray

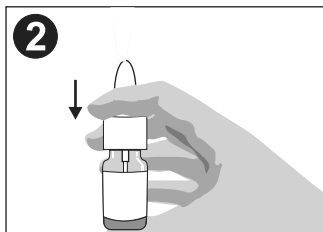


Directions for Use

Before use

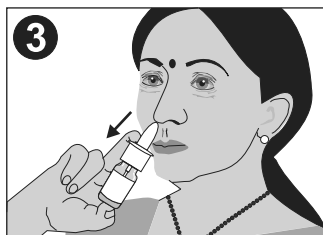


Hold the bottle as shown with your forefinger and middle finger on either side of the nozzle and your thumb underneath the bottle.



If using for the first time, test the spray; with the nozzle pointing away from your face, press it down several times as shown, until a fine mist comes out of the nozzle.

During use:



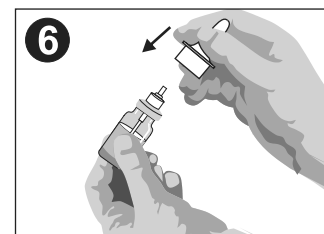
Bend your head forward slightly and insert the nozzle into one of your nostrils. Try to hold the nasal spray upright. Press the pump firmly once only.



Remove the nasal spray from your nose and breathe in deeply through your nostril to help keep the medicine in your nose.

5 Repeat steps 3 and 4 in alternate nostrils daily.

After use:

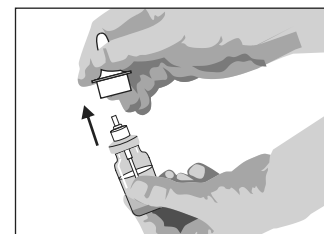


Wipe the nozzle with a clean handkerchief / tissue and replace the protective dust cap.

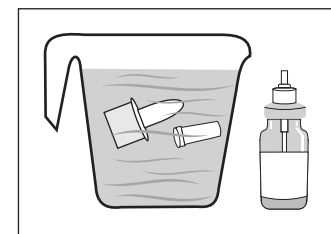
Cleaning your Nasal Spray

Your nasal spray should be cleaned at least once a week.

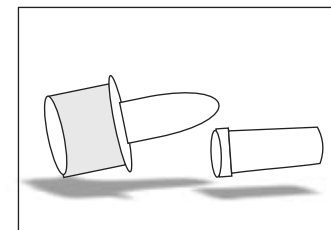
To do this:



Push the nozzle upwards to detach from the bottle.



Wash the nozzle and the dust cap in warm water



Remove all excess water and allow nozzle and cap to dry at room temperature before refitting into the bottle.

Note:

If the nozzle gets blocked, remove it as shown, and soak in warm water. Rinse the nozzle under running cold water. Allow the nozzle to dry before refitting it to the bottle.

DO NOT USE PIN OR A SHARP OBJECT TO UNBLOCK THE NOZZLE AS THIS WILL DESTROY THE SPRAY MECHANISM.