

Produktinformationen för Avestra 5 mg filmdragerad tablett, MTnr 15292, gäller vid det tillfälle då läkemedlet godkändes. Informationen kommer inte att uppdateras eftersom läkemedlet inte marknadsförs i Sverige. Av samma anledning finns inte någon svensk produktinformation.

Den engelska produktinformationen kommer dock att uppdateras när Sverige är referensland för produkten.

Om läkemedelsnamnet i följande produktinformation inte stämmer med namnet på dokumentet, beror det på att läkemedlet i Sverige är godkänt under ett annat namn.

SUMMARY OF THE PRODUCT CHARACTERISTICS

1 NAME OF THE MEDICINAL PRODUCT

Avestra 5 mg film-coated tablets.

2 QUALITATIVE AND QUANTITATIVE COMPOSITION

Each film-coated tablet contains 5 mg risedronate sodium (equivalent to 4.64 mg risedronic acid).

Excipients: Each film-coated tablet contains lactose.

For a full list of excipients, see section 6.1.

3 PHARMACEUTICAL FORM

Film-coated tablet.

Oval yellow film-coated tablet with RSN on one side and 5 mg on the other.

4 CLINICAL PARTICULARS

4.1 Therapeutic indications

Treatment of postmenopausal osteoporosis, to reduce the risk of vertebral fractures. Treatment of established postmenopausal osteoporosis, to reduce the risk of hip fractures. Prevention of osteoporosis in postmenopausal women with increased risk of osteoporosis (see section 5.1).

To maintain or increase bone mass in postmenopausal women undergoing long-term (more than 3 months), systemic corticosteroid treatment at doses $\geq 7.5\text{mg/day}$ prednisone or equivalent.

4.2 Posology and method of administration

The recommended daily dose in adults is one 5 mg tablet orally. The absorption of Avestra is affected by food, thus to ensure adequate absorption patients should take Avestra:

- Before breakfast: At least 30 minutes before the first food, other medicinal product or drink (other than plain water) of the day.

In the particular instance that before breakfast dosing is not practical, Avestra can be taken between meals or in the evening at the same time everyday, with strict adherence to the following instructions, to ensure Avestra is taken on an empty stomach:

- Between meals: Avestra should be taken at least 2 hours before and at least 2 hours after any food, medicinal product or drink (other than plain water).
- In the evening: Avestra should be taken at least 2 hours after the last food, medicinal product or drink (other than plain water) of the day. Avestra should be taken at least 30 minutes before going to bed.

If an occasional dose is missed, Avestra can be taken before breakfast, between meals, or in the evening according to the instructions above.

The tablets must be swallowed whole and not sucked or chewed. To aid delivery of the tablet to the stomach Avestra is to be taken while in an upright position with a glass of plain water ($\geq 120\text{ ml}$). Patients should not lie down for 30 minutes after taking the tablet (see section 4.4).

Supplemental calcium and vitamin D should be considered if the dietary intake is inadequate.

Elderly: No dosage adjustment is necessary since bioavailability, distribution and elimination were similar in elderly (>60 years of age) compared to younger subjects.

Renal Impairment: No dosage adjustment is required for those patients with mild to moderate renal impairment. The use of risedronate sodium is contraindicated in patients with severe renal impairment (creatinine clearance lower than 30 ml/min) (see sections 4.3 and 5.2).

Children: Safety and efficacy of Avestra have not been established in children and adolescents.

4.3 Contraindications

Hypersensitivity to risedronate sodium or to any of the excipients.

Hypocalcaemia (see section 4.4).

Pregnancy and lactation.

Severe renal impairment (creatinine clearance <30ml/min).

4.4 Special warnings and precautions for use

Foods, drinks (other than plain water) and medicinal products containing polyvalent cations (such as calcium, magnesium, iron and aluminium) interfere with the absorption of bisphosphonates and should not be taken at the same time as Avestra (see section 4.5) In order to achieve the intended efficacy, strict adherence to dosing recommendations is necessary (see section 4.2)

Efficacy of bisphosphonates in the treatment of postmenopausal osteoporosis is related to the presence of low bone mineral density (BMD T-score at hip or lumbar spine ≤ -2.5 SD) and/or prevalent fracture. High age or clinical risk factors for fracture alone are not reasons to initiate treatment of osteoporosis with a bisphosphonate.

The evidence to support efficacy of bisphosphonates including Avestra in very elderly women (>80 years) is limited (see section 5.1).

Bisphosphonates have been associated with oesophagitis, gastritis, oesophageal ulcerations and gastroduodenal ulcerations. Thus caution should be used:

- In patients who have a history of oesophageal disorders which delay oesophageal transit or emptying e.g. stricture or achalasia.
- In patients who are unable to stay in the upright position for at least 30 minutes after taking the tablet
- If risedronate is given to patients with active or recent oesophageal or upper gastrointestinal problems.

Prescribers should emphasise to patients the importance of paying attention to the dosing instructions and be alert to any signs or symptoms of possible oesophageal reaction. The patients should be instructed to seek timely medical attention if they develop symptoms of oesophageal irritation such as dysphagia, pain on swallowing, retrosternal pain or new/worsened heartburn.

Hypocalcaemia should be treated before starting Avestra therapy. Other disturbances of bone and mineral metabolism (e.g. parathyroid dysfunction, hypovitaminosis D) should be treated at the time of starting Avestra therapy.

Osteonecrosis of the jaw, generally associated with tooth extraction and/or local infection (including osteomyelitis) has been reported in patients with cancer receiving treatment regimens including primarily intravenously administered bisphosphonates. Many of these patients were also receiving chemotherapy and corticosteroids. Osteonecrosis of the jaw has also been reported in patients with osteoporosis receiving oral bisphosphonates.

A dental examination with appropriate preventive dentistry should be considered prior to treatment with bisphosphonates in patients with concomitant risk factors (e.g. cancer, chemotherapy, radiotherapy, corticosteroids, poor oral hygiene).

While on treatment, these patients should avoid invasive dental procedures if possible. For patients who develop osteonecrosis of the jaw while on bisphosphonate therapy, dental surgery may exacerbate the condition. For patients requiring dental procedures, there are no data available to suggest whether discontinuation of bisphosphonate treatment reduces the risk of osteonecrosis of the jaw. Clinical judgment of the treating physician should guide the management plan of each patient based on individual benefit /risk assessment.

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

4.5 Interaction with other medicinal products and other forms of interaction

No formal interaction studies have been performed, however no clinically relevant interactions with other medicinal products were found during clinical trials.

In the risedronate sodium Phase III osteoporosis studies, acetyl salicylic acid or NSAID use was reported by 33% and 45% of patients respectively.

If considered appropriate risedronate sodium may be used concomitantly with oestrogen supplementation.

Concomitant ingestion of medications containing polyvalent cations (e.g. calcium, magnesium, iron and aluminium) will interfere with the absorption of risedronate sodium (see section 4.4).

Risedronate sodium is not systemically metabolised, does not induce cytochrome P450 enzymes, and has low protein binding.

4.6 Pregnancy and lactation

There are no adequate data from the use of risedronate sodium in pregnant women. Studies in animals have shown reproductive toxicity (see section 5.3). The potential risk for humans is unknown. Studies in animal indicate that a small amount of risedronate sodium pass into breast milk. Risedronate sodium must not be used during pregnancy or by breast-feeding women.

4.7 Effects on ability to drive and use machines

No effects on ability to drive and use machines have been observed.

4.8 Undesirable effects

Risedronate sodium has been studied in phase III clinical trials involving more than 15,000 patients. The majority of undesirable effects observed in clinical trials were mild to moderate in severity and usually did not require cessation of therapy.

Adverse experiences reported in phase III clinical trials in postmenopausal women with osteoporosis treated for up to 36 months with risedronate 5mg/day (n=5020) or placebo (n=5048) and considered possibly or probably related to risedronate are listed below using the following convention (incidences versus placebo are shown in brackets): 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 ($< 1/10,000$).

Nervous system disorders:

Common: headache (1.8% vs. 1.4%)

Eye disorders:

Uncommon: iritis*

Gastrointestinal disorders:

Common: constipation (5.0% vs. 4.8%), dyspepsia (4.5% vs. 4.1%), nausea (4.3% vs. 4.0%), abdominal pain (3.5% vs. 3.3%), diarrhoea (3.0% vs. 2.7%)
Uncommon: gastritis (0.9% vs. 0.7%), oesophagitis (0.9% vs. 0.9%), dysphagia (0.4% vs. 0.2%), duodenitis (0.2% vs. 0.1%), oesophageal ulcer (0.2% vs. 0.2%)
Rare: glossitis (<0.1% vs. 0.1%), oesophageal stricture (<0.1% vs. 0.0%),

Musculoskeletal and connective tissues disorders:

Common: musculoskeletal pain (2.1% vs. 1.9%)

Investigations:

Rare: abnormal liver function tests*

* No relevant incidences from Phase III osteoporosis studies; frequency based on adverse event/laboratory/rechallenge findings in earlier clinical trials.

Laboratory findings: Early, transient, asymptomatic and mild decreases in serum calcium and phosphate levels have been observed in some patients.

The following additional adverse reactions have been reported during post-marketing use (frequency unknown):

Eye disorders:

iritis, uveitis

Musculoskeletal and connective tissues disorders:

osteonecrosis of the jaw

Skin and subcutaneous tissue disorders:

hypersensitivity and skin reactions, including angioedema, generalised rash, urticaria and bullous skin reactions, some severe including isolated reports of Stevens-Johnson syndrome and toxic epidermal necrolysis.

hair loss.

Immune system disorders:

anaphylactic reaction

Hepatobiliary disorders:

serious hepatic disorders. In most of the reported cases the patients were also treated with other products known to cause hepatic disorders.

4.9 Overdose

No specific information is available on the treatment of overdose with risedronate sodium.

Decreases in serum calcium following substantial overdose may be expected. Signs and symptoms of hypocalcaemia may also occur in some of these patients.

Milk or antacids containing magnesium, calcium or aluminium should be given to bind risedronate and reduce absorption of risedronate sodium. In cases of substantial overdose, gastric lavage may be considered to remove unabsorbed risedronate sodium.

5 PHARMACOLOGICAL PROPERTIES

5.1 Pharmacodynamic properties

Pharmaco-therapeutic group: Bisphosphonates
ATC Code: M05BA07

Risedronate sodium is a pyridinyl bisphosphonate that binds to bone hydroxyapatite and inhibits osteoclast-mediated bone resorption. The bone turnover is reduced while the osteoblast activity and bone mineralisation is preserved. In preclinical studies risedronate sodium demonstrated potent anti-osteoclast and antiresorptive activity, and dose dependently increased bone mass and biomechanical skeletal strength. The activity of risedronate sodium was confirmed by measuring biochemical markers for bone turnover during pharmacodynamic and clinical studies. Decreases in biochemical markers of bone turnover were observed within 1 month and reached a maximum in 3-6 months.

Treatment and Prevention of Postmenopausal Osteoporosis:

A number of risk factors are associated with postmenopausal osteoporosis including low bone mass, low bone mineral density, early menopause, a history of smoking and a family history of osteoporosis. The clinical consequence of osteoporosis is fractures. The risk of fractures is increased with the number of risk factors.

The clinical programme studied the effect of risedronate sodium on the risk of hip and vertebral fractures and contained early and late postmenopausal women with and without fracture. Daily doses of 2.5 mg and 5 mg were studied and all groups, including the control groups, received calcium and vitamin D (if baseline levels were low). The absolute and relative risk of new vertebral and hip fractures were estimated by use of a time-to-first event analysis.

- Two placebo-controlled trials (n=3,661) enrolled postmenopausal women under 85 years with vertebral fractures at baseline. Risedronate sodium 5 mg daily given for 3 years reduced the risk of new vertebral fractures relative to the control group. In women with respectively at least 2 or at least 1 vertebral fractures, the relative risk reduction was 49% and 41% respectively (incidence of new vertebral fractures with risedronate sodium 18.1% and 11.3%, with placebo 29.0% and 16.3%, respectively). The effect of treatment was seen as early as the end of the first year of treatment. Benefits were also demonstrated in women with multiple fractures at baseline. Risedronate sodium 5 mg daily also reduced the yearly height loss compared to the control group.
- Two further placebo controlled trials enrolled postmenopausal women above 70 years with or without vertebral fractures at baseline. Women 70-79 years were enrolled with femoral neck BMD T-score <-3 SD (manufacturer's range, i.e. -2.5 SD using NHANES III) and at least one additional risk factor. Women ≥80 years could be enrolled on the basis of at least one non-skeletal risk factor for hip fracture or low bone mineral density at the femoral neck. Statistical significance of the efficacy of risedronate sodium versus placebo is only reached when the two treatment groups 2.5 mg and 5 mg are pooled. The following results are only based on *a-posteriori* analysis of subgroups defined by clinical practise and current definitions of osteoporosis:
 - - In the subgroup of patients with femoral neck BMD T-score ≤-2.5SD (NHANES III) and at least one vertebral fracture at baseline, risedronate sodium given for 3 years reduced the risk of hip fractures by 46% relative to the control group (incidence of hip fractures in combined risedronate sodium 2.5 and 5 mg groups 3.8%, placebo 7.4%);
 - - Data suggest that a more limited protection than this may be observed in the very elderly (≥80 years). This may be due to the increasing importance of non-skeletal factors for hip fracture with increasing age.
 - In these trials, data analysed as a secondary endpoint indicated a decrease in the risk of new vertebral fractures in patients with low femoral neck BMD without vertebral fracture and in patients with low femoral neck BMD with or without vertebral fracture.

- Risedronate sodium 5 mg daily given for 3 years increased bone mineral density (BMD) relative to control at the lumbar spine, femoral neck, trochanter and wrist and prevented bone loss at the mid-shaft radius.
- In a one-year follow-up off therapy after three years treatment with risedronate sodium 5 mg daily there was rapid reversibility of the suppressing effect of risedronate sodium on bone turnover rate.
- In postmenopausal women taking oestrogen, risedronate sodium 5 mg daily increased bone mineral density (BMD) at the femoral neck and mid-shaft radius only, compared to oestrogen alone.
- Bone biopsy samples from postmenopausal women treated with risedronate sodium 5 mg daily for 2 to 3 years, showed an expected moderate decrease in bone turnover. Bone formed during risedronate sodium treatment was of normal lamellar structure and bone mineralisation. These data together with the decreased incidence of osteoporosis related fractures at vertebral sites in women with osteoporosis appear to indicate no detrimental effect on bone quality.
- Endoscopic findings from a number of patients with a number of moderate to severe gastrointestinal complaints in both risedronate sodium and control patients indicated no evidence of treatment related gastric, duodenal or oesophageal ulcers in either group, although duodenitis was uncommonly observed in the risedronate sodium group.
- In a trial comparing before-breakfast dosing and dosing at other times of the day in women with postmenopausal osteoporosis, lumbar spine BMD gains were statistically higher with before-breakfast dosing.
- In osteopenic postmenopausal women, risedronate sodium has shown superiority to placebo in increasing lumbar spine BMD at 12 and 24 months.

Corticosteroid Induced Osteoporosis: The clinical programme included patients initiating corticosteroid therapy (≥ 7.5 mg/day prednisone or equivalent) within the previous 3 months or patients who had been taking corticosteroids for more than 6 months. Results of these studies demonstrate that:

- Risedronate sodium 5 mg daily given for one year maintains or increases bone mineral density (BMD) relative to control at the lumbar spine, femoral neck, and trochanter.
- Risedronate sodium 5 mg daily reduced the incidence of vertebral fractures, monitored for safety, relative to control at 1 year in pooled studies.
- histological examination of bone biopsies from patients taking corticosteroids and risedronate sodium 5 mg daily did not show signs of disturbed mineralisation process.

5.2 Pharmacokinetic properties

Absorption: Absorption after an oral dose is relatively rapid ($t_{\max} \sim 1$ hour) and is independent of dose over the range studied (2.5 to 30 mg). Mean oral bioavailability of the tablet is 0.63% and is decreased when risedronate sodium is administered with food. Bioavailability was similar in men and women.

Distribution: The mean steady state volume of distribution is 6.3 l/kg in humans. Plasma protein binding is about 24%.

Metabolism: There is no evidence of systemic metabolism of risedronate sodium.

Elimination: Approximately half of the absorbed dose is excreted in urine within 24 hours, and 85% of an intravenous dose is recovered in the urine after 28 days. Mean renal clearance is 105 ml/min and mean total clearance is 122 ml/min, with the difference probably attributed to clearance due to adsorption to bone. The renal clearance is not concentration dependent, and there is a linear relationship between renal clearance and creatinine clearance. Unabsorbed risedronate sodium is eliminated unchanged in faeces. After oral administration the concentration-time profile shows three elimination phases with a terminal half-life of 480 hours.

Special Populations:

Elderly: no dosage adjustment is necessary.

Acetyl salicylic acid/NSAID users: Among regular acetyl salicylic acid or NSAID users (3 or more days per week) the incidence of upper gastrointestinal adverse events in risedronate sodium treated patients was similar to that in control patients.

5.3 Preclinical safety data

In toxicological studies in rat and dog dose dependent liver toxic effects of risedronate sodium were seen, primarily as enzyme increases with histological changes in rat. The clinical relevance of these observations is unknown. Testicular toxicity occurred in rat and dog at exposures considered in excess of the human therapeutic exposure. Dose related incidences of upper airway irritation were frequently noted in rodents. Similar effects have been seen with other bisphosphonates. Lower respiratory tract effects were also seen in longer term studies in rodents, although the clinical significance of these findings is unclear. In reproduction toxicity studies at exposures close to clinical exposure ossification changes were seen in sternum and/or skull of foetuses from treated rats and hypocalcemia and mortality in pregnant females allowed to deliver. There was no evidence of teratogenesis at 3.2mg/kg/day in rat and 10mg/kg/day in rabbit, although data are only available on a small number of rabbits. Maternal toxicity prevented testing of higher doses. Studies on genotoxicity and carcinogenesis did not show any particular risks for humans.

6 PHARMACEUTICAL PARTICULARS

6.1 List of excipients

Tablet core: Lactose monohydrate
Cellulose microcrystalline
Crospovidone
Magnesium stearate.

Film coating: Iron oxide yellow E172
Hypromellose
Macrogol
Hyprolose
Silicon dioxide
Titanium dioxide E171.

6.2 Incompatibilities

Not applicable.

6.3 Shelf-life

5 years.

6.4 Special precautions for storage

This medicinal product does not require any special storage conditions.

6.5 Nature and content of container

Opaque PVC/aluminium foil blister cards of 14 tablets in a cardboard carton, tablet count 14, 28 (2 x 14), 84 (6 x 14), 98 (7 x 14) or 10 x 14 (hospital bundle).

2 x 10 count perforated blister strip (hospital unit dose)

Not all pack sizes may be marketed.

6.6 Special precautions for disposal

No special requirements.

7 MARKETING AUTHORISATION HOLDER

<[To be completed nationally]>

In Sweden:

Gruppo LePetit S.r.l.
Viale Luigi Bodio 37/b
20158 Milano
Italy

8 MARKETING AUTHORISATION NUMBER(S)

<[To be completed nationally]>

In Sweden:

15292

9 DATE OF FIRST AUTHORISATION/RENEWAL OF THE AUTHORISATION

1999-10-07/2009-08-13

10 DATE OF REVISION OF THE TEXT

2009-09-30