



## Dexamethasone & Dexamethasone-SP

Dexamethasone (dexamethasone sodium phosphate injection, USP, 2 mg/mL) is a synthetic analogue of prednisolone that has similar but more potent anti-inflammatory therapeutic action and diversified hormonal and metabolic effects. It is indicated for the treatment of primary bovine ketosis and as an anti-inflammatory agent in cattle and horses. As supportive therapy, it may be used in the management of various rheumatic, allergic, dermatologic, and other diseases known to be responsive to anti-inflammatory corticosteroids. It may be used intravenously as supportive therapy when an immediate hormonal response is required. Do not use in calves to be processed for veal. Administer IV or IM. Prescription.

The SP formulation (dexamethasone sodium phosphate injection, USP, 4 mg/mL, equivalent to 3 mg/mL dexamethasone) allows for administration of relatively large doses in a small volume of diluent because it is highly water-soluble. It is indicated as a rapid adrenal glucocorticoid and/or anti-inflammatory agent in horses. Administer IV only. Prescription.



Order Desk: (800) 824-3703  
 Online Order: [www.mwivet.com](http://www.mwivet.com)

MWI#	DESCRIPTION	SIZE
501012	Dexamethasone	100 mL
501024	Dexamethasone SP	100 mL



the right choice.

# Dexamethasone

**CAUTION:** Federal law restricts this drug to use by or on the order of a licensed veterinarian.

**DESCRIPTION:** Dexamethasone Solution is a synthetic analogue of prednisolone, having similar but more potent anti-inflammatory therapeutic action and diversified hormonal and metabolic effects. Modification of the basic corticoid structure as achieved in Dexamethasone offers enhanced anti-inflammatory effect compared to older corticosteroids. The dosage of Dexamethasone required is markedly lower than that of prednisone and prednisolone.

Dexamethasone is not species-specific; however, the veterinarian should read the sections on INDICATIONS, DOSAGE, SIDE EFFECTS, CONTRAINDICATIONS, PRECAUTIONS, and WARNINGS before this drug is used.

Dexamethasone is intended for intravenous or intramuscular administration. Each mL contains 2mg dexamethasone, 500mg polyethylene glycol 400, 9mg benzyl alcohol, 1.8mg methylparaben and 0.2mg propylparaben as preservatives, 4.75% alcohol, HCl to adjust pH to approximately 4.9, water for injection q.s.

**EXPERIMENTAL STUDIES:** Experimental animal studies on dexamethasone have revealed it possesses greater anti-inflammatory activity than many steroids. Veterinary clinical evidence indicates dexamethasone has approximately 20 times the anti-inflammatory activity of prednisolone and 70 to 80 times that of hydrocortisone. Thymus involution studies show dexamethasone possesses 25 times the activity of prednisolone. In reference to mineralocorticoid activity, dexamethasone does not cause significant sodium or water retention. Metabolic balance studies show that animals on controlled and limited protein intake will exhibit nitrogen losses on exceedingly high dosages.

**INDICATIONS:** Dexamethasone is indicated for the treatment of primary bovine ketosis and as an anti-inflammatory agent in the bovine and equine.

As supportive therapy, Dexamethasone may be used in the management of various rheumatic, allergic, dermatologic, and other diseases known to be responsive to anti-inflammatory corticosteroids. Dexamethasone may be used intravenously as supportive therapy when an immediate hormonal response is required.

## *Bovine Ketosis*

Dexamethasone is offered for the treatment of primary ketosis. The gluconeogenic effects of Dexamethasone, when administered intramuscularly, are generally noted within the first 6 to 12 hours. When Dexamethasone is used intravenously, the effects may be noted sooner. Blood sugar levels rise to normal levels rapidly and generally rise to above normal levels within 12 to 24 hours. Acetone bodies are reduced to normal concentrations usually within 24 hours. The physical attitude of animals treated with Dexamethasone brightens and appetite improves, usually within 12 hours. Milk production, which is suppressed as a compensatory reaction in this condition, begins to increase. In some instances, it may even surpass previous peaks. The recovery process usually takes from 3 to 7 days.

## *Supportive Therapy*

Dexamethasone may be used as supportive therapy in mastitis, metritis, traumatic gastritis, and pyelonephritis, while appropriate primary therapy is administered. In these cases, the corticosteroid combats accompanying stress and enhances the feeling of general well-being.

Dexamethasone may also be used as supportive therapy in inflammatory conditions such as arthritic conditions, snake bite, acute mastitis, shipping fever, pneumonia, laminitis, and retained placenta.

## *Equine*

Dexamethasone is indicated for the treatment of acute musculoskeletal inflammations, such as bursitis, carpalitis, osselets, tendonitis, myositis, and sprains. If bony changes exist in any of these conditions, joints, or accessory structures, a response to Dexamethasone cannot be expected. In addition, Dexamethasone may be used as supportive therapy in fatigue, heat exhaustion, influenza, laminitis, and retained placenta provided that the primary cause is determined and corrected.

**ADMINISTRATION AND DOSAGE:** Therapy with Dexamethasone, as with any other potent corticosteroid, should be individualized according to the severity of the condition being treated, anticipated duration of steroid therapy, and animal's threshold or tolerance for steroid excess.

Treatment may be changed over to Dexamethasone from any other glucocorticoid with proper reduction or adjustment of dosage.

Bovine: Dexamethasone: 5 - 20mg intravenously or intramuscularly.

Equine: Dexamethasone: 2.5 - 5mg intravenously or intramuscularly.

**CONTRAINDICATIONS:** Except for emergency therapy, do not use in animals with chronic nephritis and hyper-corticalism (Cushing's Syndrome). Existence of congestive heart failure, diabetes, and osteoporosis are relative contraindications. Do not use in viral infections during the viremic stage.

**PRECAUTIONS:** Animals receiving Dexamethasone should be under close observation. Because of the anti-inflammatory action of corticosteroids, signs of infection may be masked and it may be necessary to stop treatment until a further diagnosis is made. Overdosage of some glucocorticoids may result in sodium retention, fluid retention, potassium loss, and weight gain.

Dexamethasone may be administered to animals with acute or chronic bacterial infections providing the infections are controlled with appropriate antibiotic or chemotherapeutic agents

Doses greater than those recommended in horses may produce transient drowsiness or lethargy in some horses. The lethargy usually abates in 24 hours.

Use of corticosteroids, depending on the dose, duration, and specified steroid, may result in inhibition of endogenous steroid production following drug withdrawal. In patients presently receiving or recently withdrawn from systemic corticosteroid treatments, therapy with a rapidly acting corticosteroid should be considered in unusually stressful situations

**WARNINGS:** Clinical and experimental data have demonstrated that corticosteroids administered orally or parenterally to animals may induce the first stage of parturition when administered during the last trimester of pregnancy and may precipitate premature parturition followed by dystocia, fetal death, retained placenta, and metritis.

Additionally, corticosteroids administered to dogs, rabbits, and rodents during pregnancy have produced cleft palate. Other congenital anomalies including deformed forelegs, phocomelia, and anasarca have been reported in offspring of dogs which received corticosteroids during pregnancy.

**A withdrawal period has not been established for this product in pre-ruminating calves. Do not use in calves to be processed for veal.**

**SIDE EFFECTS:** Side effects, such as SAP and SGPT enzyme elevations, weight loss, anorexia, polydipsia, and polyuria, have occurred following the use of synthetic corticosteroids in dogs. Vomiting and diarrhea (occasionally bloody) have been observed in cats and dogs. Cushing's Syndrome in dogs has been reported in association with prolonged or repeated steroid therapy. Corticosteroids reportedly cause laminitis in horses.

**HOW SUPPLIED:** Dexamethasone, 2mg per mL, 100mL multiple dose vial.

**STORAGE:** Store between 2°C and 30°C (36°F and 86°F).

# Dexamethasone-SP

**DEXAMETHASONE SODIUM PHOSPHATE INJECTION, USP 4 MG/ML (equivalent to dexamethasone 3 mg/mL)**

**FOR INTRAVENOUS USE IN HORSES ONLY**

**WARNING: DO NOT USE IN HORSES INTENDED FOR FOOD FOR VETERINARY USE ONLY**

## **DESCRIPTION:**

Dexamethasone sodium phosphate (a synthetic adrenocortical steroid), is a white or slightly yellow crystalline powder. It is freely soluble in water and is exceedingly hygroscopic.

Each mL of sterile aqueous solution contains Dexamethasone Sodium Phosphate 4mg (equivalent to dexamethasone 3mg), Sodium Citrate 10mg, Sodium Bisulfite 2mg, Benzyl Alcohol 1.5% as preservative, in Water for Injection q.s. Sodium Hydroxide and/or Hydrochloric Acid to adjust pH to between 7.0 and 8.5.

## **CLINICAL PHARMACOLOGY:**

Dexamethasone is a synthetic corticosteroid and possesses glucocorticoid activity. Dexamethasone sodium phosphate is a salt of dexamethasone that is particularly suitable for intravenous administration because it is highly water soluble, permitting administration of relatively large doses in a small volume of diluent. Dexamethasone, as a steroid, is equivalent in potency to some established steroids while being considerably more potent than others. In the case of the dog, dexamethasone is found to be about equivalent in dosage to prednisone but about 30 to 40 times more potent than prednisolone.

## **INDICATIONS AND USAGE:**

Dexamethasone Sodium Phosphate Injection is indicated as a rapid adrenal glucocorticoid and/or anti-inflammatory agent in horses.

## **CONTRAINDICATIONS:**

Do not use in viral infections. Except when used for emergency therapy, dexamethasone sodium phosphate is contraindicated in animals with tuberculosis and chronic nephritis. Existence of congestive heart failure, osteoporosis and diabetes are relative contraindications.

In the presence of infection appropriate antibacterial agents should also be administered and should be continued for at least 3 days after discontinuance of the hormone and disappearance of all signs of infection.

## **WARNINGS:**

Clinical and experimental data have demonstrated that corticosteroids administered orally or by injection to animals may induce the first stage of parturition if used during the last trimester of pregnancy and may precipitate premature parturition followed by dystocia, fetal death, retained placenta and metritis. Additionally, corticosteroids administered to dogs, rabbits, and rodents during pregnancy have produced cleft palate. Other congenital anomalies including deformed forelegs, phocomelia, and anasarca have been reported in offspring of dogs which received corticosteroids during pregnancy.

## **PRECAUTIONS:**

Because of the anti-inflammatory action of corticosteroids, signs of infection may be hidden and it may be necessary to stop treatment until diagnosis is made. Overdosage of some glucocorticoids may result in sodium retention, fluid retention, potassium loss and weight gains.

In infections characterized by overwhelming toxicity, dexamethasone sodium phosphate therapy, in conjunction with indicated antibacterial therapy, is effective in reducing mortality. It is essential that the causative organism be known and an effective antibacterial agent be administered concurrently. The injudicious use of adrenal hormones in animals with infections can be hazardous.

Use of corticosteroids, depending on dose, duration and specific steroid, may result in inhibition of endogenous steroid production following drug withdrawal. In patients presently receiving or recently withdrawn from systemic corticosteroid treatments, therapy with a rapidly acting corticosteroid should be considered in unusually stressful situations.

## **ADVERSE REACTIONS:**

The therapeutic use of dexamethasone sodium phosphate injection is unlikely to cause undesired accentuation of metabolic effects. However, if continued corticosteroid therapy is anticipated, a high protein intake should be provided to keep the animal in positive nitrogen balance. A retardant effect on wound healing should be considered when it is used in conjunction with surgery. Euphoria or an improvement of attitude, and increased appetite are the usual manifestations.

Side effects such as glycosuria, hyperglycemia, diarrhea, polydipsia and polyuria have been observed in some species.

Side effects such as SAP and SGPT enzyme elevations, eosinopenia, and vomiting have occurred following use of synthetic corticosteroids in dogs.

Cushing's Syndrome in dogs has been reported in association with prolonged or repeated steroid therapy.

Corticosteroids reportedly cause laminitis in horses.

## **DOSAGE AND ADMINISTRATION:**

For Intravenous Use Only.

Horses: The usual intravenous dosage is 2.5 to 5 mg (based on 3 mg per mL of dexamethasone content).

If permanent corticosteroid effect is required, oral therapy with dexamethasone may be substituted. When therapy is to be withdrawn after prolonged corticosteroid administration, the daily dose should be reduced gradually over a number of days, in stepwise fashion.

## **HOW SUPPLIED:**

Dexamethasone-SP, dexamethasone sodium phosphate injection 4mg/mL (equivalent to 3mg/mL dexamethasone) is available in 100mL multiple dose vials

Store between 15°C and 30°C (59°F - 86°F). Do not freeze.

**CAUTION:** Federal law restricts this drug to use by or on the order of a licensed veterinarian

