

Prednisolone:

SCHEDULING STATUS: S4

CURRENTLY COMPOUNDED FORMULATIONS:

Active ingredient(s)	Injectable	Oral equine paste	Oral carnivore paste	Orals for exotics	Oral solution/suspension	Topical treatment	Shampoo	Capsules/Tablets	Oral powder
Prednisolone	✓	✓	✓					✓	

REGISTERED PRODUCT/ TRADE NAME: Prednisolone 1% Kela injection – 10 mg/ml; Prednisolone tablets 5 mg (discontinued); Solu-Delta-Cortef™.

PHARMACOLOGICAL CLASSIFICATION: Glucocorticoid

PHARMACOLOGICAL ACTION: Glucocorticoids affect cells by binding to the glucocorticoid receptor. The activated glucocorticoid receptor-glucocorticoid complex up-regulates the expression of anti-inflammatory proteins in the nucleus (a process known as transactivation) and represses the expression of proinflammatory proteins in the cytosol by preventing the translocation of other transcription factors from the cytosol into the nucleus (transrepression).^[2] Glucocorticoids have effects on virtually every cell type and system in mammals.^[1]

INDICATION: Glucocorticoids have been used in an attempt to treat practically every malady that afflicts man or animal, but there are three broad uses and dosage ranges for use of these agents. 1) Replacement of glucocorticoid activity in patients with adrenal insufficiency, 2) as an antiinflammatory agent, and 3) as an immunosuppressive. Among some of the uses for glucocorticoids include treatment of: endocrine conditions (*e.g.*, adrenal insufficiency), rheumatic diseases (*e.g.*, rheumatoid arthritis), collagen diseases (*e.g.*, systemic lupus), allergic states, respiratory diseases (*e.g.*, asthma), dermatologic diseases (*e.g.*, pemphigus, allergic dermatoses), hematologic disorders (*e.g.*, thrombocytopenias, autoimmune hemolytic anemias), neoplasias, nervous system disorders (increased CSF pressure), GI diseases (*e.g.*, ulcerative colitis exacerbations), and renal diseases (*e.g.*, nephrotic syndrome). Some glucocorticoids are used topically in the eye and skin for various conditions or are injected intra-articularly or intra-lesionally. The above listing is certainly not complete.^[1]

DOSAGE AND DIRECTIONS FOR USE:

DOGS:

For adjunctive treatment of neoplasms: 0.5 mg/kg PO oid

For chronic bronchitis: 0.5-1 mg/kg PO oid-every other day.

For collapsing trachea: 0.25-0.5 mg/kg PO bid for 7-10 days.

For food allergy or intolerance: 0.5 mg/kg PO oid, taper dose.

As an anti-inflammatory in the adjunctive treatment of otitis interna: 0.25 mg/kg/day for first 5-7 days of treatment.^[1]

CATS:

Note: Use prednisolone in place of prednisone in cats whenever possible. Cats may not absorb or convert prednisone as well as dogs.

As an immunosuppressive agent: initially 2-4 mg/kg oid, taper dose.

For respiratory disorders: 1-2 mg/kg oid

For dermatological conditions: 1-2 mg/kg PO bid for 5 days, taper dose.^[1]

CATTLE:

For cerebral oedema: 1-4 mg/kg IV

For aseptic laminitis: 100-200 mg IM or IV; continue therapy for 2-3 days.

For glucocorticoid activity: 0.2-1 mg/kg IV or IM.^[1]

RABBITS/ RODENTS/ SMALL MAMMALS:

Mice, rats, gerbils, hamsters, guinea pigs, chinchillas: 0.5-2.2 mg/kg IM or SC.^[1]

FERRETS:

As an anti-inflammatory or for insulinoma: 0.5-2 mg/kg PO or IM (frequency not specified).^[1]

HORSES:

Note: Prednisone does not appear to be absorbed very well after oral dosing; use prednisolone or another oral steroid.

For COPD: initially 600-800 mg IM or PO in a 450 kg horse. May be possible to decrease dose and go to alternate day dosing. Doses as low as 200 mg every other day may be effective.

For glucocorticoid effects: 0.25-1 mg/kg PO.^[1]

BIRDS:

As an anti-inflammatory: 0.2 mg/30 g body weight. Alternatively, dissolve 5 mg in 2.5 ml of water and administer 2 drops orally bid. Decrease dosage schedule if using long-term.^[1]

WARNINGS/ PRECAUTIONS/ CONTRA-INDICATIONS:

- Adverse effects are generally associated with long-term administration of these drugs, especially if given at high dosages or not on an alternate day regimen. Effects generally are manifested as clinical signs of hyperadrenocorticism. When administered to young, growing animals, glucocorticoids can retard growth.^[1]
- In dogs, polydipsia (PD), polyphagia (PP), and polyuria (PU) may all be seen with short-term "burst" therapy as well as with alternate-day maintenance therapy on days when giving the drug. Adverse effects in dogs can include: dull, dry haircoat, weight gain, panting, vomiting, diarrhea, elevated liver enzymes, pancreatitis, GI ulceration, lipidemias, activation or worsening of diabetes mellitus, muscle wasting, and behavioral changes (depression, lethargy, viciousness). Discontinuation of the drug may be necessary; changing to an alternate steroid may also alleviate the problem. With the exception of PU/PD/PP, adverse effects associated with anti-inflammatory therapy are relatively uncommon. Adverse effects associated with immunosuppressive doses are more common and potentially more severe.^[1]
- Cats generally require higher dosages than dogs for clinical effect, but tend to develop fewer adverse effects. Occasionally, polydipsia, polyuria, polyphagia with weight gain, diarrhea, or depression can be seen. Long-term, high dose therapy can lead to "Cushingoid" effects, however.^[1]

REFERENCES:

1. Plumb's Veterinary Drug Handbook, Sixth Edition by Donald C. Plumb
2. www.wikipedia.org