

Practical Clinical Use of Prascend®

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Alternative Title:

The Nitty-Gritty, Down and Dirty,
Only What I Need To Know,
Don't Have Time for a
Superfluous Internal Medicine
Geek Fluff Talk on Prascend®



Prascend® =
Pergolide mesylate



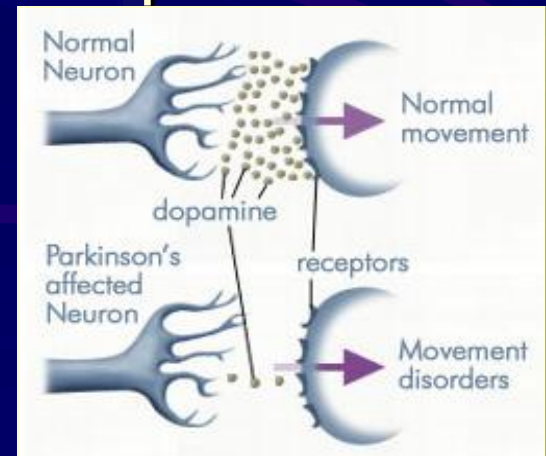
INDICATION

■ For control of clinical signs of Equine Cushing's Disease

Equine Cushing's Disease = PPID

PPID = Pituitary Pars Intermedia Dysfunction

- PI INHIBITED BY DOPAMINE from dopaminergic neurons in the hypothalamus
- Dopaminergic neurons undergo oxidative damage with aging (normal process)
- *Accelerated process in some horses.....EMS*
- As dopaminergic neurons are lost, melanotrophs are less inhibited
- Hyperplasia develops and melanotrophs secrete more hormones



(McFarlane et al., *J Neuroendocrinol* 2005)

How does Prascend® work?

Dopamine receptor agonist



Inhibits PI melanotrophs



Decreased hormone production



Horses at Risk for PPID

■ Age

Older horses/ponies
> 15 years of age

■ Breed

Ponies

Morgans, Pasos, Arabs, QH, Saddlebreds,
Warmbloods, TWH

■ No sex predilection

■ EMS?



**Pituitary Pars Intermedia Dysfunction (PPID)
Clinical Presentation**

Early	Advanced
<p>Decreased athletic performance</p> <p>Change in attitude/lethargy</p> <p>Delayed haircoat shedding</p> <p>Regional hypertrichosis</p> <p>Change in body conformation</p> <p>Regional adiposity</p> <p>Laminitis</p>	<p>Lethargy</p> <p>Generalized hypertrichosis</p> <p>Loss of seasonal haircoat shedding</p> <p>Skeletal muscle atrophy</p> <p>Rounded abdomen</p> <p>Abnormal sweating (increased or decreased)</p> <p>Polyuria/polydipsia</p> <p>Recurrent infections (e.g. sole abscesses)</p> <p>Regional adiposity</p> <p>Absent reproductive cycle / infertility</p> <p>Laminitis</p> <p>Hyperglycemia</p> <p>Neurologic deficit/blindness</p>

Prepared by the PPID Working Group:

Nicholas Frank (Group Coordinator), Frank Andrews, Ben Buchanan, Andy Durham, Janice Kritchevsky,
Dianne McFarlane, and Hal Schott

Atypical Clinical Signs /Cases

- Regional hypertrichosis
- Recurrent infections
- Change of body conformation
- Fertility problems
- Horses with EMS at 10yr



So Which Horses Need Prascend®?

How Do I Diagnose PPID?



Horse with history and clinical signs consistent with PPID

Tier 1: Resting ACTH*

Single sample or 2 samples taken 15 min apart and combined

Positive

Use seasonally adjusted reference intervals

Initiate treatment

Negative[†]

Horse is not affected by PPID
Diagnostic testing complete

Option 1: Perform another Tier 1 test

Resting ACTH concentration
Overnight DST

Positive

Initiate treatment

Negative[†]

Tier 1: Overnight DST*

2 samples (0 h and 19 h)
or 1 sample at 19 h

Negative[†]

November to July

Initiate treatment

Positive

>10ng/mL
(1.0 µg/dL) at 19 h

August to October

Cannot be interpreted

Option 2: Perform Tier 2 test

TRH stimulation test with ACTH measured*

Equine Cushings Disease = PPID

DIAGNOSIS



Current Tests Good for Advanced Disease

Not Good for Early Cases!!!!!!

Diagnosis by Treatment Trial

It's done for ulcers and EPM..why not?



Treat for 30-90 days

Look for improvement in signs

Why is Prascend® better than compounded Pergolide?

Comparison of Pharmaceutical Equivalence for Compound Preparations of Pergolide Mesylate

- Assess potency and stability of various formulations
- Liquid, powder, and capsules in common use by practitioners (Franks, Roadrunner, Smartpak, Stokes, Wedgewood, Wickliffe.)
- Potency of the compound was determined at 0, 15, 30, 45 and 60 days post receipt of the drug stored at room temperature and under refrigeration

Why is Prascend® better than compounded Pergolide?

- Initial concentrations in all formulations were highly variable, many having concentrations well below the label claim.
- High degree of variation in concentrations between 2 containers of same product ordered from same pharmacy on the same date.
- 57% of tested products did not meet FDA requirements for potency at onset of the study.
- 21% of liquid products were above the required potency after 15 days. All liquid products were sub-potent by 30 days.
- The only solid product meeting the potency requirement after 60 days was determined to be 120% of the target potency concentration at the outset of the study.

Why is Prascend® better than compounded Pergolide?

Take Home Message:

Results from this study demonstrate differences in potency of the active ingredient, pergolide mesylate, in the various formulations/products obtained from different veterinary compounding pharmacies.

This could have important consequences both from an efficacy and toxicity standpoint.

Dosing Prascend®?

■ Dosage and Administration:

- Orally starting at 2.0 µg/kg once daily
 - Adjust dose to effect, don't exceed 4.0 µg/kg
- Tablets are scored - dose to nearest one-half tablet increment

Body Weight (lbs)	Dosage	Dosage
	2.0 µg/kg	4.0 µg/kg
300–749	0.5 tablet	1.0 tablet
750–1,249	1.0 tablet	2.0 tablets
1,250–1,749	1.5 tablets	3.0 tablets
1,750–2,249	2.0 tablets	4.0 tablets

Dosing Prascend® ?

How to switch from compounded pergolide:

- Start at label dose. If 4-6mg/day, 1.5-2mg
 - Potency and ingredients NOT EQUAL
 - Baseline ACTH level
- 2/3 horses will maintain on starting dose



Dosing Prascend®?



Tips on Administration

- Most will eat w/ handful grain (TINY bitter pill)
- Dissolves in <15 seconds into pink solution.
- Apple juice, corn syrup, cake icing, circus peanuts, carrots, apple slices, flavors, etc.
 - If IR: **sugar-free sweet treats**

Watch for “pergolide cloud/veil”

- Horses occasionally appear depressed when pergolide treatment is initiated; may show inappetance.

Practical Approach:

- Stop treatment for 2-4 days
- 1/2 dose once daily for 2 days
- Increase to twice daily for 2 days
- Return to regular dose once daily



Dosing Prascend®?

Other Side Effects:

- Increased arthritis pain (lack of endorphins from PPID)
- “Hyperexcitability”
- Can decrease Prolactin



Results of Prascend® Treatment Trial

Horses evaluated for 6 months:

- 50% had ↓ACTH in 1 week
- Most had ↓ACTH in 28 days
- 76% responded during 6 months
- Subset of non-responders followed 3yrs – normal
- **About 30% transient inappetance**



Results of Prascend® Treatment Trial

Percent of Animals with Improvement in Clinical Signs Relative to Baseline Scores

Clinical sign	Day 90 (%)	Day 180 (%)
	N=113	N=111*
Hirsutism	32.7%	89.2%
Hyperhidrosis	27.4%	42.3%
Polyuria/polydipsia	31%	34.2%
Muscle wasting	36.3%	46%

*Two horses were withdrawn from the study prior to Day 180.



Economic Considerations in Using Prascend®

- 60 ct vs 160 ct boxes – All foil 10 packs
- Can use Horse Owner Brochure as package insert for “trial samples”
- PPID is not cured, it is managed
- Prascend® can be cost effective by improving the horse’s health

Management of PPID

- Drug Therapy with Prascend®?
- Screen for Insulin Resistance (IR)
- Proper Nutrition
- Hoof Care
- Routine Dentistry
- Deworming
- Body Clipping



Tyler-22 years



Courtesy of Hal Schott

Tyler, 22 years old. Back at work, and winning!

THE END



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