Systemic corticosteroid regimens used for acute spinal radiculopathy

There is **no universally accepted regimen**, and evidence suggests **modest improvement in function with little or no clinically important improvement in pain**, with higher rates of transient adverse effects.

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Regimen	Typical Dose	Duration	Evidence	Comments
Prednisone taper (Goldberg et al., JAMA 2015)	60 mg daily × 5 days → 40 mg daily × 5 days → 20 mg daily × 5 days (total 600 mg)	15 days	**Highest-quality RCT (n=269)**	Improved Oswestry Disability Index by ~6 points at 3 weeks and ~7 points at 1 year; **no significant pain reduction or reduction in surgery**. More adverse effects than placebo.
Prednisone burst	50 mg daily	5 days	Small RCTs	Simpler regimen frequently used in primary care; evidence does **not consistently demonstrate superiority** over placebo.
Prednisone taper (older studies)	60 mg × 3 days → 40 mg × 3 days → 20 mg × 3 days	9 days	Older RCTs	Included in systematic reviews; overall mixed results with minimal clinical benefit.
Weight-based Prednisone	1 mg/kg/day for 1 week, then taper by one-third each week	~3 weeks	Older trial	Limited evidence; not routinely recommended today.
Dexamethasone taper	64 mg day 1 → 32 mg day 2 → 24 mg day 3 → 12 mg day 4 → 8 mg daily × 3 days	7 days	Several older RCTs	Equivalent cumulative potency ≈400 mg prednisone. No convincing superiority over placebo across trials.
Single-dose IM/IV methylprednisolone	Variable (commonly 160 mg IM or equivalent IV dosing in studies)	Single dose	Small heterogeneous trials	Some short-term improvement reported; insufficient evidence for routine use.
Oral methylprednisolone (“Medrol Dosepak”)	24 mg day 1 tapered over 6 days	6 days	Widely prescribed but **not directly supported by robust RCTs** for lumbar radiculopathy	Common in practice due to convenience rather than strong evidence.

Major references

1. **Goldberg H, et al.** Oral Steroids for Acute Radiculopathy Due to a Herniated Lumbar Disk. *JAMA*. 2015;313(19):1915-1923. (Prednisone 60/40/20 mg taper; n=269)
2. Cochrane Review (Oliveira et al.) *Systemic corticosteroids for radicular and non-radicular low back pain.* 2022. Concluded that systemic steroids provide **slight short-term functional benefit but minimal effect on pain**, with no reduction in surgery.
3. 2026 Systematic Review of Oral Corticosteroid Therapy in Lumbar Radiculopathy. Included four RCTs (369 patients); concluded **modest functional benefit without consistent pain improvement**, recommending individualized use.

Clinical takeaway:

If systemic steroids are chosen for **acute (<3 months) lumbar radiculopathy**, the regimen with the strongest supporting evidence is the **15-day prednisone taper (60 mg → 40 mg → 20 mg; cumulative 600 mg)** from the JAMA trial. However, the expected benefit is **modest improvement in function rather than pain**, and routine use for all patients is not supported by current evidence.