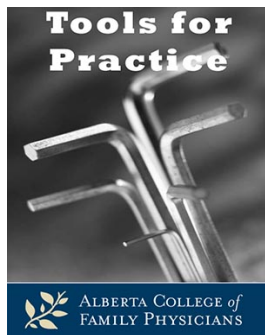


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Acute Back Pain: Is Cyclobenzaprine a reasonable option?

Clinical Question: What is the effectiveness of cyclobenzaprine for acute back pain?

Bottom-line: Cyclobenzaprine provides reduced pain and increased global improvement over placebo for one in every 3-9 patients in the first week. Cyclobenzaprine is as good or better than diazepam. Cyclobenzaprine 5 mg TID (half-pill) is as effective as 10 mg TID with less somnolence.

Evidence:

- Systematic reviews and newer Randomized Controlled Trials (RCTs):
 - Non-benzodiazepine muscle relaxants versus placebo: Three systematic reviews (9-46 RCTs, 820-5,401 patients), differences statistically significant:¹⁻³
 - Pain: ~12 points lower on 100 point Visual Analogue Scale at 10 days.¹
 - Pain: Attaining undefined 'pain reduction' Number Needed to Treat (NNT)=4-7 at 2-7 days.²
 - Global efficacy:² Attaining undefined 'target' NNT=4 at days 2-4.
 - Cyclobenzaprine versus placebo:
 - One systematic review (14 RCTs, 3,023 patients):⁴
 - Global improvement, NNT=3 at ~10 days.
 - Two publications with two RCTs each, we pooled and did statistics:
 - Dosing (1,389 patients):⁵
 - Backache relief: 50% cyclobenzaprine 5 mg TID versus 38% placebo at seven days, NNT=9 (p<0.001).
 - No difference: 5 mg versus 10 mg or 2.5 mg versus placebo.
 - Extended or Immediate Release: 504 patients.⁶
 - No difference: Extended release 30 mg OD versus immediate release 10 mg TID.
 - Cyclobenzaprine plus ibuprofen, three RCTs:⁷⁻⁹
 - Largest (867 patients): No benefit to adding ibuprofen.⁷
 - Two small studies of back/neck strain, (77 and 61 patients): Too underpowered to find differences.^{8,9}

Context:

- Concerns: Most trials industry sponsored;⁴ small samples; short duration, poorly-defined targets; unclear if clinically meaningful cut-offs.
- No difference in efficacy between the different muscle relaxants although cyclobenzaprine more consistently evaluated.³
- Other medications:
 - Cyclobenzaprine better or equivalent to diazepam.³
 - Other direct comparisons are lacking but versus placebo:
 - Acetaminophen: No effect on back pain.¹⁰
 - NSAIDs: NNT=11 for global improvement.¹¹
- Adverse events: Dose related somnolence and dry mouth:⁵
 - Any somnolence:⁵ 10% placebo, 29% for 5 mg TID, 38% for 10 mg TID.
 - 10mg TID caused more somnolence than 5mg TID, Number Needed to Harm (NNH)=12.
 - Discontinuation from somnolence:⁵ 0.8% placebo, 2.5% for 5 mg TID, 5.2% for 10 mg TID.
- Guidelines recommend cyclobenzaprine for the treatment of acute low back pain.¹²

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Disclosure:

Authors do not have any conflicts to disclose.

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