



Pharm for Fibro, Round 2: Can gabapentinoids ease the pain?

CLINICAL QUESTION

Do gabapentinoids reduce pain in patients with fibromyalgia?

BOTTOM LINE

About 40% of people with fibromyalgia on pregabalin 300-600mg/day experience a meaningful reduction in pain (pain reduced by $\geq 30\%$) versus 30% on placebo at 8-14 weeks. Lower doses (example: 150mg) may not be effective; however, higher doses cause more harm, with up to ~30% of people stopping due to side effects (versus 10% on placebo). Based on one small randomized, controlled trial (RCT), gabapentin is also effective.

EVIDENCE

- Statistically significant unless indicated.
- Pregabalin versus placebo: 1 systematic review (5 RCTs, 3283 patients, 150-600mg daily). At 8-14 weeks:¹
 - Proportion of patients with $\geq 30\%$ reduction in pain:
 - 150mg: no difference.
 - 300-600mg: 39-43% versus 29% (placebo), Number Needed to Treat (NNT)~8-10.
 - Adverse event withdrawals:

- 150mg: no difference.
- 300-600mg: 17-28% versus 10% (placebo), Number Needed to Harm (NNH)=6-15.
- Some adverse effects increased with higher doses. Examples:
 - Dizziness: 32% (300mg) versus 46% (600mg) versus 10% (placebo), NNH~3-5.
 - Peripheral edema: 6.5% (300mg) versus 11% (600mg) versus ~2% (placebo) NNH=11-23.
- Pregabalin 150mg versus duloxetine 60mg: One RCT, 66 patients. At 4 weeks:²
 - Number of pain sites (up to 19 possible sites, baseline~8): reduced to 6.3 (pregabalin) versus 4 (duloxetine).
- Pregabalin (300-450mg) added to antidepressants: One RCT, 181 patients on various antidepressants. At 6 weeks:³
 - Proportion with ≥30% pain reduction: 45% (pregabalin add-on) versus 28% (no add-on), NNT=6.
- Gabapentin: 1 publicly funded RCT, 150 patients, 1200-2400mg/day. After 12 weeks:⁴
 - Proportion with ≥30% pain reduction: 51% versus 31% (placebo), NNT=5.
 - Global improvement: 68% versus 35% (placebo), NNT=3.
 - Adverse events:
 - Withdrawal due to adverse events: No difference.
 - Sedation: 24% versus 4% (placebo); dizziness 25% versus 9% (placebo). NNH=5-7.
- Limitations: All pregabalin studies were industry funded. Most studies excluded patients on antidepressants.

CONTEXT

- Canadian guidelines: Antidepressant medications can be used based on individual presentation and anticonvulsants can be tried, up-titrating as tolerated.⁵
- Depression is present in about 22% patients with fibromyalgia.⁶
- Duloxetine and mirtazapine reduce pain by ≥30% in ~50% of patients with fibromyalgia versus 35% placebo.⁷
- 90-day costs:⁸ pregabalin 300mg ~\$95; gabapentin 900mg ~\$45.

REFERENCES

1. Derry S, Cording M, Wiffen PJ *et al.* Cochrane Database Syst Rev. 2016 Sep 29;9(9):CD011790.
2. Bidari A, Moazen-Zadeh E, Ghavidel-Parsa *et al.* DARU J Pharm Sci. 2019 Jun;27(1):149-158.
3. Arnold LM, Sarzi-Puttini P, Arsenault P *et al.* J Rheumatol. 2015 Jul;42(7):1237-44.

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4. Arnold LM, Goldenberg DL, Stanford SB *et al.* Arthritis Rheum. 2007 Apr;56(4):1336-44.
5. Fitzcharles MA, Ste-Marie PA, Goldenberg DL *et al.* Pain Res Manag. 2013 May-Jun;18(3):119-26.
6. Fuller-Thomson E, Nimigon-Young J, Brennenstuhl S. Rheumatol Int. 2012 Apr;32(4):853-62.
7. Young J, Perry D, Thomas B. Tools for Practice #375: Pharm for Fibro: Can antidepressants ease the pain? Available at <https://cfpclearn.ca/tfp375/>. Accessed October 18, 2024.
8. Personal communication with Shraddha Joshi at Summerside Pharmacy, Edmonton, Alberta, August 1, 2024.

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