

Will topical NSAIDs help with chronic musculoskeletal pain?

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COCHRANE REVIEW: Derry S, Conaghan P, Da Silva JAP, Wiffen PJ, Moore RA. Topical NSAIDs for chronic musculoskeletal pain in adults. *Cochrane Database of Systematic Reviews* 2016, Issue 4.

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THE PROBLEM: Chronic musculoskeletal pain affects many people. The most common condition causing chronic musculoskeletal pain is osteoarthritis. NSAIDs as a gel or solution applied directly to the site is recommended as a potential form of pain relief.¹ However, the effectiveness of these topical treatments has often been questioned. Studies have shown that a placebo gel or solution often has similar effects to that of the NSAID. This is thought to be due to a bio-lubrication mechanism.² This Cochrane review was designed to answer the question as to whether topical NSAIDs really do help with superficial musculoskeletal pain.

CLINICAL BOTTOM LINE: This Cochrane review showed that topical NSAIDs did reduce pain by more than 50% in significantly more participants than placebo treatments.³ The placebo effect was very strong with half the participants in the placebo group reporting significantly reduced pain. Dry skin was reported by some participants but there were no serious systemic adverse events reported.³

Outcome measured	Success	Evidence	Harms
Achieved 50% reduction in pain with diclofenac gel or solution	Approximately 60% of individuals had at least a 50% reduction in pain if they were given topical diclofenac gel or solution. This was a significantly higher proportion than those receiving placebo, where ~50% had a reduction in pain.	This was based on six trials including 2342 participants.	There were 29 studies reporting on localised adverse events. There was a relatively high incidence of localised adverse events with high levels also reported in the placebo groups. Dry skin was the most commonly reported reaction to the topical NSAID. With some participants reporting rash and erythema.
Achieved 50% reduction in pain with ketoprofen gel	Approximately 63% of individuals had at least a 50% reduction in pain if they are given topical ketoprofen gel. This was a significantly higher proportion than those receiving placebo, where ~48% had a reduction in pain.	This was based on evidence from four trials including 2573 participants.	Fourteen studies reported on systemic adverse events including headache, diarrhoea and dyspepsia but the incidence of these were below 10% for the study populations.

References

1. NICE clinical guidelines, Osteoarthritis. Care and management in adults. 2014. 177.
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3. Derry S, et al. Topical NSAIDs for chronic musculoskeletal pain in adults. *Cochrane Database of Systematic Reviews*, 2016(4).

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