PEARLS

Topical analgesics effective for acute and chronic pain

Clinical Question	How effective are topical analgesics applied to intact skin for the treatment of acute and chronic pain in adults?
Bottom Line	For strains and sprains, several topical non-steroidal anti-inflammatory drugs (NSAIDs) helped reduce pain by at least half over about a week (NNT* 2-5). These were diclofenac Emulgel, ketoprofen gel, piroxicam gel, diclofenac Flector plaster, and diclofenac other plaster. For hand and knee osteoarthritis, topical diclofenac and topical ketoprofen reduced pain by at least half over at least 6 to 12 weeks (NNT* 5-10). For postherpetic neuralgia, a single application of topical high-concentration capsaicin reduced pain by at least half for 8 to 12 weeks (NNT* 12). There was no good evidence to support any other topical analgesic in any other painful condition. Topical low-concentration capsaicin caused local side effects (such as itching or rash) in 40% of patients, and side effects caused withdrawal in just over 8%. Side effects and withdrawal because of side effects were otherwise uncommon or not different from those with a topical placebo. Serious side effects were uncommon. *NNT = number needed to treat to benefit one individual.*
Caveat	The quality of the evidence ranged from high to very low. The main reason for evidence being very low quality was the small number of participants in some studies, which made it impossible (or unsafe) to estimate benefit or harm.
Context	Topical analgesic drugs are used for a variety of painful conditions. Some are acute, typically strains or sprains, tendinopathy, or muscle aches. Others are chronic, typically osteoarthritis of the hand or knee, or neuropathic pain.
Cochrane Systematic Review	Derry S et al. Topical analgesics for acute and chronic pain in adults – an overview of Cochrane Reviews. Cochrane Reviews, 2017, Issue 5. Art. No.: CD008609.DOI: 10.1002/14651858. CD008609.pub2. This review includes 13 Cochrane Reviews (206 studies) involving around 30,700 participants.

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