It's not just about rubbing—topical capsaicin and topical salicylates may be useful as adjuvants to conventional pain treatment

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Drugs can be injected (subcutaneously, intramuscularly, intravenously, intrathecally, epidurally); given by mouth (orally, sublingually), intranasally, or rectally; or inhaled. They can also be applied to the skin. The transdermal method is suitable for certain lipid soluble drugs and produces a steady rate of delivery for up to three days. Cutaneous administration is used when a local effect on the skin is required. Drugs may also be applied to the skin to achieve close proximity to the bones or muscles without flooding the organism; this is the case when, for instance, an analgesic cream is applied to a painful knee.

The two reviews by Mason and coworkers (Oxford Pain Research Group) provide evidence that analgesic creams and ointments may be useful for treating some acute and chronic pain.[1 2] Topical capsaicin, for instance, shows some efficacy in neuropathic pain. Topical salicylates work in strains, sprains, and sport injuries; the same has been shown for topical non-steroidal anti-inflammatory drugs.[3]

Several things need to be considered when putting these data into a clinical context. Firstly, each of these remedies has a biological basis for an analgesic effect, and this supports their usefulness. Consequently this is not just about rubbing; it is about molecules that have an effect on cutaneous nociceptors (capsaicin) and tissue cyclooxygenase (aspirin and non-steroidal anti-inflammatory drugs). Secondly, that a drug is applied to the skin does not necessarily have fewer adverse effects. With topical capsaicin, one third of the patients are likely to experience some local skin irritation; one in 10 may even stop treatment. Thirdly, none of the topical analgesics is universally efficacious. Putting this together, we may define some pragmatic clinical guidelines. For instance, topical capsaicin is unlikely to be a first choice treatment for neuropathic pain—there is simply not enough analgesia and there is too much harm. However, it may be regarded as an adjuvant to standard treatment for neuropathic pain with conventional or unconventional analgesics, or it may serve as a last resource when everything else has failed. With topical salicylates and non-steroidal anti-inflammatory drugs there are few local and almost no systemic adverse effects. These creams may be used as a first line treatment in, for instance, sport injuries—especially considering their availability over the counter.

The question then is why topical analgesics are popular among patients but do not have a good reputation among doctors. One reason may be the apparent unreliability of the existing evidence supporting their usefulness; indeed, there are not many relevant

published trials, and most are of low quality, questionable validity, and limited size. As a consequence, many doctors are not convinced that the creams work. This makes systematic reviews that use a stringent methodological approach, such as those by Mason and coworkers, so valuable. As a consequence of this approach, the results may be less advantageous than in other, less rigorous studies (the numbers needed to treat are higher), but at least there is assurance that the evidence is viewed in the most appropriate light and that the results can be trusted.

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References

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