

## **Best Evidence from the Cochrane Library**

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The Cochrane Library contains high quality health care information, including systematic reviews from The Cochrane Collaboration. These reviews bring together research on the effects of health care and are considered the gold standard for determining the relative effectiveness of different interventions. The Cochrane Collaboration (<http://www.cochrane.org>) is a UK registered international charity and the world's leading producer of systematic reviews. It has been demonstrated that Cochrane systematic reviews are of comparable or better quality and are updated more often than the reviews published in print journals.

The Following Synopses Highlight Some of the Key Health Care Conclusions and Their Implications for Practice as Published in The Cochrane Library, 2009, Issue 3.

### **Muscle Rubs: Use for Pain is Questionable**

There is not enough evidence to support using gels and creams containing rubefaciants for chronic and acute pain, according to a systematic review by Cochrane Researchers. Rubefaciants cause irritation and reddening of the skin, due to increased blood flow. The review focused on formulations containing salicylates, which are widely prescribed or sold over the counter as topical treatments for sports injuries and muscle pain.

“At present, due to a lack of high quality evidence, we cannot say exactly how effective rubefaciants are for acute injuries and there are certainly other more effective treatments which could be prescribed for use in chronic conditions like osteoarthritis,” says lead researcher Andrew Moore, of the Nuffield Department of Anesthetics at the University of Oxford in the UK.

There are over a million prescriptions each year for rubefacient gels and creams such as Movelat. As with Movelat, the rubefacient compounds in many of these products are salicylates, which, while they are related to aspirin, may not work in the same way, especially when applied to the skin. They are referred to as “counter-irritants” because it is thought that they offset localized pain through local skin irritation. The review analysed data from 16 trials for acute and chronic pain, which together included 1,276 people. Only salicylates were studied and trials were generally small. Results from four studies showed topical salicylates performed better than placebos against acute pain, but excluding lower quality studies meant the results were not statistically significant. When used for chronic conditions, salicylates performed better than placebos. However, only one in six patients with chronic pain benefited substantially from using the muscle rubs compared to one in three using non-steroidal anti-inflammatory drugs.

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Matthews P, Derry S, Moore RA, McQuay HJ. Topical Rubefacients for Acute and Chronic Pain in Adults. Cochrane Database of Systematic Reviews 2009, Issue 3. Art. No.: CD007403.

### **Chinese Herbs for Endometriosis: May Have Comparable Benefits with Fewer Side Effects than Conventional Drug Treatment**

Chinese herbal medicine (CHM) may relieve symptoms in the treatment of endometriosis. A systematic review by Cochrane Researchers found some evidence that women had comparable benefits following laparoscopic surgery and suffered fewer adverse effects if they were given Chinese herbs compared with conventional drug treatments. Endometriosis is a gynecological disorder affecting as many as one in six women of reproductive age. It can cause pelvic pain, irregular and painful periods, and infertility. Surgical treatments do not always lead to long-term improvement in symptoms and drug treatments can have unpleasant side effects such as hot flushes, acne and weight gain.

The researchers conducted the first English language systematic review of CHM for treatment of endometriosis. Two trials, which together focused on 158 women, were included in the review. In one trial, CHM provided symptomatic relief comparable to that provided by the hormonal drug Gestrinone, but with fewer side effects. In the other trial, CHM was more effective than the hormonal drug Danazol and resulted in fewer side effects. “These findings suggest that Chinese herbs may be just as effective as certain conventional drug treatments for women suffering from endometriosis, but at present we do not have enough evidence to generalize the results,” says lead researcher Andrew Flower of the Complementary Medicine Research Unit at the University of Southampton in the UK. One hundred and ten studies were originally considered for review but most were of poor methodological quality and had to be excluded. The researchers stress the need for Chinese researchers to adopt more rigorous methods in carrying out trials and reporting them. “Poor quality reporting has the potential to confuse and undermine research in Chinese herbal medicine,” says Flower.

Flower A, Liu JP, Chen S, et al. Chinese Herbal Medicine for Endometriosis. Cochrane Database of Systematic Reviews 2009, Issue 3. Art. No.: CD006568. DOI: 10.1002/14651858.CD006568.pub2.

### **Blood Pressure Targets: Aiming Lower Offers No Benefit**

Aiming for lower than standard blood pressure targets offers no known clinical benefit, according to a Cochrane Review. In a systematic review of the evidence, researchers found that using antihypertensive drugs to reduce blood pressure below the 140/90 mm Hg standard was not associated with any reduction in death rates or serious morbidity. “At present there is no evidence from randomized trials to support aiming for a blood pressure target lower than 140/90, in the general population of patients with elevated blood pressure,” says lead researcher Jose Arguedas of the Faculty of Medicine at the University of Costa Rica in Costa Rica. The findings do not support guidelines in a number of publications that recommend aiming for lower targets, based on the assumption that “lower is better” when it comes to blood pressure. The researchers were unable to determine whether it is safe to aim for lower targets because relevant data were missing from most of the trials. The review is based on the results of seven trials, which together involved 22,089 people. Whilst patients aiming for targets below 135/85 mmHg did succeed in

achieving greater reductions in blood pressure than those in the standard target group, there was no difference between the two groups in terms of the number of patients dying or suffering heart attacks, strokes, heart failure or kidney failure. “Our research included patients with diabetes or chronic renal disease, and the evidence was slightly less robust for those subgroups of patients. We intend to carry out separate systematic reviews for those subgroups, especially because guidelines recommend even lower blood pressure targets for them”, says Arguedas.

Arguedas JA, Perez MI, Wright JM. Treatment Blood Pressure Targets for Hypertension. Cochrane Database of Systematic Reviews 2009, Issue 3. Art. No.: CD004349. DOI: 10.1002/14651858.CD004349.pub2.

### **Caesarean Section: Local Anesthetic Reduces the Need for Painkillers Postoperatively**

Giving a local anesthetic during a Caesarean section helps manage pain after the operation and can reduce consumption of painkillers, according to Cochrane Researchers. The researchers recommend local anesthetics as part of integrated pain management strategies for Caesarean section operations, provided that consideration is given to the cost. “This review is particularly important in the light of the growing number of women giving birth by Caesarean section,” says lead researcher, Anthony Bamigboye, Department of Obstetrics and Gynecology at the University of Witwatersrand in Johannesburg, South Africa.

“Improved pain relief allows mothers to bond with their babies and begin breastfeeding more quickly.” Caesarean sections account for around a quarter of all births in the US, Canada and the UK. Local anesthetics can be given, in addition to general or regional anesthetics, to help manage pain during and after operations. The anesthetic is either injected to block nerves in the abdominal wall or applied directly to the wound as an anesthetic solution. The researchers reviewed data from 20 studies that together involved 1,150 women who gave birth by Caesarean section in both developing and developed countries. They found that women treated with local or regional anesthesia did not require as much morphine or other opioid drugs for pain relief after their operations. When non-steroidal anti-inflammatory drugs were given, pain was reduced further. One concern; however, is the additional cost of giving local anesthetic.

“None of the trials in this review addressed the cost implications of increasing use of local anesthetic,” says Bamigboye. “A cost benefit analysis is needed to find out whether increased expenditure on theatre time and local anesthetic can be offset by reductions in postoperative painkillers.”

Bamigboye AA, Hofmeyr GJ. Local Anaesthetic Wound Infiltration and Abdominal Nerves Block during Caesarean Section for Postoperative Pain Relief. Cochrane Database of Systematic Reviews 2009, Issue 3. Art. No.: CD006954.