

## 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 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 1.

### **Acupuncture Stops Headaches, but ‘Faked’ Treatments Work Almost as Well**

Headache sufferers can benefit from acupuncture, even though how and where acupuncture needles are inserted may not be important. Two separate systematic reviews by Cochrane researchers show that acupuncture is an effective treatment for prevention of headache and migraine. Nevertheless, the results also suggest that faked procedures, in which needles are incorrectly inserted, can be just as effective. “Much of the clinical benefit of acupuncture might be due to non-specific needling effects and powerful placebo effects, meaning selection of specific needle points may be less important than many practitioners have traditionally argued,” says lead researcher of both studies, Klaus Linde from the Technical University of Munich, Germany. One study focused on mild to moderate but frequent “tension-type” headache, whilst the other focused on more severe but less frequent headache usually termed migraine. Together the two studies included 33 trials, involving 6,736 patients. Following a course of at least eight weeks, patients treated with acupuncture suffered fewer headaches compared to those who were given only painkillers. In the migraine study, acupuncture was superior to proven prophylactic drug treatment, but faked treatment were no less effective. In the tension headache study, true acupuncture was actually slightly more effective than faked treatment. The results indicate that acupuncture could be used as an alternative for those patients who prefer not to use drug treatment, and additionally may result in fewer side effects.

Linde K, Allais G, Brinkhaus B, Manheimer E, Vickers A, White AR. Acupuncture for Tension-Type Headache. Cochrane Database of Systematic Reviews 2009, Issue 1. Art. No.: CD007587. DOI: 10.1002/14651858.CD007587.

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**Vulnerable Children Fare Well with Relatives**

Placing vulnerable children with relatives is a viable option, a new study by Cochrane Researchers suggests. In view of several recent high profile child abuse cases, the study may have important policy implications. “We don’t know what type of out-of-home care is best for children. But our research suggests that children placed with relatives do as well or better than those placed with foster parents,” says lead researcher Marc Winokur from the Colorado State University in the US. In 2005, almost 125,000 children in the US were formally placed with kin while there has been an increase in children cared for by family and friends in England from 6% in 1989 to 12% in 2005. Despite this trend, little research has been carried out on the impact of the so called “kinship care” as compared with traditional foster care – placing children with unrelated foster parents. Researchers reviewed data from 62 studies on children in out-of-home placements. They found children in kinship care experienced fewer behavioral and mental health problems and had more stable placements than did children in foster care. Winokur notes that, along with these positive findings about kinship care, policy makers are likely to encourage its use because kinship care costs less to provide than foster care. However, he is keen to stress that foster care is not forgotten: “Foster care should continue to be an essential out-of-home care option, as children in these placements also experience positive outcomes and appropriate kinship placements are not always available”.

Winokur M, Holtan A, Valentine D. Kinship Care for the Safety, Permanency, and well-being of Children Removed from the Home for Maltreatment. Cochrane Database of Systematic Reviews 2009, Issue 1. Art. No.: CD006546. DOI: 10.1002/14651858.CD006546.pub2.

### **Preterm Birth: Magnesium Sulphate Cuts Cerebral Palsy Risk**

A new study shows that Magnesium sulphate protects very premature babies from cerebral palsy. The findings of this Cochrane Review could help reduce incidence of the disabling condition, which currently affects around one in every 500 newborn babies, but up to one-in-ten very premature babies (<28 weeks of gestation). The neuro-protective function of magnesium in preterm babies was first suggested in the early nineties. Cochrane Researchers who carried out a systematic review of the available evidence say this role is now established. Magnesium sulphate is usually given as a slow IV infusion, but can also be given as an intramuscular injection.

“There is now enough evidence to support giving magnesium sulphate to women at risk of very preterm birth as a protective agent against cerebral palsy for their baby,” said lead researcher, Lex Doyle, who works at the Department of Obstetrics and Gynecology at the Royal Women’s Hospital and the University of Melbourne in Australia.

Exactly how magnesium protects the brain is not certain, but it is essential for many processes that keep cells working normally, it may protect against harmful molecules that can damage or kill cells, and it improves blood flow under some circumstances. The researchers reviewed data from five trials of antenatal magnesium sulphate therapy, which together included 6,145 babies. Overall, 63 women at risk of preterm birth had to be given magnesium sulphate to prevent one case of cerebral palsy in the baby. Side effects of the treatment include flushing, sweating, nausea, vomiting, headaches and palpitations. However, the researchers found no increase in major complications in mothers due to magnesium therapy.

Doyle LW, Crowther CA, Middleton P, Marret S, Rouse D. Magnesium Sulphate for Women at Risk of Preterm Birth for Neuroprotection of the Fetus. Cochrane Database of Systematic Reviews 2009, Issue 1. Art. No.: CD004661. DOI: 10.1002/14651858.CD004661.pub3.

### **Anakinra for Rheumatoid Arthritis: A Modest Benefit with Some Risk**

New research supports a modest beneficial effect of Anakinra for rheumatoid arthritis patients, but warns against potential risks for serious infections and its use with other biologic medications. Rheumatoid arthritis is a chronic inflammatory disease affecting as many as one in 100 people worldwide. It affects the joints, making them stiff and painful. Anakinra is one of a new breed of arthritis drugs licensed in the past decade called “biologics”.

The drug is the first to target the immune protein IL-1, thought to be partly responsible for inflammation in arthritis patients. It is given by daily injection. In a Cochrane Systematic Review of five recent Anakinra trials involving 2,876 patients, researchers found that Anakinra reduced pain and stiffness in patients, and helped to improve joint function compared to placebo. However, while around a quarter of patients experienced improvement in their symptoms as a result of taking Anakinra, the researchers say the improvements are notably less than those seen with other biologics. In addition, there were more injection site reactions with the use of Anakinra and the rate of serious infections was approaching statistical significance when compared to placebo. “We would recommend caution with the use of Anakinra for rheumatoid arthritis, especially with the only modest beneficial outcomes compared to other biologic medications studied for rheumatoid arthritis,” said lead researcher Dr. Marty Mertens of the University of Minnesota in the US.

One study included in the review investigated the combination of Anakinra with another biologic medication, Etanercept. That study found no benefits in arthritis outcome, but did show a significant increase in the number of serious adverse events. “On the basis of these results, we recommend that doctors avoid combining biologic medications with Anakinra when treating patients with rheumatoid arthritis,” said Mertens. Dr. Mertens thinks more research is required to inform patients and doctors about the safety of the drug: “We have only limited data on the safety of Anakinra, and need more long-term studies to evaluate this, especially the potential for increased risk of serious infections”.

Mertens M, Singh JA. Anakinra for Rheumatoid Arthritis. Cochrane Database of Systematic Reviews 2009, Issue 1. Art. No.: CD005121. DOI: 10.1002/14651858.CD005121.pub3.