



## **The Cochrane Library ... the best single source of reliable evidence about the effects of health care**

**Strictly Embargoed until 00:01 hours (GMT), 21<sup>st</sup> January 2009**

This alert highlights some of the key health care conclusions and their implications for practice as published next week in [The Cochrane Library](#), 2009, Issue 1.

Media wishing to receive a full copy of the reviews highlighted in this newsletter, or to arrange an interview with an author, may contact Jennifer Beal on +44 (0)1243 770633 / +44 (0) 7802 468863 or by email, [wnews@wiley.com](mailto:wnews@wiley.com).

### **Reviews highlighted in this newsletter:**

- **[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 headaches and migraines. But the results also suggest that faked procedures, in which needles are incorrectly inserted, can be just as effective.
- **[Stop Traffic Crashes: Switch On the Lights](#)**  
Street lighting provides a simple, low cost means of stemming the global epidemic of road traffic death and injury. Low income countries should consider installing more lights, and high income countries should think carefully before turning any off to reduce carbon emissions.
- **[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.
- **[Clinical Trials: Unfavourable Results Often Go Unpublished](#)**  
Trials showing a positive treatment effect, or those with important or striking findings, were much more likely to be published in scientific journals than those with negative findings, a new review from The Cochrane Library has found.
- **[Preterm Birth: Magnesium Sulphate Cuts Cerebral Palsy Risk](#)**  
Magnesium sulphate protects very premature babies from cerebral palsy, a new study shows. The findings of this Cochrane Review could help reduce incidence of the disabling condition, which currently affects around one in every 500 newborn babies overall, but up to one-in-ten very premature babies (<28 weeks of gestation).

- [Body Dysmorphic Disorder: Research on Effective Treatments Still Lacking](#)  
Medication and psychotherapy may be beneficial for patients suffering from body dysmorphic disorder (BDD). But a new Cochrane Review found that much more research is required to determine the most effective treatment and whether both approaches should be used in combination.
- [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.
- [Selection of Other New Cochrane Systematic Reviews](#)

## **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 headaches and migraines. But 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, who works at the Centre for Complementary Medicine Research at the Technical University of Munich, Germany.

In each study, the researchers tried to establish whether acupuncture could reduce the occurrence of headaches. One study focused on mild to moderate but frequent ‘tension-type’ headaches, whilst the other focused on more severe but less frequent headaches usually termed migraines. Together the two studies included 33 trials, involving a total of 6,736 patients.

Overall, following a course of at least eight weeks, patients treated with acupuncture suffered fewer headaches compared to those who were given only pain killers. In the migraine study, acupuncture was superior to proven prophylactic drug treatments, but faked treatments were no less effective. In the tension headache study, true acupuncture was actually slightly more effective than faked treatments.

The results indicate that acupuncture could be used as an alternative for those patients who prefer not to use drug treatments, and additionally may result in fewer side effects. However, Linde says more research is still required, “Doctors need to know how long improvements associated with acupuncture will last and whether better trained acupuncturists really achieve better results than those with basic training only.”

Full citations:

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.

Linde K, Allais G, Brinkhaus B, Manheimer E, Vickers A, White AR. Acupuncture for migraine prophylaxis. *Cochrane Database of Systematic Reviews* 2009, Issue 1. Art.No.: CD001218. DOI: 10.1002/14651858.CD001218.pub2.

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## Stop Traffic Crashes: Switch On the Lights

Street lighting provides a simple, low cost means of stemming the global epidemic of road traffic death and injury. Low income countries should consider installing more lights, and high income countries should think carefully before turning any off to reduce carbon emissions, is the advice from a new Cochrane Review.

Street lighting may be considered an obvious means of preventing road traffic crashes, but the scientific evidence for this has been uncertain and many studies are decades out of date. Some even suggest that drivers ‘feel’ safer on better lit roads and may speed up as a result. But a systematic review by Cochrane Researchers now shows that street lighting does indeed reduce crashes and injuries on the roads.

The World Health Organization estimates that 1 million people die each year on the world’s roads and up to an additional 50 million are injured, causing an estimated global bill of \$578 billion.

“Road traffic crashes are not just the unfortunate culmination of chance, but are events that can be analysed so that the risk factors are identified and then addressed. Darkness is a risk factor – street lighting is therefore a valuable tool,” said lead researcher, Fiona Beyer, of the Institute of Health and Society at the University of Newcastle in the UK.

The researchers reached their conclusions by pooling data from 14 studies on the effects of street lighting on road safety. They found that street lighting reduced total crashes by between 32% and 55%, and fatal injury crashes by 77%.

Without intervention, the number of deaths due to road traffic crashes is expected to reach 2.3 million by 2020. It is thought that nine out of ten deaths will occur in low and middle income countries. But Beyer says the results may also have implications for policy makers who plan to reduce public street lighting under the premise of cutting carbon emissions and costs.

“In the UK, an increasing number of local councils are looking to turn off some public street lighting in a move to reduce costs and carbon emissions. The potential adverse road safety impact of such a policy should be carefully considered in light of our findings,” said Beyer.

Full citation: Beyer FR, Ker K. Street lighting for preventing road traffic injuries. *Cochrane Database of Systematic Reviews* 2009, Issue 1. Art. No.: CD004728. DOI: 10.1002/14651858.CD004728.pub2.

**\*\*\*SEE [WWW.COCHRANE.ORG/PODCASTS](http://WWW.COCHRANE.ORG/PODCASTS) FOR A PODCAST BY THE AUTHOR OF THIS REVIEW, AVAILABLE FROM WEDNESDAY 21<sup>ST</sup> JANUARY 2009\*\*\***

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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, who works at the Social Work Research Center at Colorado State University in the US.

Reflecting changes in child welfare practice and policy around the world, a substantial proportion of children removed from the home for abuse or neglect during the past twenty years have been placed with relatives. 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 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 behavioural and mental health problems and had more stable placements than did children in foster care.

The researchers stress that each child’s needs must still be assessed on a case by case basis. They say more rigorous studies need to be carried out to verify the results and establish how placement type affects educational and other outcomes.

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.”

### Full Citation:

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.

### References:

- 1) US data: U.S. Department of Health and Human Services, "The AFCARS Report: Preliminary FY 2005 estimates as of September 2006."  
[www.acf.hhs.gov/programs/cb/stats\\_research/afcars/tar/report13.htm](http://www.acf.hhs.gov/programs/cb/stats_research/afcars/tar/report13.htm)
- 2) England data: Department of Health, 1991; Department for Education and Skills, 2006.

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## Clinical Trials: Unfavourable Results Often Go Unpublished

Trials showing a positive treatment effect, or those with important or striking findings, were much more likely to be published in scientific journals than those with negative findings, a new review from The Cochrane Library has found.

“This publication bias has important implications for healthcare. Unless both positive and negative findings from clinical trials are made available, it is impossible to make a fair assessment of a drug’s safety and efficacy,” says lead researcher, Sally Hopewell of the UK Cochrane Centre in Oxford, UK.

The international team of researchers carried out a systematic review of all the existing research in this area. In addition to showing that negative results were published less often, they found that if these results were eventually published, they would take between one and four more years to appear in journals than studies showing positive results.

Results from one of the five studies in the review indicated that investigators and not editors might be to blame. The reasons most commonly given for not publishing were that investigators thought their findings were not interesting enough or did not have time. “The registration of all clinical trial protocols before they start should make it easier to identify where we are missing results,” says Kay Dickersin from Johns Hopkins University in Baltimore, USA, another of the researchers on this project.

One of the other researchers, Kirsty Loudon, based in Scotland, adds, “Registration of trials and their results would help people conducting systematic reviews to look at both published and unpublished evidence, to reach reliable conclusions.”

The researchers say their study also highlights the need for a worldwide commitment to the disclosure of the findings of clinical trials. Mike Clarke of Trinity College Dublin in Ireland, says, “The World Health Organisation recently found widespread support for the development of such a process.”

Andy Oxman from the Norwegian Knowledge Centre for Health Services concludes, “Healthcare decisions need to be based on all the evidence, not just the most exciting results.”

Full citation: Hopewell S, Loudon K, Clarke MJ, Oxman AD, Dickersin K. Publication bias in clinical trials due to statistical significance or direction of trial results. *Cochrane Database of Systematic Reviews* 2009, Issue 1. Art. No.: MR000006. DOI: 10.1002/14651858.MR000006.pub3.

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

Magnesium sulphate protects very premature babies from cerebral palsy, a new study shows. The findings of this Cochrane Review could help reduce incidence of the disabling condition, which currently affects around one in every 500 newborn babies overall, but up to one-in-ten very premature babies (<28 weeks of gestation).

The neuroprotective 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 infusion through a vein, but can also be given as an injection into the muscle.

“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 Gynaecology 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 very 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.

Full citation: 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.

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## **Body Dysmorphic Disorder: Research on Effective Treatments Still Lacking**

Medication and psychotherapy may be beneficial for patients suffering from body dysmorphic disorder (BDD). But a new Cochrane Review found that much more research is required to determine the most effective treatment and whether both approaches should be used in combination.

Body dysmorphic disorder affects as many as one in 20 people. Patients suffering from BDD worry obsessively about their physical appearance, with concerns frequently but not exclusively focused on the skin, hair and nose, and often have very low levels of self-esteem. Many are also diagnosed with depression and around a quarter may attempt suicide. According to Cochrane Researchers, however, there is currently very little evidence regarding the relative effectiveness of drug treatment and psychotherapy approaches.

“Given the number of people suffering from BDD and the level of distress caused, it is surprising that so little data is available on treatments. This is certainly a field that deserves additional attention and funding,” said lead researcher, Jonathan Ipser, who works at the MRC Research Unit for Anxiety and Stress Disorders at the University of Stellenbosch, South Africa.

Ipser and colleagues carried out a systematic review of currently available evidence, analysing data from four trials, which together included 169 patients. They found that over half of people treated in a single trial with the antidepressant fluoxetine for 12 weeks showed improvement, compared to less than a quarter of those given a placebo. And in two 12 week trials of cognitive behavioural therapy (CBT), symptom severity was significantly reduced. Both types of treatment were well tolerated, with no severe adverse effects reported.

“Both approaches seem to be acceptable to patients with this condition, as shown by low drop-out rates in trials. There was also some suggestion that psychotherapy

could reduce the risk of future relapse, although we need more data on long term treatment effects to confirm this,” said Ipser.

Full citation: Ipser JC, Sander C, Stein DJ. Pharmacotherapy and psychotherapy for body dysmorphic disorder. *Cochrane Database of Systematic Reviews* 2009, Issue 1. Art. No.: CD005332. DOI: 10.1002/14651858.CD005332.pub2.

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## **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 anakinra reduced pain and stiffness in patients, and helped to improve joint function, when 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 with anakinra 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. This found no benefits in arthritis outcomes, 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 better 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.”

Full citation: 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.

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## Extracts From a Selection of Other Cochrane Systematic Reviews

This section contains extracts from 19 selected new or updated reviews also publishing in The Cochrane Library 2009, Issue 1. These extracts have been divided into headings of:

- [Alternative Therapies](#)
- [Cancer](#)
- [Diabetes](#)
- [HIV](#)
- [Hospital Care](#)
- [Older People](#)
- [Smoking Cessation](#)
- [Treatment Efficacy](#)

To receive a full copy of the results from this selection, or to arrange an interview with an author, contact Jennifer Beal on +44 (0)1243 770633 / +44 (0) 7802 468863 or by email, [wnews@wiley.com](mailto:wnews@wiley.com).

### **Alternative Therapies**

#### **Chinese herbal medicine for premenstrual syndrome**

(CD006414) By Jing et al

##### **Background**

Traditional Chinese herbal medicines are frequently used to treat premenstrual syndrome (PMS) in China. Until now, their efficacy has not been systematically reviewed.

##### **Extract from Implications for Practice**

Currently, there is insufficient evidence for the efficacy of traditional Chinese medicine in the treatment of PMS.

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#### **Dance therapy for schizophrenia**

(CD006868) By Xia & Grant

##### **Background**

Dance therapy or dance movement therapy (DMT) is defined as 'the psychotherapeutic use of movement as a process which furthers the emotional, social, cognitive, and physical integration of the individual'. It may be of value for people with developmental, medical, social, physical or psychological impairments. Dance therapy can be practiced in mental health rehabilitation units, nursing homes, day care centres and incorporated into disease prevention and health promotion programs.

##### **Extract from Implications for Practice**

1. For those with schizophrenia: The data in this review are inconclusive. There is no evidence to support - or refute - the use of dance therapy. Those with schizophrenia may wish to be involved in future research to help to resolve this lack of evidence.
2. For clinicians: Based on evidence in the current review, there is no reason for clinicians to either encourage or discourage the use of dance therapy. More future research is needed in order to reach a conclusion.
3. For policy makers/managers: Until there is more data, there is no evidence in this review to support change in policy.

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### **Cancer**

#### **Post-operative radiotherapy for ductal carcinoma in situ of the breast**

(CD000563) By Goodwin et al

### **Background**

The addition of radiotherapy (RT) following breast conserving surgery (BCS) was first shown to reduce the risk of ipsilateral recurrence in the treatment of invasive breast cancer. Ductal carcinoma in situ (DCIS) is a pre-invasive lesion. Recurrence of ipsilateral disease following BCS can be either DCIS or invasive breast cancer. Randomised controlled trials (RCTs) have shown that RT can reduce the risk of recurrence, but assessment of potential long-term complications from addition of RT following BCS for DCIS has not been reported for women participating in RCTs.

### **Extract from Implications for Practice**

This result confirms the benefit of radiotherapy following breast conserving surgery for DCIS and supports its use for all women as the overall benefit was large and all subgroups analysed showed benefit for the use of radiotherapy. There was no reported long-term toxicity from the use of radiotherapy and no excess deaths from any cause were reported in the groups treated with radiotherapy. Short term toxicity and quality of life were not reported. Clinicians therefore need to ensure that comprehensive information relating to potential side effects is made available to women undergoing this treatment.

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## **Adjuvant (post-surgery) chemotherapy for early stage epithelial ovarian cancer**

(CD004706) By Winter-Roach et al

### **Background**

Epithelial ovarian cancer kills about 1700 in the UK each year. Ten to fifteen percent of all cases are diagnosed early when there is still a good chance of cure. The treatment of early stage disease involves surgery to remove disease often followed by chemotherapy. The largest clinical trials of this adjuvant therapy show an overall survival (OS) advantage with adjuvant platinum based chemotherapy but the precise role of this treatment in sub-groups of patients with differing prognoses needs to be defined.

### **Extract from Implications for Practice**

Since the finding of early stage disease is often unexpected and therefore often managed by general gynaecologists without sub-specialist training, it is not surprising that comprehensive staging is infrequently achieved. On this basis it may be safe practice to recommend adjuvant chemotherapy for the majority of cases of apparent early stage ovarian cancer. However if staging is comprehensive, it should be possible to identify patients in whom it is safe, if not better, to withhold chemotherapy unless and until it is needed to treat recurrent disease.

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## **Diabetes**

### **Low glycaemic index, or low glycaemic load, diets for diabetes mellitus**

(CD006296) By Thomas & Elliott

### **Background**

The aim of diabetes management is to normalise blood glucose levels, since improved blood glucose control is associated with reduction in development, and progression, of complications. Nutritional factors affect blood glucose levels, however there is currently no universal approach to the optimal dietary treatment for diabetes. There is controversy about how useful the glycaemic index (GI) is in diabetic meal planning. Improved glycaemic control through diet could minimise medications, lessen risk of diabetic complications, improve quality of life and increase life expectancy.

### **Extract from Implications for Practice**

The studies included in this systematic review were all randomised controlled trials, and all had interventions of at least four weeks or longer. The longest trial was 12 months. This review provides data that low glycaemic index diets can significantly improve diabetic control in less than optimally controlled people with diabetes by lowering percentage glycated haemoglobin A1c (HbA1c) levels by 0.5%.

## **HIV**

### **Interventions for preventing late postnatal mother-to-child transmission of HIV** (CD006734) By Horvath et al

#### **Background**

Worldwide, mother-to-child transmission (MTCT) of human immunodeficiency virus type 1 (HIV) represents the most common means by which children acquire HIV infection. Efficacious and effective interventions to prevent in utero and intrapartum transmission of HIV infection have been developed and implemented. However, a large proportion of MTCT of HIV occurs postnatally, through breast milk transmission.

#### **Extract from Implications for Practice**

To date, three interventions have been identified for the prevention of late postnatal (breastfeeding) transmission of HIV: complete avoidance of breastfeeding, exclusive breastfeeding, and antiretroviral prophylaxis to the breastfeeding infant. Morbidity associated with complete avoidance of breastfeeding (e.g., diarrhoeal and respiratory disease), in addition to the cost of purchasing formula or other replacement milk and the stigma associated with not breastfeeding, are significant, and in many situations make this intervention infeasible. Counseling and support for exclusive breastfeeding have increased the proportion of women who pursue this modality of infant feeding.

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### **Theory-based interventions for contraception** (CD007249) By Lopez et al

#### **Background**

The explicit use of theory in research helps expand the knowledge base. Theories and models have been used extensively in HIV-prevention research and in interventions for preventing sexually transmitted infections (STIs). The health behavior field uses many theories or models of change. However, educational interventions addressing contraception often have no stated theoretical base.

#### **Extract from Implications for Practice**

Interventions with a theoretical base help explain how people change. Usual care, or a traditional program, may focus on information transfer rather than how people learn, think, and behave. Favorable results were shown for two-thirds of the interventions to improve condom use and about half of the programs addressing use of other contraceptives. Interventions could be brief or intensive. Practitioners might adapt the effective and pertinent interventions to their own situations of providing counseling or programs to improve contraceptive use.

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## **Hospital Care**

### **Benzodiazepines for delirium** (CD006379) By Lonergan et al

#### **Background**

Delirium occurs in 30% of hospitalised patients and is associated with prolonged hospital stay and increased morbidity and mortality. The results of uncontrolled studies have been unclear, with some suggesting that benzodiazepines may be useful in controlling non-alcohol related delirium.

#### **Extract from Implications for Practice**

There is no evidence to support the use of benzodiazepines in the treatment of non-alcohol withdrawal related delirium among hospitalised patients.

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## Early discharge hospital at home

(CD000356) By Shepperd et al

### Background

'Early discharge hospital at home' is a service that provides active treatment by health care professionals in the patient's home for a condition that otherwise would require acute hospital in-patient care. If hospital at home were not available then the patient would remain in an acute hospital ward.

### Extract from Implications for Practice

This review does not support the widespread development of early discharge hospital at home services as a cheaper substitute for in-patient care within health care systems that have well developed primary care services; nor has it demonstrated that hospital at home is so hazardous or expensive that existing schemes for patients recovering from a stroke, and older patients recovering from a mix of conditions, including orthopaedic surgery and COPD, or patients who have had elective surgery, should be discontinued. The environment in which these services are being delivered may influence outcome. It may be that schemes such as hospital at home provide a cost effective alternative to acute care if the running costs of the local hospital are relatively high.

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## Older People

### Driving assessment for maintaining mobility and safety in drivers with dementia

(CD006222) By Martin et al

#### Background

Demographic changes are leading to an increase in the number of older drivers: as dementia is an age-related disease, there is also an increase in the numbers of drivers with dementia. Dementia can impact on both the mobility and safety of drivers, and the impact of formal assessment of driving is unknown in terms of either mobility or safety. Those involved in assessment of older drivers need to be aware of the evidence of positive and negative effects of driving assessment. Although cognitive tests are felt by some authors to have poor face and construct validity for assessing driving performance, extrapolating from values in one large-scale prospective cohort study, the cognitive test that most strongly predicted future crashes would, if used as a screening tool, potentially prevent six crashes per 1000 people over 65 screened, but at the price of stopping the driving of 121 people who would not have had a crash.

#### Extract from Implications for Practice

There is no randomized evidence to indicate whether neuropsychological, on-road or other assessments of driving ability can help support safe drivers to remain mobile, or to reduce crashes

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### Vision screening of older drivers for preventing road traffic injuries and fatalities

(CD006252) By Subzwari et al

#### Background

Demographic data in North America, Europe, Asia, Australia and New Zealand suggest a rapid growth in the number of persons over the age of 65 years as the baby boomer generation passes retirement age. As older adults make up an increasing proportion of the population, they are an important consideration when designing future evidence-based traffic safety policies, particularly those that lead to restrictions or cessation of driving. Research has shown that cessation of driving among older drivers can lead to negative emotional consequences such as loss of independence and depression. Those older adults who continue to drive tend to do so less frequently than other demographic groups and are more

likely to be involved in a road traffic crash, probably due to what is termed the 'low mileage bias'.

#### **Extract from Implications for Practice**

At present, there is insufficient evidence to support the efficacy of the vision screening test as a preventive strategy to reduce motor vehicle crashes among older drivers. In addition, the use of driving assessments tools, such as visual acuity, on road driving tests, simulator tests, and others vary among jurisdictions and their validity has been questioned in the research literature. Hence, further research is required to fully examine their reliability. In addition to licensing authorities, physicians also play a vital role in the safety of older drivers as they typically have the first encounter with older drivers experiencing vision problems.

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### **Vitamin D and vitamin D analogues for preventing fractures associated with involuntal and post-menopausal osteoporosis**

(CD000227) By Avenell et al

#### **Background**

Vitamin D and related compounds have been used to prevent osteoporotic fractures in older people.

#### **Extract from Implications for Practice**

Frail older people confined to institutions appear to experience a reduction in hip and other non-vertebral fractures if given vitamin D with calcium supplements. The effectiveness in fracture prevention of administration of vitamin D with calcium supplements to community-dwelling older people is unclear. Supplementation with vitamin D and calcium, for fracture prevention, may be associated with a marginal reduction in mortality compatible with the reduction in hip fracture risk. Vitamin D alone, in the doses which have been used, appears unlikely to be effective in fracture prevention in older people. There is no evidence that related vitamin D compounds (analogues) have advantages in terms of effectiveness or reduced incidence of adverse effects compared with vitamin D. Calcitriol appears to be associated with an increased incidence of adverse effects such as hypercalcaemia.

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### **Rehabilitation for older people in long-term care**

(CD004294) By Forster et al

#### **Background**

Examination of demographic trends indicates that the worldwide population is progressively ageing. It is expected that such longevity will be associated with an increase in morbidity and demand for long-term residential care. This review examines whether there is evidence that physical rehabilitation benefits older people in long-term care.

#### **Extract from Implications for Practice**

The included studies provide evidence that physical rehabilitation interventions for elderly people residing in long-term care can be both safe and successful, improving both physical and mental state. However the size and duration of the effects of physical rehabilitation interventions is unclear.

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### **Orthotic devices after stroke and other non-progressive brain lesions**

(CD003694) By Tyson & Kent

#### **Background**

Post-stroke motor impairments cause difficulty controlling the joints of the affected limbs to produce useful movements. One way to manage this is to use an orthosis to control the movement of the affected joints but evidence for their benefit is lacking.

#### **Extract from Implications for Practice**

Using an ankle foot orthosis (AFO) can make an immediate improvement in walking disability (speed), walking impairment (step/stride length) and balance impairment (weight distribution in standing) while the AFO is worn. The AFO had no significant effects on mobility disability and another measure of balance impairment (postural sway). However, the long-term effects of AFO use has not been investigated. The results support the use of an ankle-foot orthosis to improve walking and balance (weight distribution) in people with stroke and non-progressive brain lesions. They do not support the use of upper limb orthosis aiming to maintain or

improve range of movement in the wrist, fingers or thumb in people with stroke and non-progressive brain lesions.

\*\*\*SEE [WWW.COCHRANE.ORG/PODCASTS](http://WWW.COCHRANE.ORG/PODCASTS) FOR A PODCAST BY THE AUTHOR OF THIS REVIEW, AVAILABLE FROM WEDNESDAY 21<sup>ST</sup> JANUARY 2009\*\*\*

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## Glucosamine therapy for treating osteoarthritis

(CD002946) By Towheed et al

### Background

Osteoarthritis (OA) is a common form of arthritis and is often associated with significant disability and impaired quality of life. This is an update of a Cochrane review first published in 2001 and previously updated in 2005.

### Extract from Implications for Practice

The previous review from 2005, with 20 studies and 2570 participants, showed that glucosamine sulphate taken orally in amounts of 1500 mg/day produced a 28% (per cent change from baseline) benefit in pain and an increase in function of 21% (per cent change in Lequesne Index from baseline) in osteoarthritis, without side effects. If only the best designed studies are included, the benefit in pain and WOMAC function is no longer present; as shown in this update which includes 25 studies and 4963 patients. Inclusion of five new studies reduces the overall benefit on pain to 22% and function to 11% in the Lequesne Index.

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## Smoking Cessation

### Interventions for preventing weight gain after smoking cessation

(CD006219) By Parsons et al

### Background

Most people who stop smoking gain weight, on average about 7kg in the long term. There are some interventions that have been specifically designed to tackle smoking cessation whilst also limiting weight gain. Many smoking cessation pharmacotherapies and other interventions may also limit weight gain.

### Extract from Implications for Practice

Smoking cessation is usually accompanied by weight gain and quitters can expect to gain an average of 4 to 6 kilograms over one year of continuous abstinence. There are no pharmacological interventions specifically to reduce weight gain that can be recommended with promise of long-term benefit to smokers trying to quit. Fluoxetine could be tried, but evidence for long-term benefit is unclear. Advice to prevent weight gain by reducing calories may reduce abstinence, and is not effective for controlling weight. It should not be used. Individualized behavioural weight control plans, very low calorie diets, and cognitive behavioural therapy may all reduce weight gain, and there is no strong evidence they reduce abstinence. They should be used cautiously, ideally in research settings. Nicotine replacement therapy, antidepressants and probably varenicline for smoking cessation all reduce weight gain in the short term, but patients need to be advised that it is unclear whether they reduce weight gain in the long term. There is mixed evidence that exercise limits post-cessation weight gain. The long-term effect of all combined smoking cessation and weight control interventions on weight gain is small at best, at less than one kilogram, compared with a typical weight gain of about five kilograms for continuous abstinence over one year, and is of borderline clinical relevance. The only possible exceptions are individualized weight control interventions, cognitive behavioural therapy and very low calorie diets.

\*\*\*SEE [WWW.COCHRANE.ORG/PODCASTS](http://WWW.COCHRANE.ORG/PODCASTS) FOR A PODCAST BY THE AUTHOR OF THIS REVIEW, AVAILABLE FROM WEDNESDAY 21<sup>ST</sup> JANUARY 2009\*\*\*

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## **Treatment Efficacy**

### **Short versus standard duration antibiotic therapy for acute streptococcal pharyngitis in children**

(CD004872) By Altamimi et al

#### **Background**

The standard duration of treatment for acute group A beta hemolytic streptococcus (GABHS) pharyngitis with oral penicillin is 10 days. Shorter duration antibiotics may have comparable efficacy.

#### **Extract from Implications for Practice**

Three to six days treatment with oral antibiotics has comparable efficacy to the standard duration 10 days of oral penicillin in treating children with acute GABHS pharyngitis. The shorter duration of antibiotic treatment can be more convenient to the patient, will improve compliance and reduce failure rate, returns to the physician, and ultimately overall cost. If the clinician chooses azithromycin for three days, a dose of 20 mg/kg/day should be used rather than 10 mg/kg/day.

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### **Pulmonary rehabilitation following exacerbations of chronic obstructive pulmonary disease**

(CD005305) By Puhan et al

#### **Background**

Pulmonary rehabilitation has become a cornerstone in the management of patients with stable Chronic Obstructive Pulmonary Disease (COPD). Systematic reviews have shown large and important clinical effects of pulmonary rehabilitation in these patients. In unstable COPD patients who have suffered from an exacerbation recently, however, the effects of pulmonary rehabilitation are less established.

#### **Extract from Implications for Practice**

Pulmonary rehabilitation is an effective intervention for the post-exacerbation management of COPD patients. It is likely to reduce the risk for future hospital admissions and leads to large and clinically relevant improvements of health-related quality of life and exercise capacity.

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### **Compression for venous leg ulcers**

(CD000265) By O'Meara et al

#### **Background**

Around one percent of people in industrialised countries will suffer from a leg ulcer at some time. The majority of these leg ulcers are due to problems in the veins, resulting in an accumulation of blood in the legs. Leg ulcers arising from venous problems are called venous (varicose or stasis) ulcers. The main treatment has been a firm compression garment (bandage or stocking) in order to aid venous return. There is a large number of compression garments available and it is unclear whether they are effective in treating venous ulcers and which compression garment is the most effective.

#### **Extract from Implications for Practice**

Compression increases the healing rates of venous leg ulcers compared with no compression. Multi-component compression systems are more effective than single-component systems. Multi-component systems containing an elastic bandage appear more effective than those composed mainly of inelastic constituents. Variants of the original Charing Cross four-layer bandage achieve similar outcomes. The four-layer bandage is more clinically and cost-effective than multi-component systems comprising a short-stretch bandage. The relative effects of the four-layer bandage and paste bandage systems are not clear from current evidence. There is currently no evidence of a difference in the effectiveness of adjustable compression boots and compression bandage systems or between single-layer stockings and paste bandage systems. Two-layer stockings might be more effective than the short-stretch bandage. The relative effectiveness of tubular compression and compression bandages is currently unclear. The limited evidence on the effects of different compression systems on venous ulcer recurrence precludes definitive conclusions at the current time. The

performance of any type of compression bandage might be influenced by operator skill; this is likely to be less of an issue for compression hosiery.

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- Ends -

## Notes for editors

1. 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<sup>1</sup>.
2. The Cochrane Library can be accessed at <http://www.thecochranelibrary.com>. Guest users may access abstracts for all Reviews in the database, and members of the media may request full access to the contents of the Library. For further information, see contact details below.

A number of countries have national provisions by which some or all of their residents are able to access The Cochrane Library for free. These include:

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3. The Cochrane Library is available with free one-click access to all residents of countries in the World Bank's list of low-income economies (countries with a gross national income (GNI) per capita of less than \$1000). Access to The Cochrane Library for low-income countries is via Wiley-Blackwell IP recognition, a system which recognises the country a user is in. Users in low-income countries can access The Cochrane Library via <http://www.thecochranelibrary.com>.

There are also several programmes, such as the Health InterNetwork Access to Research Initiative (HINARI) and the International Network for the Availability of Scientific Publications (INASP) that provide access in developing countries. To find out whether your country is included in any of these programmes/provisions, or to learn how to get access if you don't already have it, please visit: <http://www.thecochranelibrary.com>.

4. The Cochrane Database of Systematic Reviews received its first Impact Factor ever in 2007 and has an IF of 4.654, giving it a ranking of 14 out of 100 in the ISI category Medicine, General & Internal.

5. As of January 2009 The Cochrane Library is proud to introduce it's first ever Editor-in-Chief, Dr David Tovey. Dr. Tovey was previously Editorial Director of the BMJ Evidence Centre and editor of Clinical Evidence. He graduated from Bristol University in 1983. After completing vocational GP training, he was senior partner in a large, inner city practice in South London, and a postgraduate CPD tutor until 2003, when he joined the BMJ Group. He is a Fellow of the Royal College of General Practitioners.
6. As of Issue 4 2008, the Cochrane Database of Systematic Reviews includes Systematic Reviews of Diagnostic Test Accuracy. Diagnostic test accuracy reviews are full-text systematic reviews of studies that assess the accuracy of a diagnostic test or tests for a given target condition in a specific patient/participant group and setting.
7. The Cochrane Library Issue 1, 2009 Podcasts: a collection of podcasts on a selection of Cochrane Reviews by the authors will be available from <http://www.cochrane.org/podcasts> from Wednesday 21st January 2009.

For Issue 4, 2008, the podcasts are:

- **Post-operative radiotherapy for ductal carcinoma in situ of the breast**
- **Early discharge hospital at home**
- **Interventions for treating obesity in children**
- **Virtual reality training for surgical trainees in laparoscopic surgery**
- **Robot assistant for laparoscopic cholecystectomy**
- **Street lighting for preventing road traffic injuries**
- **School-based physical activity programs for promoting physical activity and fitness in children and adolescents aged 6-18**
- **Publication bias in clinical trials due to statistical significance or direction of trial results**
- **Acupuncture for tension-type headache & Acupuncture for migraine prophylaxis**
- **Orthotic devices after stroke and other non-progressive brain lesions**
- **Interventions for preventing weight gain after smoking cessation**

Podcasts of the top 20 most accessed reviews of 2007 will also be available from [www.cochrane.org/podcasts](http://www.cochrane.org/podcasts) from 21st January

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<sup>a</sup> Jadad AR, Cook DJ, Jones A, Klassen TP, Tugwell P, Moher M, et al. Methodology and reports of systematic Reviews and meta-analyses: a comparison of Cochrane Reviews with articles published in paper-based journal.