



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

**Strictly Embargoed until 00:01 hours (GMT), 23<sup>rd</sup> January 2008**

This alert highlights some of the key health care conclusions and their implications for practice as published this week in [The Cochrane Library](#), 2008, Issue 1.

To receive a full copy of the Reviews highlighted in this newsletter, or to arrange an interview with an author, contact Jennifer Beal +44 (0)1243 770633 or by email, [jbeal@wiley.com](mailto:jbeal@wiley.com).

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

- **[Abstinence-plus programs for HIV prevention can reduce risk behaviour](#)**  
Programmes that aim to encourage sexual abstinence while also encouraging and teaching safer sex strategies for those who are sexually active can reduce short- and long-term HIV risk behaviour among young people in high-income countries, according to the findings of a new Cochrane Review.
- **[Hand washing can reduce diarrhoea episodes by about one third](#)**  
Both in institutions and in community situations, interventions that promote hand washing lead to significant reductions in the incidence of diarrhoea. This is the finding of a team of Cochrane Researchers that studied data in 14 randomised controlled trials.
- **[Antioxidants such as vitamins C and E don't prevent pre-eclampsia](#)**  
Taking vitamins C or E during pregnancy will not reduce a woman's risk of experiencing pre-eclampsia, a Cochrane Systematic Review has concluded.
- **[Music therapy may offer hope for people with depression](#)**  
A therapist may be able to use music to help some patients fight depression and improve, restore and maintain their health, states a Systematic Review from The Cochrane Library.
- **[No high quality studies on reducing MRSA infection in nursing homes for elderly people](#)**  
Nursing homes for older people provide environments where bacteria such as methicillin-resistant Staphylococcus aureus (MRSA) are likely to thrive. Despite this, there are no high quality studies that look specifically at means of reducing the risk of transmission and infection in this setting.

- [Clean or boiled tap water is as good as saline at cleaning acute wounds](#)  
Using drinkable tap water to clean wounds does not increase infection rates, according to the findings of a Cochrane Review. There is, however, no evidence that it reduces infection rates or increases healing rate over leaving the wound alone.
- [Alendronate can help prevent bone fractures in many postmenopausal women](#)  
Giving 10mg per day of the bisphosphate drug alendronate to women after their menopause can help prevent loss of bone mass, reducing their risk of fractures, a Cochrane Review has found.
- [A selection of other new or updated Cochrane Reviews](#)

### **Abstinence-plus programs for HIV prevention can reduce risk behaviour**

Programmes that aim to encourage sexual abstinence while also encouraging and teaching safer sex strategies for those who are sexually active can reduce short- and long-term HIV risk behaviour among young people in high-income countries, according to the findings of a new Cochrane Review.

HIV and AIDS are huge threats to human health. Each day in 2005 around 7,600 people died from HIV-related causes and a further 38.6 million people were living with the disease. Two million of these were living in the high-income countries of North America and Western and Central Europe. Estimates suggest that that year 4.1 million people contracted the virus. Estimates also suggest that 70% of HIV-infected people stay sexually active, with a substantial proportion continuing to participate in unprotected sex. On top of this there is a rising prevalence of other sexually transmitted infections including chlamydia and gonorrhoea in many high-income countries around the world.

Abstinence-plus programmes start from the premise that sexual abstinence is the best way to prevent infection, but recognises that some people will continue to be sexually active and therefore also helps to enable safe and effective use of condoms. In addition to teaching condom skills, abstinence-plus programmes commonly teach about safer sex negotiation, communication with partners, and transmission of HIV and other sexually transmitted infections.

Cochrane Researchers therefore looked for evidence that specifically identified the effectiveness of abstinence-plus programmes in high-income countries.

They found 39 studies involving over 37,000 North American young people. In 23 studies there was a significant increase in protective behaviour. None of the studies reported any adverse effects; contrary to criticisms against abstinence-plus programmes, participants did not become more sexually active after completing the interventions. Owing in part to limitations in measurement, the results were unable to show evidence that abstinence-plus programmes affected self-reported rates of sexually transmitted infections, or self-reported pregnancy incidence.

“In a previous Cochrane Review we concluded that abstinence-only programs have no effect in high-income countries, which makes the finding that abstinence-plus programs can influence behaviour even more striking,” says lead researcher Dr Don Operario who works at the Department of Social Policy and Social Work at the University of Oxford, UK. “This is an opportunity for the HIV prevention and public health communities to harness the potential benefits of comprehensive sexual health education such as abstinence-plus programmes.”

Underhill K, Montgomery P, Operario D. Abstinence-plus programs for HIV infection prevention in high-income countries. Cochrane Database of Systematic Reviews 2008, Issue 1. Art. No.: CD007006. DOI: 10.1002/14651858.CD007006.

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### **Hand washing can reduce diarrhoea episodes by about one third**

Both in institutions and in communities, interventions that promote hand washing lead to significant reductions in the incidence of diarrhoea.

The [WHO](#)\* estimates that diarrhoea kills around 2.2 million people annually, mostly young children in middle- or low-income countries. Encouraging children and adults to wash their hands after using the lavatory is one intervention that has potential to reduce the risk.

A team of Cochrane Researchers set out to assess the strength of evidence for the benefits of hand washing. They studied data in 14 randomised controlled trials, eight of which had been conducted in day-care centres and schools mainly in high-income countries; five had been community-based trials in low- and middle-income countries, and one looked at a specific high-risk group of HIV-infected adults living in the USA.

The data showed that interventions promoting hand washing can reduce diarrhoea episodes by 29% in day-care centres in high-income countries and by 31% in communities in low- or middle- income countries.

“This is a huge benefit. For people in low-income areas this effect is comparable to providing clean water,” says lead author Dr Regina Ejemot.

“The challenge is to find ways of promoting hand washing, as well as to set up long term trials that test whether good practice has become part of a person’s way of life,” says Ejemot.

Ejemot RI, Ehiri JE, Meremikwu MM, Critchley JA. Hand washing for preventing diarrhoea. Cochrane Database of Systematic Reviews 2008, Issue 1. Art. No.: CD004265. DOI: 10.1002/14651858.CD004265.pub2.

\* [http://www.who.int/water\\_sanitation\\_health/diseases/diarrhoea/en](http://www.who.int/water_sanitation_health/diseases/diarrhoea/en)

**\*\*\*SEE [WWW.COCHRANE.ORG/PODCASTS](http://WWW.COCHRANE.ORG/PODCASTS) FOR A PODCAST BY THE AUTHOR OF THIS REVIEW, AVAILABLE FROM WEDNESDAY 23<sup>RD</sup> JANUARY 2008\*\*\***

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## **Antioxidants such as vitamins C and E don't prevent pre-eclampsia**

Taking vitamins C or E during pregnancy will not reduce a woman's risk of experiencing pre-eclampsia, a Cochrane Systematic Review has concluded.

Pre-eclampsia can occur during pregnancy when a woman develops high blood pressure and tests show that protein is appearing in her urine. The situation can be dangerous to both her health and that of the developing baby. Indeed it is a major cause of death in women worldwide.

The cause of pre-eclampsia is unknown, but one theory suggests that it is triggered by free-radicals. In this case taking antioxidants could mop up these free-radicals and reduce the risk.

A team of Cochrane Researchers studied data from 10 trials that involved a total of 6,533 women who participated in studies assessing the effects of antioxidants (such as vitamins C and E) during pregnancy. Their conclusion was that overall there was no reduction in the risk of pre-eclampsia with the use of antioxidant supplements. In addition, antioxidants did not help reduce the risk of many other health issues including having a pre-term delivery, delivering babies that had not grown well in the womb or infant death.

"Evidence does not currently support routine use of antioxidant supplements during pregnancy as a means of reducing the risk of pre-eclampsia or other serious problems," says lead author Dr Alice Rumbold, who works at the Menzies School of Health Research in Darwin, Australia.

Rumbold A, Duley L, Crowther CA, Haslam RR. Antioxidants for preventing pre-eclampsia. *Cochrane Database of Systematic Reviews* 2008, Issue 1. Art. No.: CD004227. DOI: 10.1002/14651858.CD004227.pub3.

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## **Music therapy may offer hope for people with depression**

A therapist may be able to use music to help some patients fight depression and improve, restore and maintain their health, states a Systematic Review from The Cochrane Library.

About 121 million people world-wide are believed to suffer from depression. This can be seen in disturbed appetite, sleep patterns and overall functioning as well as leading to low self-esteem and feelings of worthlessness and guilt. It can lead to suicide and is associated with 1 million deaths a year.

Drugs and psychotherapy are common treatments, but a group of Cochrane Researchers set out to see whether there was evidence that music therapy could deliver benefits.

After searching the international literature, they identified five studies that met their criteria. Four of these reported greater reduction in symptoms of depression among people who had been given music therapy than those who had been randomly

assigned to a therapy group that did not involve music. The fifth study, however, did not find this effect.

“While the evidence came from a few small studies, it suggests that this is an area that is well worth further investigation and, if the use of music therapy is supported by future trials, we need to find out which forms have greatest effect,” says lead author Anna Maratos, an Arts Therapist who works in the Central and Northwest London Foundation NHS Trust, London, UK.

“The current studies indicate that music therapy may be able to improve mood and has low drop-out rates,” says Maratos.

“It is important to note that at the moment there are only a small number of relatively low quality studies in this area, and we will only be able to be confident about the effectiveness of music therapy once some high quality trials have been conducted,” says Maratos.

Maratos AS, Gold C, Wang X, Crawford MJ. Music therapy for depression. *Cochrane Database of Systematic Reviews* 2008, Issue 1. Art. No.: CD004517. DOI: 10.1002/14651858.CD004517.pub2.

**\*\*\*SEE [WWW.COCHRANE.ORG/PODCASTS](http://WWW.COCHRANE.ORG/PODCASTS) FOR A PODCAST BY THE AUTHOR OF THIS REVIEW, AVAILABLE FROM WEDNESDAY 23<sup>RD</sup> JANUARY 2008\*\*\***

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## **No high quality studies on reducing MRSA infection in nursing homes for elderly people**

Nursing homes for older people provide environments where bacteria such as meticillin-resistant *Staphylococcus aureus* (MRSA) are likely to thrive. Despite this, there are no high quality studies that look specifically at means of reducing the risk of transmission and infection in this setting.

MRSA is a bacterial strain that causes significant disease partly because it is resistant to most commonly used antibiotics. It is most frequently found in communities where antibiotics are frequently taken and where people live close together. In homes for elderly people this is even more problematic in that some residents have pressure sores that are particularly vulnerable to infection.

Given the anxiety about MRSA and the high risk associated with these homes, a team of Cochrane Researchers set out to find studies that aimed to reduce the risk of infection. Having searched the international literature they discovered that there were no studies that met their criteria.

“The lack of studies in this field is surprising,” says lead author Professor Carmel Hughes who works in the School of Pharmacy at Queen’s University, Belfast.

“We are aware of one randomised controlled study that is currently underway in nursing homes, however given the importance of the issue we need many more. It is important that we recognise that these homes are very different from hospitals and that we do not simply try to apply findings from research conducted in hospitals,” says Hughes.

Hughes CM, Smith MBH, Tunney MM. Infection control strategies for preventing the transmission of methicillin-resistant *Staphylococcus aureus* (MRSA) in nursing homes for older people. *Cochrane Database of Systematic Reviews* 2008, Issue 1. Art.No.: CD006354. DOI: 10.1002/14651858.CD006354.pub2.

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## **Clean or boiled tap water is as good as saline at cleaning acute wounds**

Using drinkable tap water to clean wounds does not increase infection rates, according to the findings of a Cochrane Review. There is, however, no evidence that it reduces infection rates or increases healing rate over leaving the wound alone.

Cleaning wounds caused by injuries is part of standard medical care, but there is a vigorous debate about how best to do it. Research shows that using chemical-containing antiseptic may slow wound healing. Many people recommend saline (salt solution) instead, but others worry that this will wash away growth promoters and infection-fighting white blood cells. Sterile saline is also not always available and can be expensive.

As an alternative to saline, some suggest using drinkable tap water, or clean water that has been boiled.

Cochrane Researchers considered data from eleven trials that compared rates of infection and healing in wounds when treated with various cleansing regimes.

In adults, wounds cleansed with tap water had significantly fewer infections than those cleansed with saline. There was no difference between wounds cleansed with tap water and those that received no cleaning.

In situations where a broken bone had punctured the skin, there was no significant difference between cleansing with saline, distilled water or boiled water.

“The decision to use tap water to cleanse wounds should take into account the quality of water, nature of wounds and the patient’s general condition,” says lead author Ritin Fernandez who works in the Centre for Applied Nursing Research in Liverpool BC, Australia.

Fernandez R, Griffiths R. Water for wound cleansing. *Cochrane Database of Systematic Reviews* 2008, Issue 1. Art. No.: CD003861. DOI: 10.1002/14651858.CD003861.pub2.

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## **Alendronate can help prevent bone fractures in many postmenopausal women**

Giving 10mg per day of the bisphosphate drug alendronate to women after their menopause can help prevent loss of bone mass, reducing their risk of fractures, a Cochrane Review has found. This finding applies to women who have started to lose

their bone mass but have no fractures (primary prevention), as well as those who have lost significant bone mass and/or have had fractures (secondary prevention).

Healthy bones constantly break down and rebuild their structure. The process is sensitive to hormones and once women have passed through the menopause the balance is disturbed; their bones tend to break down slightly more than they build. Over time this leads to a noticeable loss of bone mass, and weakening of the bones. Once the bones become too weak they are prone to fracture.

A team of Cochrane Researchers set out to evaluate the evidence behind the use of alendronate for primary and secondary prevention of bone fractures in these women. Alendronate works by inhibiting the bone break down process.

By studying the outcomes of eleven trials that involved a total of 12,068 women the researchers found significant evidence of both primary and secondary prevention against breaking bones in the back (vertebrae). In secondary prevention, there was also a statistically significant protection against fractures of other bones including those in the hip and wrist.

“This work revealed no increase in side effects in the women who were using the drugs, despite the fact that some studies outside clinical trials raise the possibility of stomach and jaw complaints,” says lead author Dr George Wells, who works in the Department of Epidemiology and Community Medicine at the University of Ottawa.

“As a woman gets older, her risk of having on-going health problems or dying is significantly greater if she has reduced bone density and then breaks a bone such as a hip, so it is important to find effective preventative therapies with low or no side-effects,” says Wells.

Wells GA, Cranney A, Peterson J, Boucher M, Shea B, Robinson V, Coyle D, Tugwell P. Alendronate for the primary and secondary prevention of osteoporotic fractures in postmenopausal women. *Cochrane Database of Systematic Reviews* 2008, Issue 1. Art. No.: CD001155. DOI: 10.1002/14651858.CD001155.pub2.

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## **Extracts from a selection of other Cochrane Systematic Reviews**

This section contains extracts from 24 selected new or updated reviews also publishing in The Cochrane Library 2007, Issue 4. These extracts have been divided into headings of:

[Smoking](#)

[Menopause](#)

[Contraception](#)

[Pregnancy / Babies](#)

[Disease / Infection / Treatment](#)

[Cancer](#)

[Diabetes](#)

[Policy](#)

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 or by email, [jbeal@wiley.co.uk](mailto:jbeal@wiley.co.uk).

## **Smoking**

### **"Psychosocial interventions for smoking cessation in patients with coronary heart disease"**

(CD006886) by Barth et al

Quitting smoking improves prognosis after a cardiac event, but many patients continue to smoke, and improved cessation aids are urgently required.

#### **Extract from the Implications for Practice findings**

After a cardiac event about 30% to 50% of smokers with CHD quit without professional help. Additional psychosocial interventions show a superior quitting rate compared to standard care. Interventions for smoking cessation in CHD patients should last for more than 1 month. Brief interventions may not be effective. The overall effect of psychosocial smoking cessation interventions in CHD patients can be expressed by the number needed to treat statistics with a figure of 9.7. This means about 10 patients had to be treated for one person to be abstinent from tobacco after 1 year.

### **"Mass media interventions for smoking cessation in adults"**

(CD004704) by Bala et al

#### **Background**

Mass media tobacco control campaigns can reach large numbers of people. Much of the literature is focused on the effects of tobacco control advertising on young people, but there are also a number of evaluations of campaigns targeting adult smokers, which show mixed results. Campaigns may be local, regional or national, and may be combined with other components of a comprehensive tobacco control policy.

#### **Extract from the Implications for Practice findings**

Tobacco control programmes that include mass media campaigns may change smoking behaviour in adults, but the evidence comes from studies of variable quality and scale. The specific contribution of the mass media component is unclear. The duration and intensity of an intervention may affect its impact on smoking behaviour, but evaluations need to extend for long enough to detect lasting changes, and to allow for confounders and for secular trends. No consistent relationship was observed between campaign effectiveness and age, education, ethnicity or gender.

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## **Menopause**

### **"Hormone replacement therapy for cognitive function in postmenopausal women"**

(CD003122) by Lethaby et al

#### **Background**

As estrogens have been found in animal models to be associated with the maintenance and protection of brain structures, it is biologically plausible that maintaining high levels of estrogens in postmenopausal women by medication could be protective against cognitive decline.

#### **Extract from the Implications for Practice findings**

There is good evidence that both ERT and HRT do not prevent cognitive decline in older postmenopausal women. It is not known whether specific types of ERT or HRT have effects in subgroups of women, although there was evidence that combined hormone therapy (CEE + MPA) in similarly aged women was associated with a decrement in a number of verbal memory tests and a small improvement in a test of figural memory. There is insufficient evidence to determine whether subgroups of women using specific types of hormone therapy could benefit from treatment. Based on the available evidence, ERT or HRT cannot be recommended for cognitive improvement or maintenance in healthy postmenopausal women.

## "Etidronate for the primary and secondary prevention of osteoporotic fractures in postmenopausal women"

(CD003376) by Wells et al

### **Background**

Osteoporosis is an abnormal reduction in bone mass and bone deterioration leading to increased fracture risk. Etidronate belongs to the bisphosphonate class of drugs which act to inhibit bone resorption by interfering with the activity of osteoclasts.

### **Extract from the Implications for Practice findings**

Etidronate, used at 400 mg per day, demonstrated a clinically important benefit in the secondary prevention of vertebral fractures. The secondary prevention population was defined as having a bone density of at least 2 SD values below peak bone mass or one or more vertebral compression fractures, or both. There were no statistically significant reductions in vertebral fractures when used for primary prevention. Furthermore, no statistically significant reductions in non-vertebral, hip or wrist fractures were observed regardless of whether etidronate was used for primary or secondary prevention.

## "Oral contraceptives containing drospirenone for premenstrual syndrome"

(CD006586) by Lopez et al

### **Background**

Premenstrual syndrome (PMS) is a common problem. Premenstrual dysphoric disorder (PMDD) is a severe form of PMS. Combined oral contraceptives (COCs), which have both progestin and estrogen, have been examined for their ability to relieve premenstrual symptoms. A COC containing drospirenone and low estrogen has been approved for treating PMDD in women who choose COCs for contraception.

### **Extract from the Implications for Practice findings**

Drospirenone with EE 20 µg COC may help treat premenstrual symptoms in women with PMDD. However, a powerful placebo effect was evident: in one trial, symptoms were reduced for 48% of the drospirenone COC group versus 36% of the placebo group. The difference may not be clinically significant. Furthermore, effectiveness after three cycles is unknown. Little evidence exists for treating less severe symptoms and whether drospirenone works any better than other COCs.

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## Contraception

## "Skin patch and vaginal ring versus combined oral contraceptives for contraception"

(CD003552) by Lopez et al

### **Background**

The delivery of combination contraceptive steroids from a skin patch or vaginal ring offers potential advantages over the traditional oral route. The skin patch and vaginal ring could require a lower dose due to increased bioavailability and improved user compliance.

### **Extract from the Implications for Practice findings**

The trials of a contraceptive skin patch or a vaginal ring versus a COC showed similar effectiveness rates for the two methods compared. Compared to oral contraceptives, the patch could lead to more discontinuation but the vaginal ring showed little difference. Patch users had increased risk for breast discomfort, painful periods, nausea, and vomiting. In contrast, ring users had less nausea, irritability and depression than COC users in single trials. Ring users often had fewer bleeding problems but more vaginal irritation and discharge.

## "Cyclical progestogens for heavy menstrual bleeding"

(CD001016) by Lethaby et al

### **Background**

Excessively heavy menstrual bleeding (HMB) or menorrhagia is an important cause of ill health in women. Eighty per cent of women treated for HMB have no anatomical pathology, which makes medical therapy, with the avoidance of possibly unnecessary surgery, an attractive alternative. Of the wide variety of medications used to reduce heavy menstrual bleeding, oral progestogens are the most commonly prescribed. This review assesses the effectiveness of two different regimens of oral progestogens in reducing ovulatory HMB.

### **Extract from the Implications for Practice findings**

Progestogens administered from day 15 or 19 to day 26 of the cycle offer no advantage over other medical therapies such as danazol, tranexamic acid, NSAIDs and the progesterone-releasing intrauterine system in the treatment of menorrhagia in women with ovulatory cycles. Progestogen therapy for 21 days of the cycle results in a significant reduction in menstrual blood loss, although women find the treatment less acceptable than using intrauterine levonorgestrel. This regimen of progestogen may have a role in the short-term treatment of menorrhagia.

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## **Pregnancy / Babies**

### **"Biophysical profile for fetal assessment in high risk pregnancies"**

(CD000038) by Lalor et al

#### **Background**

A biophysical profile (BPP) includes ultrasound monitoring of fetal movements, fetal tone and fetal breathing, ultrasound assessment of liquor volume with or without assessment of the fetal heart rate. The BPP is performed in an effort to identify babies that may be at risk of poor pregnancy outcome, so that additional assessments of wellbeing may be performed, or labour may be induced or a caesarean section performed to expedite birth.

#### **Extract from the Implications for Practice findings**

There is insufficient evidence from randomised trials to support the biophysical profile (BPP) as a test of fetal wellbeing in high-risk pregnancies. Although the number of participating women was relatively small (n = 280), combined data from the two high-quality trials Alfirevic 1995 and Lewis 1999 suggest an increase in the risk of caesarean section in the BPP group. In addition, the increase in the rate of induction of labour in the Alfirevic 1995 trial highlights the need for careful evaluation of the impact of the BPP on a wide range of relevant maternal and neonatal outcomes.

### **"Probiotics for prevention of necrotizing enterocolitis in preterm infants"**

(CD005496) by AlFaleh and Bassler

#### **Background**

Necrotizing enterocolitis (NEC) and nosocomial sepsis are associated with increased morbidity and mortality in preterm infants. Through prevention of bacterial migration across the mucosa, competitive exclusion of pathogenic bacteria, and enhancing the immune responses of the host, prophylactic enteral probiotics (live microbial supplements) may play a role in reducing NEC and associated morbidity.

#### **Extract from the Implications for Practice findings**

Enteral supplementation of probiotics reduced the risk of severe NEC and mortality in preterm infants. This analysis supports a change in practice in premature infants > 1000 g at birth. Data regarding outcome of ELBW infants could not be extracted from the available studies; therefore, a reliable estimate of the safety and efficacy of administration of probiotic supplements cannot be made in this high risk group.

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## **Disease / Infection / Treatment**

### **"Amantadine and rimantadine for influenza A in children and the elderly"**

(CD002745) by Alves Galvão et al

#### **Background**

Although amantadine (AMT) and rimantadine (RMT) are used to relieve or treat influenza A symptoms in healthy adults, little is known about the effectiveness and safety of these antivirals in preventing and treating influenza A in children and the elderly

#### **Extract from the Implications for Practice findings**

According to available data, AMT was effective in prophylaxis against influenza A in children. The safety of the drug was not well established but it should be tried if one takes into account the important role of children in transmitting infections. Currently, RMT cannot be recommended as a prophylactic drug for either age group.

## "Arthroscopic debridement for knee osteoarthritis"

(CD005118) by Laupattarakasem et al

### **Background**

Knee osteoarthritis (OA) is a progressive disease that initially affects the articular cartilage. Observational studies have shown benefits for arthroscopic debridement (AD) on the osteoarthritic knee, but other recent studies have yielded conflicting results that suggest AD may not be effective.

### **Extract from the Implications for Practice findings**

Based on the results of this review, we conclude that there is gold level evidence (Moseley 2002) that AD has no significant benefit for knee OA of undiscriminated cause. Debatable areas remain to be addressed, for example, there may be groups of patients or levels of severity of disease for which the intervention may be effective. Hubbard 1996 found that AD provides more successful results for localised lesion on the medial femoral condyle than arthroscopic washout, but the study was of lower methodological quality.

## "Dietary interventions for recurrent abdominal pain (RAP) and irritable bowel syndrome (IBS) in childhood"

(CD003019) by Huertas-Ceballos et al

### **Background**

Between 4% and 25% of school-age children complain of recurrent abdominal pain (RAP) of sufficient severity to interfere with daily activities. It is unclear whether the diagnosis includes children with different aetiologies for their pain. For the majority no organic cause for their pain can be found on physical examination or investigation. Although most children are likely managed by reassurance and simple measures, a large range of interventions have been recommended.

### **Extract from the Implications for Practice findings**

There is no clear evidence of the effectiveness of any form of dietary manipulation which makes it impossible to recommend it to clinicians or families at present.

## "Relaxation therapies for the management of primary hypertension in adults"

(CD004935) by Dickinson et al

### **Background**

Lifestyle interventions are often recommended as initial treatment for mild hypertension, but the efficacy of relaxation therapies is unclear.

### **Extract from the Implications for Practice findings**

In view of the poor methodological quality of studies included in the meta-analysis, it is difficult to draw any definitive conclusions about the efficacy or lack of efficacy of relaxation techniques for primary hypertension. Some relaxation therapies may reduce blood pressure by a small amount in some patients. There was substantial variation between the effects of relaxation therapies in different populations and we were unable to identify the characteristics of patients in whom it was likely to be effective.

## "Corticosteroids for managing tuberculous meningitis"

(CD002244) by Prasad and Singh

### **Background**

Tuberculous meningitis, a serious form of tuberculosis that affects the meninges covering the brain and spinal cord, is associated with high mortality and disability among survivors. Corticosteroids have been used as an adjunct to antituberculous drugs to improve the outcome, but their role is controversial.

### **Extract from the Implications for Practice findings**

Corticosteroids should be routinely used in HIV-negative people with tuberculous meningitis to reduce death and disabling residual neurological deficit amongst survivors. The drug and dose as used in most trials may be dexamethasone (for adults 12 to 16 mg/day for three weeks, tapered over the next three weeks; for children 0.3 to 0.4 mg/kg/day for one to two weeks and tapered over the next two weeks; given intravenously until the patient starts accepting orally when tablets can be used) or prednisolone (for adults 60 mg/day for three weeks and tapered over the next three weeks; for children 2 mg/kg/day for three weeks and tapered over the next three weeks), and either of the two may be used in clinical practice.

However, there is not enough evidence to support or refute a similar conclusion for those who are HIV positive.

### "Glucocorticoid corticosteroids for Duchenne muscular dystrophy"

(CD003725) by Manzur et al

#### **Background**

Duchenne muscular dystrophy (DMD) is the most common muscular dystrophy of childhood. This incurable disease is characterised by muscle wasting and loss of walking ability leading to complete wheelchair dependence by 13 years of age. Prolongation of walking is one of the major aims of treatment.

#### **Extract from the Implications for Practice findings**

Randomised controlled trials show that treatment with glucocorticoid corticosteroids in Duchenne muscular dystrophy improves muscle strength and function for six months to two years, and respiratory muscle strength and function for six months. The most effective prednisolone regime is probably 0.75mg/kg daily. Not enough data were available to compare the efficacy of prednisone and deflazacort. The long-term benefits and harms are not clear but non-randomised studies suggest that clinically significant prolongation of time to loss of walking is possible though potential harms are significant, including weight gain, behavioural changes, vertebral fractures and cataracts.

### "Surgical hand antisepsis to reduce surgical site infection"

(CD004288) by Tanner et al

#### **Background**

Surgical hand antisepsis, to destroy transient micro-organisms and inhibit the growth of resident micro-organisms, is routinely carried out before undertaking invasive procedures. Antisepsis may reduce the risk of surgical site infections in patients.

#### **Extract from the Implications for Practice findings**

There is no evidence of a difference in rates of surgical site infection when surgical teams rub with alcohol containing 75% propanol-1, propanol-2 with mecetronium ethylsulfate or scrub with chlorhexidine gluconate or povidone iodine. This would suggest that alcohol rubs containing additional active ingredients are acceptable alternatives to aqueous scrubs. This finding is supported by two trials measuring CFUs.

### "Interventions for noisy breathing in patients near to death"

(CD005177) by Wee and Hillier

#### **Background**

Noisy breathing (death rattle) occurs in 23 to 92% of people who are dying. The cause of death rattle remains unproven but is presumed to be due to an accumulation of secretions in the airways. It is therefore managed physically (repositioning and clearing the upper airways of fluid with a mechanical sucker) or pharmacologically (with anticholinergic drugs).

#### **Extract from the Implications for Practice findings**

So how do we manage death rattle? Wiffen's view that many treatments are time-honoured rather than RCT-honoured (Wiffen 2005) equally applies to palliative care. However, the practice of treating death rattle with anticholinergics of one form or another is so deeply engrained in the daily practice and culture of terminal care that it is likely to continue. But there are two caveats. First, there is no conclusive evidence at present of one anticholinergic agent being superior to another. Second, there is an ethical obligation that patients are closely monitored for lack of therapeutic benefit and adverse effects so that futile treatments may be discontinued. Moreover, rather than the indiscriminate use of anticholinergics, it may be more important to discuss with relatives the cause, implications and their fears and concerns about death rattle (Wee 2006) in order to reduce their distress.

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## **Cancer**

### "Interventions for relieving the pain and discomfort of screening mammography"

(CD002942) by Miller et al

#### **Background**

The pain of mammography is recognised as a significant deterrent for women considering this examination, and may affect participation in breast screening.

#### **Extract from the Implications for Practice findings**

Provision of verbal or written information about the procedure prior to a mammogram can reduce the pain and discomfort of the procedure. These are easy and inexpensive interventions to include in mammography screening. While use of a breast cushion was shown to reduce the pain of screening mammography, a possible adverse effect on image quality for a small proportion of those women studied was concerning. Mammograms may be less painful with a breast cushion; however, their use could lead to a breast cancer being missed, or to tests needing to be repeated, because they affected image quality. The Food and Drug Administration (FDA) has approved the use of breast cushions for mammography screening in the USA. However, considering the current evidence, the authors believe that breast cushions should not be recommended for use in screening mammography programmes.

### **"Drug therapy for the management of cancer related fatigue"**

(CD006704) by Minton et al

#### **Background**

Cancer related fatigue (CRF) is common, under-recognised and difficult to treat. There have been trials looking at drug interventions to improve CRF but results have been conflicting depending on the population studied and outcome measures used. No previous reviews of this topic have been exhaustive or have synthesised all available data.

#### **Extract from the Implications for Practice findings**

Two methylphenidate trials provided equivocal evidence for its use in a dose of 10 to 20 mg per day depending on response. Serious adverse effects were minimal but contra-indications to this drug should be reviewed before prescribing. Erythropoietin and darbopoetin trials provided evidence that erythropoietin is effective in relieving CRF in anaemic patients undergoing chemotherapy. Current prescribing guidelines should be adhered to and safety concerns shared with patients to allow for informed decision making. It is not possible to recommend doses but this should be the minimum effective dose for the shortest duration.

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## **Diabetes**

### **"Omega-3 polyunsaturated fatty acids (PUFA) for type 2 diabetes mellitus"**

(CD003205) by Hartweg et al

#### **Background**

People with type 2 diabetes mellitus are at increased risk from cardiovascular disease. Dietary omega-3 polyunsaturated fatty acids (PUFAs) are known to reduce triglyceride levels, but their impact on cholesterol levels, glycemic control and vascular outcomes are not well known.

#### **Extract from the Implications for Practice findings**

In hypertriglyceridemic patients, dietary supplementation with omega-3 PUFA leads to a modest lowering of triglycerides without any clinically significant effect on glycemic control, and omega-3 polyunsaturated fatty acids (PUFA) may represent a reasonable therapeutic strategy in these individuals.

### **"Intravitreal steroids for macular edema in diabetes"**

(CD005656) by Grover et al

#### **Background**

Macular edema is secondary to leakage from diseased retinal capillaries and is an important cause of poor central visual acuity in patients with diabetic retinopathy.

#### **Extract from the Implications for Practice findings**

Our analysis suggests that intravitreal steroid injections and implants may have some treatment effect for some cases of persistent or refractory DME in situations where the current standard of care was insufficient, but because of the varied treatment protocols, our analysis failed to identify any specific practice algorithms. Because of the relatively short half-life of IVTA, repeat injections may be required to maintain or obtain the desired effect which might increase the risk of injection-related complications such as infectious endophthalmitis, retinal

tears, retinal detachment, retinal holes and vitreous hemorrhage. Intravitreal steroid implants help circumvent the complications of repeat injections and may have a more sustained effect, but they may also have a greater risk of elevated IOP requiring medical and surgical intervention and a greater risk of cataract progression requiring surgery. Finally, these studies do not readily address the treatment effect of intravitreal steroids on other stages of DME, especially the earlier stage either as standalone therapy or in combination with other therapies, such as laser photocoagulation.

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## **Policy**

### **"Pharmaceutical policies: effects of cap and co-payment on rational drug use"**

(CD007017) by Austvoll-Dahlgren et al

#### **Background**

Growing expenditures on prescription drugs represent a major challenge to many health systems. Cap and co-payment (direct cost-share) policies are intended as an incentive to deter unnecessary or marginal utilisation, and to reduce third-party payer expenditures by shifting parts of the financial burden from the insurer to patients, thus increasing their financial responsibility for prescription drugs. Direct patient drug payment policies include caps (maximum number of prescriptions or drugs that are reimbursed), fixed co-payments (patients pay a fixed amount per prescription or drug), coinsurance (patients pay a percent of the price), ceilings (patients pay the full price or part of the cost up to a ceiling, after which drugs are free or available at reduced cost), and tier co-payments (differential co-payments usually assigned to generic and brand drugs).

#### **Extract from the Implications for Practice findings**

Introducing direct co-payments reduced drug use across studies. Patients responded by discontinuing drugs or by paying an increased proportion of the costs themselves. Reductions were found for life-sustaining drugs or drugs that are important in treating chronic conditions as well as other drugs, suggesting that patients may not have been able to prioritise their drug use when faced with a reimbursement restriction. While the shift of cost from the insurer to patients in many cases led to savings for the insurer, the discontinuation of drugs may have had unintended effects. Few studies reported on the effects on health and healthcare utilisation.

### **"Helmets for preventing injury in motorcycle riders"**

(CD004333) by Liu et al

#### **Background**

Motorcycle crash victims form a high proportion of those killed or injured in road traffic crashes. Injuries to the head, following motorcycle crashes, are a common cause of severe morbidity and mortality. It seems intuitive that helmets should protect against head injuries but it has been argued that motorcycle helmet use decreases rider vision and increases neck injuries. This review will collate the current available evidence on helmets and their impact on mortality, and head, face and neck injuries following motorcycle crashes.

#### **Extract from the Implications for Practice findings**

Observational studies that control for confounders demonstrate that helmets are effective in reducing head injuries in motorcyclists who crash by 69% and death by 42%. There is some evidence to suggest that the effect on mortality may be modified by other crash factors such as speed at impact. Currently no conclusive evidence exists on the effect of motorcycle helmets on neck or facial injuries.

### **"Interventions for preventing injuries in the agricultural industry"**

(CD006398) by Rautiainen et al

#### **Background**

Agriculture is more hazardous than most other industries. Many strategies have been introduced to reduce injuries in the field, yet the effectiveness of different interventions on occupational injuries still remains unclear.

#### **Extract from the Implications for Practice findings**

This review did not find evidence supporting the widespread use of educational interventions alone. The widespread use of educational interventions alone can therefore be questioned.

However, this is not to indicate that there is not a place for an educational component within a multi-factorial intervention. The use of financial incentives could be effective but should be studied better before more extensive implementation can be recommended. The banning of Endosulfan lowered the rate of fatal pesticide poisonings in one study and should be considered for other countries as well.

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## Notes for editors

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- Hand washing can reduce diarrhoea episodes by about one third
  - Music therapy may offer hope for people with depression
  - Non-steroidal anti-inflammatory drugs (NSAIDs) are effective for short-term relief of low-back pain
  - No high quality studies to reduce MRSA infection in nursing homes for elderly people
  - Cranberry juice may help women with recurrent urinary tract infections
  - Hawthorn extract can help the heart

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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.