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This alert highlights some of the key health care conclusions and their implications for practice as published in [The Cochrane Library](#), 2010, Issue 1, on 20th January 2010.

Reviews highlighted in this newsalert:

- **[Cervical Cancer: Combined Drug and Radiotherapy Improves Survival](#)**
Combining drugs and radiotherapy improves the survival chances of women receiving treatment for cervical cancer. These are the conclusions of Cochrane Researchers who carried out the most comprehensive study of the effects of combined drug and radiotherapy in cervical cancer treatment to date.
- **[NSAIDs May Be More Effective Than Paracetamol For Period Pain](#)**
Non-steroidal anti-inflammatory drugs (NSAIDs) like ibuprofen may be more effective for relieving period pain than paracetamol, according to the update of a Cochrane Review. However, it remains unclear whether any one NSAID is safer or more effective than others.
- **[Vitamin D Supplementation Can Reduce Falls In Nursing Care Facilities](#)**
Giving people living in nursing facilities vitamin D can reduce the rate of falls, according to a new Cochrane Review. This finding comes from a study of many different interventions used in different situations. In hospitals, multifactorial interventions and supervised exercise programs also showed benefit.
- **[Hypertension: Beta-Blockers Effective In Combination Therapies](#)**
Using beta-blockers as a second-line therapy in combination with certain anti-hypertensive drugs significantly lowers blood pressure in patients with hypertension, according to a systematic review by Cochrane Researchers. This review also goes some way to explaining the differences in the way that patients respond to beta-blockers and other classes of blood pressure lowering drugs.
- **[Parkinson's: Treadmill Training Improves Movement](#)**
Treadmill training can be used to help people with Parkinson's disease achieve better walking movements, say researchers. In a systematic review of the evidence, Cochrane Researchers concluded treadmill training could be used to improve specific gait parameters in Parkinson's patients.
- **[HIV: Positive Lessons From Home-Based Care](#)**
Intensive home-based nursing in HIV/AIDS patients significantly improves self-reported knowledge of HIV, awareness of medications, and self-reported adherence to medication programmes, according to a new Cochrane Systematic Review.

Cervical Cancer: Combined Drug and Radiotherapy Improves Survival

Combining drugs and radiotherapy improves the survival chances of women receiving treatment for cervical cancer. These are the conclusions of Cochrane Researchers who carried out the most comprehensive study of the effects of combined drug and radiotherapy in cervical cancer treatment to date.

Cervical cancer is the second most common cancer in women worldwide. Treatments for the disease have changed markedly over the last decade as a result of guidelines issued by the National Cancer Institute (NCI) in 1999, which stated that chemoradiotherapy should be considered as an alternative to radiotherapy. Chemoradiotherapy combines chemotherapy (drug treatment) and x-ray treatment, whereas radiotherapy is just x-ray treatment.

“We saw clear evidence that adding chemotherapy to radiotherapy improves survival, as well as disease free survival,” said Claire Vale, of the Medical Research Council Clinical Trials Unit in London in the UK. “These are effective, affordable treatments that provide a benchmark for other potential treatment approaches.”

The researchers analysed data from 15 trials involving a total of 3,452 women. They found that compared to women who had radiotherapy alone, women receiving chemoradiotherapy were more likely to live for longer after treatment. Five years after receiving treatment, 66 out of every 100 women survived with chemoradiotherapy compared to 60 out of 100 with radiotherapy. In addition, treatment with chemoradiotherapy reduced the chance of the cancer coming back or spreading to other areas. Crucially, their analysis showed that the benefits of chemoradiotherapy were not just restricted to the platinum-based drugs recommended by the NCI.

Based on a small subset of the data, there was also an indication that continuing drug therapy after chemoradiotherapy could improve survival rates even further, although the researchers say more studies are required to confirm this. “We suggest that new trials are needed to find out whether giving extra chemotherapy is better for women with cervical cancer or not,” said Vale.

Full citation: Chemoradiotherapy for Cervical Cancer Meta-analysis Collaboration (CCCMAC). Reducing uncertainties about the effects of chemoradiotherapy for cervical cancer: individual patient data meta-analysis. *Cochrane Database of Systematic Reviews* 2010, Issue 1. Art. No.: CD008285. DOI: 10.1002/14651858.CD008285.

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NSAIDs May Be More Effective Than Paracetamol For Period Pain

Non-steroidal anti-inflammatory drugs (NSAIDs) like ibuprofen may be more effective for relieving period pain than paracetamol, according to the update of a Cochrane Review. However, it remains unclear whether any one NSAID is safer or more effective than others.

Period pain affects a high proportion of women: up to 72% in a recent Australian survey of 16-49 year olds. It is thought to be caused by an excess or imbalance of certain hormones released by the body during menstrual periods, including one called prostaglandin. NSAIDs such as ibuprofen, aspirin, and naproxen are commonly used for period pain.

The updated review includes data from 73 trials carried out in 18 different countries and involving a total of 5,156 women. The trials compared NSAIDs with placebo, with each other, and with paracetamol. The review shows that NSAIDs are very effective for treating period pain compared with placebo. This applied to all NSAIDs tested except

aspirin, for which there was only limited evidence of effectiveness. Due to the large number of different NSAIDs tested in the trials, no one drug emerged as more safe or effective than the rest.

The review also provides some evidence that NSAIDs are significantly more effective than paracetamol, though there were only three relevant studies. Until now there has been no evidence that NSAIDs work any better than paracetamol, and a previous Cochrane Review published in 2003 concluded that there was no evidence of any difference.

Overall, NSAIDs were shown to carry a significantly increased risk of adverse effects compared to placebo. Adverse effects can include indigestion, headaches, and drowsiness. “Women using these drugs need to be aware of the side effects,” said lead author Jane Marjoribanks, who works with the Cochrane Menstrual Disorders and Subfertility Group in Auckland, New Zealand . “It would be interesting to see whether these could be reduced, without loss of effectiveness, by combining lower doses with other drugs such as paracetamol, or with other therapies such as transcutaneous electrical nerve stimulation.”

Full citation: Marjoribanks J, Proctor M, Farquhar C, Derks RS. Nonsteroidal anti-inflammatory drugs for dysmenorrhoea. *Cochrane Database of Systematic Reviews* 2010, Issue 1. Art. No.: CD001751. DOI: 10.1002/14651858.CD001751.pub2.

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Vitamin D Supplementation Can Reduce Falls In Nursing Care Facilities

Giving people living in nursing facilities vitamin D can reduce the rate of falls, according to a new Cochrane Review. This finding comes from a study of many different interventions used in different situations. In hospitals, multifactorial interventions and supervised exercise programs also showed benefit.

Older people living in nursing facilities or who have been admitted to hospital are much more likely to suffer a fall than those living in the community. In these settings, falls fairly often result in head injuries and fractures, with rates of hip fracture more than ten times higher in nursing facilities than in the community. It is important to try to prevent falls to avoid unnecessary stress for older people and their families, and to reduce pressure on staff and resources. However, prevention is complicated as falls usually happen for several or many different reasons.

“Many of the preventive measures used to avoid falls in older people are combined in what are called multifactorial interventions, so it can be very difficult to separate out the effects of all the different measures,” said lead researcher Ian Cameron, who is based at Sydney Medical School at the University of Sydney in Ryde, Australia.

The current review included 41 trials involving 25,422 older people, who were mostly women. Five trials tested the effects of giving vitamin D to patients in nursing facilities, where it was found to be an effective measure for preventing falls. The researchers found that multifactorial interventions, which often incorporated exercise, medication, or environmental factors including appropriate equipment, reduced the risk of falls in hospitals. In nursing homes, the effects of multifactorial interventions were not significant

overall. However, the researchers concluded that multifactorial interventions provided by multidisciplinary teams in these facilities may reduce the rate and risk of falls.

“In our review, we saw limited evidence that these combined interventions work, but we could more confidently recommend them if they were delivered by a multidisciplinary team,” said Cameron. “Currently, there’s no one component of any of these programmes that stands out as more important than any other and we’re also missing data on whether increased supervision or new technologies such as alarm systems are of any benefit.”

Full citation: Cameron ID, Murray GR, Gillespie LD, Robertson MC, Hill KD, Cumming RG, Kerse N. Interventions for preventing falls in older people in nursing care facilities and hospitals. *Cochrane Database of Systematic Reviews* 2010, Issue 1. Art. No.: CD005465. DOI: 10.1002/14651858.CD005465.pub2.

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Hypertension: Beta-Blockers Effective In Combination Therapies

Using beta-blockers as a second-line therapy in combination with certain anti-hypertensive drugs significantly lowers blood pressure in patients with hypertension, according to a systematic review by Cochrane Researchers. This review also goes some way to explaining the differences in the way that patients respond to beta-blockers and other classes of blood pressure lowering drugs.

Beta-blockers are commonly used in the treatment of hypertension (high blood pressure) to help reduce the risk of stroke and cardiovascular disease. They can be used alone or as a second-line therapy in combination with a wide range of anti-hypertensive drugs. The idea behind combining two different drugs to treat hypertension is that each has a different mechanism of action and thus may help tackle different mechanisms involved in causing the condition. In this way, greater decreases in blood pressure may be achieved than with single drug therapy.

The review included 20 trials involving a total of 3,744 patients. Overall, the researchers found that adding beta-blockers as the second-line drug, in combination with thiazide diuretics or calcium channel blockers, caused an additional blood pressure reduction. The reduction was around 30% greater when the dose was doubled.

This data was compared with a Cochrane Review published in Issue 4, 2009 that examined the blood pressure lowering effect of second-line thiazide diuretics. They concluded that the two drugs produced different patterns of blood pressure lowering. Second-line beta-blockers were found to be more effective at reducing diastolic blood pressure (the minimum pressure in the arteries between beats when the heart relaxes to fill with blood) but had little or no effect on pulse pressure, while second-line thiazides significantly decreased pulse pressure in a dose-related manner.

“We feel that these findings are generalisable to most patients being treated for hypertension where a beta-blocker is added as a second-line drug to a first-line thiazide,” said lead researcher, Jenny Chen, who works in Pharmacology and Therapeutics at the University of British Columbia in Vancouver, Canada. “The finding that beta-blockers produce a different pattern of blood pressure lowering to thiazides when used as second-line drugs certainly deserves further attention as it might explain why beta-blockers

appear to be less effective than thiazide diuretics at reducing adverse cardiovascular outcomes, particularly in older individuals.”

“The major limitation of this work is that we only know what happens when you add beta-blockers to thiazides and calcium channel blockers. It is possible that adding beta-blockers to other classes of drugs might produce a different result,” said Chen.

Full citation: Chen JMH, Heran BS, Perez MI, Wright JM. Blood pressure lowering efficacy of beta-blockers as second-line therapy for primary hypertension. *Cochrane Database of Systematic Reviews* 2010, Issue 1. Art. No.: CD007185. DOI: 10.1002/14651858.CD007185.pub2.

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Parkinson’s: Treadmill Training Improves Movement

Treadmill training can be used to help people with Parkinson’s disease achieve better walking movements, say researchers. In a systematic review of the evidence, Cochrane Researchers concluded treadmill training could be used to improve specific gait parameters in Parkinson’s patients.

Gait hypokinesia, characterised by slowness of movement, is one of the main movement disorders that affects Parkinson’s patients and can have a major impact on quality of life. More recently, health professionals have started incorporating exercise into treatment regimes as a useful complement to traditional drug therapies. Training on treadmills is one option that may help to improve movement.

The researchers analysed data from eight trials including 203 patients for the review, published in *The Cochrane Library*. They compared treadmill training versus no treadmill training, using effects on walking speed, stride length, number of steps per minute (cadence) and walking distance to measure improvement in gait. Treadmill training had a positive impact on each of these measurements, apart from cadence.

“Treadmill training appears to be a safe and effective way of improving gait in patients with Parkinson’s disease,” said lead researcher Jan Mehrholz, of the Wissenschaftliches Institut in Kreischa, Germany. “Crucially, we saw very few adverse effects or drop outs in patients given this type of rehabilitation therapy.”

However, the researchers say the findings must be treated with care as they are based on a limited number of small trials. “There is still a need for larger trials to establish if treadmill training can be safely used as a routine therapy for Parkinson’s patients,” said Merhholz. “We also need to answer basic questions about how long the benefits last and what a good training programme should consist of. For instance, how often and how long should patients train for?”

Full citation: Mehrholz J, Friis R, Kugler J, Twork S, Storch A, Pohl M. Treadmill training for patients with Parkinson’s disease. *Cochrane Database of Systematic Reviews* 2010, Issue 1. Art. No.: CD007830. DOI: 10.1002/14651858.CD007830.pub2.

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HIV: Positive Lessons From Home-Based Care

Intensive home-based nursing in HIV/AIDS patients significantly improves self-reported knowledge of HIV, awareness of medications, and self-reported adherence to medication programmes, according to a new Cochrane Systematic Review. One home-based care trial included in the review also significantly impacted on HIV stigma, worry, and physical functioning. It did not, however, help improve depressive symptoms, mood, general health, and overall functioning.

These conclusions are interesting, but more research is needed to understand the impact of home-based care in developing countries and on important disease outcomes, say the researchers. The study represents the first systematic review of the impact of home care in HIV/AIDS.

As a disease that affects 33 million people, HIV/AIDS puts a huge strain on health systems, particularly in developing countries. Therefore, in countries where health services are overstretched, home-based care is offered to HIV patients as an alternative to hospital care. Home-based care can include counselling, medical management, exercise, and spiritual support to try to improve patients' quality of life in familiar surroundings, while reducing costs and pressure on hospital beds.

Researchers examined data from 13 studies, two of which were ongoing. The researchers report that home-based care has positive impacts on some aspects of patient wellbeing but little effect on others. Patients said that home care improved their knowledge of the disease, and of HIV medications, and helped them adhere to medication programmes. It also reduced worry and improved physical functions of patients, but had little effect on depression, general health, or indicators of disease progression such as CD4 counts.

Importantly, few studies considered the effects of home-based care in developing countries or on important disease outcomes. "Further large studies are needed to evaluate the effects of home-based care in developing countries, where HIV and AIDS take the biggest toll," said Young. "And there should be a greater focus on how home-based care impacts on progression to full blown AIDS and death from the disease."

"This study is a useful addition to the literature because of the wide range of home care options considered. However, there is no doubt that the evidence base for home-based care in HIV needs further development."

Full citation: Young T, Busgeeth K. Home-based care for reducing morbidity and mortality in people infected with HIV/AIDS. *Cochrane Database of Systematic Reviews* 2010, Issue 1. Art. No.: CD005417. DOI: 10.1002/14651858.CD005417.pub2.

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Notes for editors

1. About *The Cochrane Library*

The Cochrane Library contains high quality health care information, including the Cochrane Database of Systematic Reviews, from the Cochrane Collaboration. Cochrane Systematic 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 (Wen J et al; *The reporting quality of meta-analyses improves: a random sampling study*. Journal of Clinical Epidemiology 2008; 61: 770-775).

From 2010 *The Cochrane Library* will move from quarterly to monthly publication.

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2. Accessing *The Cochrane Library*

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