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Bruce Arroll<sup>1</sup>, Jaap van Binsbergen<sup>2</sup>, Tom Fahey<sup>3</sup>, Tim Kenealy<sup>1</sup>,  
Floris van de Laar<sup>2</sup>

Tilly Pouwels<sup>2</sup>

Secretary to Cochrane Primary Health Care Field

email: [t.pouwels@cochraneprimarycare.org](mailto:t.pouwels@cochraneprimarycare.org)

The Cochrane Primary Health Care Field is a collaboration between:

<sup>1</sup> New Zealand Branch of the Australasian Cochrane Centre at the Department of General Practice and Primary Health Care, University of Auckland and funded by the New Zealand Guidelines Group;

<sup>2</sup> Academic Department of Primary and Community Care in The Netherlands, The Dutch College of General Practitioners, and the Netherlands Institute for Health Services Research;

<sup>3</sup> Department of General Practice, Royal College of Surgeons in Ireland, Dublin.

## Abstracts

### Mechanical pumps are effective for expressing milk

<b>Clinical question</b>	How effective are mechanical pumps for milk expression in lactating women?
<b>Bottom line</b>	Mothers appear to obtain greater total volumes of milk in a 6-day period within 2 weeks of birth using an electric or foot-powered pump compared to hand expression, and a greater volume at 1 expression during the second week when provided with a relaxation tape. Simultaneous pumping of both breasts takes less time compared to sequential pumping but gives similar milk volumes. One small study found hand-expressed and pump-expressed milk had a similar incidence of milk contamination.
<b>Caveat</b>	Methodological shortcomings of some trials, especially small sample sizes and very large standard deviations, the small number of studies reviewed for each outcome, and the diversity in the nature, duration and frequency of the interventions argue caution in applying these results beyond the specific equipment tested in the specific settings. Maternal satisfaction, adverse effects on mothers and economic effects of interventions were poorly reported. Eight of the 10 studies that evaluated pumps or other products had support from the manufacturers.
<b>Context</b>	The World Health Organization recommends that infants be fed exclusively on human milk from birth to 6 months of age. Children who do not receive human milk are more likely to suffer health problems. Not all babies are able to feed at the breast because of prematurity, illness, abnormalities, or separation from their mothers. These

	babies need expressed milk. Mothers may also express milk for their own comfort if they have sore nipples or engorgement; to increase milk supply; or to leave milk if away from their baby.
<b>Cochrane Systematic Review</b>	Becker GE et al. Methods of milk expression for lactating women. Cochrane Reviews 2008, Issue 4. Article No. CD006170. DOI:10.1002/14651858.CD006170.pub 2. This review contains 12 studies involving 397 participants in 5 different countries.
<b>PEARLS 146, March 2009, written by Brian R McAvoy</b> (First published in New Zealand Doctor, 25 March 2009)	

[References]

## **St John's wort is effective for depression**

<b>Clinical question</b>	How effective is St John's wort for patients with major depression?
<b>Bottom line</b>	St John's wort is superior to placebo in patients with major depression. It is as effective as standard antidepressants (tricyclics, tetracyclics and selective serotonin reuptake inhibitors), and has fewer side effects than standard antidepressants. The 29 trials reviewed lasted for 4 to 12 weeks and included 18 comparisons with placebo and 17 comparisons with synthetic standard antidepressants.
<b>Caveat</b>	Findings were more favourable for St John's wort extracts in studies from German-speaking countries where these products have a long tradition and are often prescribed by physicians. In studies from other countries, St John's wort extracts seemed less effective. The difference could be due to the inclusion of patients with slightly different types of depression, but it cannot be ruled out that some of the smaller studies from German-speaking countries were flawed and reported over-optimistic results.
<b>Context</b>	Extracts from St John's wort ( <i>Hypericum perforatum</i> ) are widely used for treating patients with depression. <i>Hypericum</i> extracts contain at least seven constituents or groups of components that may contribute to its pharmacological effects. <sup>1</sup> Extracts of St John's wort are licensed and widely used in Germany for the treatment

	of depressive, anxiety and sleep disorders.
<b>Cochrane Systematic Review</b>	Linde K et al. St John's wort for major depression. Cochrane Reviews 2008, Issue 4. Article No. D000448. DOI: 10.1002/14651858.CD000448.pub3. This review contains 29 trials involving 5489 participants.
<b>PEARLS 147, March 2009, written by Brian R McAvoy</b>	

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1. Nahrstedt A, Butterweck V. Pharmacopsychiatry 1997;30(Suppl 2):12-134

## **Combined leg compression and anticoagulants effective in preventing venous thromboembolism**

<b>Clinical question</b>	Compared with single modalities, how effective is intermittent pneumatic leg compression combined with pharmacological prophylaxis in preventing venous thromboembolism (VTE) in high-risk patients?
<b>Bottom line</b>	Compared with compression alone, combined prophylactic modalities significantly decrease the incidence of VTE, ie, symptomatic pulmonary embolism (PE) and deep vein thrombosis (DVT). Compared with pharmacological prophylaxis alone, combined modalities significantly reduce the incidence of DVT but the effect on PE could not be determined because of the lack of events in the included studies. Anticoagulants used in the trials included aspirin, warfarin, unfractionated heparin, low molecular weight heparin and fondaparinux.
<b>Caveat</b>	Most patients had either a high-risk procedure or condition. The surgical procedures were orthopaedic, urological, cardiothoracic, gynaecological or general surgical. The magnitude of the reduction in VTE may be less for patients at moderate risk.
<b>Context</b>	DVT and PE are possible complications of surgery and trauma. These complications extend hospital stay and are associated with long term disability and death. Mechanical intermittent pneumatic leg compression reduces venous stasis while anticoagulants reduce blood clotting.
<b>Cochrane Systematic Review</b>	Kakkos SK et al. Combined intermittent pneumatic leg compression and pharmacological prophylaxis for prevention of venous thromboembolism in high-risk patients. Cochrane Reviews 2008, Issue 4. Article No. CD005258. DOI: 10.1002/14651858. CD005258.pub2.

This review contains 11 trials involving 7431 participants.

**PEARLS 148, November 2008, written by Brian R McAvoy**

[References]

## **Low molecular weight heparin effective for prevention of venous thromboembolism in patients with lower-leg immobilisation**

<b>Clinical question</b>	How effective is low molecular weight heparin (LMWH) for prevention of venous thromboembolism (VTE) in patients with lower leg immobilisation?
<b>Bottom line</b>	LMWH significantly reduces VTE when immobilisation of the lower leg is required in outpatients. Further analysis showed a significant reduction in the occurrence of DVT when using LMWH in the following patient subgroups: surgical patients; non-surgical patients; patients with fractures; patients with soft-tissue injuries; patients with below-knee casts; a group with proximal thrombosis and a group with distal thrombosis. LMWH should be used for both below-knee and above-knee casts or braces.
<b>Caveat</b>	The six studies each used a different LMWH. The total number of patients was insufficient to evaluate which LMWH to choose. Complications of major bleeding events were extremely rare (0.3%) and there were no reports of heparin-induced thrombocytopenia.
<b>Context</b>	Immobilisation of the lower limb with plaster casts or braces in adult patients is associated with DVT and pulmonary embolism. In order to prevent these complications, preventive treatment with anticoagulants is often used, most commonly LMWH.
<b>Cochrane Systematic Review</b>	Testroote M et al. Low molecular weight heparin for prevention of venous thromboembolism in patients with lower-leg immobilisation. Cochrane Reviews 2008, Issue 4. Article No. CD006681. DOI:
<b>PEARLS 149, March 2009, written by Brian R McAvoy</b>	

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