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The short summaries in this digest are all taken from the Cochrane Library 2003; Issue 4.

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Double-gloving to reduce cross-infection in surgery

Tanner J, Parkinson H.

Double-gloving to reduce surgical cross-infection (Cochrane Review). Cochrane Library 2003; Issue 4. Chichester: John Wiley

The invasive nature of surgery and its exposure to blood means that there is a high risk of transfer of pathogens. Both the patient and the surgical team need to be protected. This risk can be reduced by implementing protective barriers such as the use of surgical gloves. Wearing two pairs of surgical gloves, as opposed to one pair, is considered to provide an additional barrier and further reduce the risk of contamination. This Cochrane Review examined randomised controlled trials (RCT) involving single-gloving, double-gloving, glove liners or coloured puncture-indicator systems.

Of the 18 RCT included, nine trials compared the use of single latex gloves with the use of double latex gloves (double-gloving). Further, one trial compared single latex orthopaedic gloves (thicker than standard latex gloves) with double latex gloves; three other trials compared double latex gloves with the use of double latex indicator gloves (coloured latex gloves worn underneath latex gloves). Two more studies investigated double latex gloves versus double latex gloves worn with liners (an insert worn between two pairs of latex gloves), and another two trials compared the use of double latex gloves and the use of latex inner gloves worn with cloth outer gloves. Finally, one trial looked at double latex gloves compared with latex inner gloves worn with steel-weave outer gloves. The latter study showed no reduction in the number of perforations

to the innermost glove when wearing a steel-weave outer glove.

The reviewers found evidence that in low-risk surgical specialties the wearing of two pairs of latex gloves significantly reduced the number of perforations to the innermost glove. Wearing two pairs of latex gloves also did not cause the glove-wearer to sustain more perforations to their outermost glove. Wearing double latex indicator gloves enables the glove wearer to detect perforations to the outermost glove more easily than when wearing double latex gloves. Nevertheless, using the double latex indicator system does not assist the detection of perforations to the innermost glove, nor reduce the number of perforations to either the outermost or the innermost glove.

Wearing a glove liner between two pairs of latex gloves when undertaking joint replacement surgery significantly reduces the number of perforations to the innermost glove, compared with the use of just double latex gloves. Likewise, wearing cloth outer gloves when carrying out joint replacement surgery significantly reduces the number of perforations to the innermost glove, again compared with wearing double latex gloves. Wearing steel-weave outer gloves to undertake joint replacement surgery, however, does not reduce the number of perforations to innermost gloves compared with double latex gloves.

Does placebo treatment have a clinically important effect?

Hróbjartsson A, Gøtzsche PC.

Placebo treatment versus no treatment (Cochrane Review). Cochrane Library 2003; Issue 4. Chichester: John Wiley

Placebo interventions are often believed to improve patient-reported and observer-reported outcomes. This Cochrane Review set out to assess the effect of placebo interventions. Included in the review were randomised placebo trials with a no-treatment control group, investigating any health problem. Of 130 trials included, investigating 40 clinical conditions, outcome data were available in 114. Outcomes were binary (3795 patients) in 32 trials and continuous in 82 (4730 patients). Overall, the researchers concluded that there was no evidence that placebo interventions, in general, have clinically important effects. However, a possible moderate effect on subjective continuous outcomes, especially pain, could not be clearly distinguished from bias.

An end to "nil by mouth from midnight" for adults?

Brady M, Kinn S, Stuart P.

Preoperative fasting for adults to prevent perioperative complications (Cochrane Review). Cochrane Library 2003; Issue 4. Chichester: John Wiley

Fasting before general anaesthesia aims to reduce the volume and acidity of stomach contents during surgery, thus reducing the risk of regurgitation/aspiration. Recent guidelines have recommended a shift in fasting policy from the standard "nil by mouth from midnight" approach to more relaxed policies which permit a period of restricted fluid intake up to a few hours before surgery. Practice has been slow to change, however, and supporting evidence is scattered across a range of journals.

This Cochrane review examined the effect of different preoperative fasting regimens on perioperative complications and patient wellbeing. Thirty-eight randomised controlled comparisons (made within 22 trials) were identified. Most were based on "healthy" adult participants who were not considered to be at increased risk of regurgitation or aspiration during anaesthesia. Few trials reported the incidence of aspiration/regurgitation or related morbidity but relied on indirect measures of patient safety, ie, intra-operative gastric volume and pH.

The reviewers found no evidence to suggest a shortened fluid fast results in an increased risk of aspiration, regurgitation or related morbidity compared with the standard "nil by mouth from midnight" fasting policy. Permitting patients to drink water preoperatively in fact resulted in significantly lower gastric volumes. Clinicians should be encouraged to appraise this evidence for themselves and when necessary adjust any remaining standard fasting policies (nil by mouth from midnight) for patients who are not considered to be at risk during anaesthesia.

The use of TENS in chronic pain

Carroll D, Moore RA, McQuay HJ, Fairman F, Tramèr M, Leijon G.
Transcutaneous electrical nerve stimulation (TENS) for chronic pain (Cochrane Review). Cochrane Library 2003; Issue 4. Chichester: John Wiley

Transcutaneous electrical nerve stimulation (TENS) is used in a variety of different clinical settings to treat a range of different acute and chronic pain conditions and has become popular with both patients and health professionals. This Cochrane Review set out to evaluate the effectiveness of TENS in chronic pain.

The 19 RCT included (from 18 reports) were varied in terms of design, analgesic outcomes, chronic pain conditions, TENS treatments and overall methodological quality. Few studies evaluated the long-term analgesic effectiveness of TENS, and single-dose evaluations of TENS are unhelpful in making clinical decisions over the long-term effectiveness of TENS in the management of chronic pain.

The reviewers found that the published trials do not provide information on the stimulation parameters most likely to provide optimum pain relief, nor do they answer questions about long-term

effectiveness. Consequently the results are inconclusive and large multicentre RCT of TENS in chronic pain are needed.

Water and wound cleansing

Fernandez R, Griffiths R, Ussia C.

Water for wound cleansing (Cochrane Review). Cochrane Library 2003; Issue 4. Chichester: John Wiley

Various solutions have been recommended for cleansing wounds, although normal saline is favoured because it is an isotonic solution and does not interfere with the normal healing process. Tap water is commonly used in the community for cleansing wounds because it is easily accessible, efficient and cost effective, but there is an unresolved debate about its use.

This Cochrane review aimed to assess the effects of water compared with other solutions for wound cleansing. Randomised and quasi-RCT that compared the use of water with other solutions for wound cleansing were eligible for inclusion.

Although the evidence is limited, one trial suggested that the use of tap water to cleanse acute wounds reduces the infection rate whereas other trials conclude that there is no difference in the infection and healing rates between wounds that were not cleansed and those cleansed with tap water and other solutions. However, the quality of the tap water should be considered prior to its use and, in the absence of potable tap water, boiled and cooled water as well as distilled water can be used as wound cleansing agents.

The use of St John's Wort in depression

Linde K, Mulrow CD.

St John's Wort for depression (Cochrane Review). Cochrane Library 2003; Issue 4. Chichester: John Wiley

Extracts of the plant *Hypericum perforatum* L. (popularly called St John's Wort) have been used in folk medicine for a long time and for a range of indications, including depressive disorders. This review investigates whether extracts of *Hypericum* are more effective than placebo and as effective as standard antidepressants in the treatment of depressive disorders in adults, and whether they have fewer side-effects than standard antidepressant drugs.

The review authors selected 27 trials, which included 2291 patients. These studies suggest that *Hypericum* preparations are significantly superior to placebo and have similar efficacy to standard antidepressants. There is evidence that extracts of *Hypericum* are more effective than placebo for the short-term treatment of mild to moderately severe depressive disorders. However the current is not sufficient to establish whether *Hypericum* is as effective as other antidepressants.

Further studies are needed and should compare extracts of the plant with standard antidepressants; use well-defined groups of patients and longer observations periods; and should investigate long-term side effects and compare different extracts and doses.

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