

Best Evidence from the Cochrane Library

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Routine Vitamin A Supplementation for the Prevention of Blindness Due to Measles Infection in Children

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Annually 500,000 children become blind worldwide, 75% of them living in low-income countries. The major causes of blindness in children vary widely from region to region and are related to the standard of living of the community. Corneal scarring from measles, vitamin A deficiency, use of harmful traditional eye remedies and ophthalmia neonatorum are the major causes in low-income countries. Vitamin A is an important nutrient in the body and is required for the normal functioning of the eye. Its deficiency results in poor vision.

Measles infection in children has been associated with vitamin A deficiency and blindness. The control of blindness in children is considered a high priority within the World Health Organization's *VISION 2020 The Right to Sight Program*. Studies have reported the beneficial effect of vitamin A in reducing morbidity and mortality in children with measles. This review examined vitamin A use in preventing blindness in children infected with measles without features of vitamin A deficiency. We included two randomised controlled trials of 260 children with measles comparing vitamin A with placebo. Two doses of vitamin A given on two consecutive days to hospitalized children with measles significantly increased the blood concentration of vitamin A after one week.

However, there is a limitation in that we did not find any study that examined the efficacy of vitamin A in preventing blindness (which is the primary outcome of interest in this review) in children infected with measles. The sample size of the included studies was also relatively small which could affect the precision of the estimates given. In addition, no adverse event was reported in the included studies. We do not have sufficient evidence to demonstrate the benefit or otherwise of vitamin A in the prevention of blindness in children infected with measles.

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Carbohydrates for Improving the Cognitive Performance of Independent-Living Older Adults with Normal Cognition or Mild Cognitive Impairment

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Carbohydrates consist of sugars, oligosaccharides and polysaccharides. These components are found in a large range of foods in the diet and have variable effects on digestion, blood sugar levels and impacts on health. Despite the evidence accumulated from biological and epidemiological studies and non-randomised clinical trials, there are still no randomised, controlled trials for analyzing the efficacy and safety of carbohydrates in improving cognitive performance in this review.

Thus, we need more studies on different types of carbohydrates, particularly those from fruit, vegetable and whole grain sources, for older adults with normal cognition and mild cognitive impairment in order to understand the role of this nutrient in the prevention or reduction of cognitive decline.

Gemcitabine for Unresectable, Locally Advanced or Metastatic Bladder Cancer

Shelley M, Cleves A, Wilt TJ, Mason M

When bladder cancer has spread beyond the bladder and is unresectable or metastatic, the possibility of cure is severely diminished. Treatment at this stage of the disease aims to reduce the disease-related symptoms and to improve quality of life. Chemotherapy is the main treatment offered to patients with this condition and one drug that has recently shown activity is Gemcitabine. This review aimed to determine the effectiveness and toxicity of Gemcitabine by looking at the evidence published from randomised clinical trials. Patients receiving Gemcitabine combined with Cisplatin had a similar overall survival but less toxicity when compared to the well-established chemotherapeutic treatment of MVAC (Methotrexate, Vinblastine, Doxorubicin, Cisplatin).

This suggests that Gemcitabine plus Cisplatin may be considered an alternative chemotherapy schedule to MVAC for advanced bladder cancer but the evidence is limited to one trial only. For patients who have poor kidney function or poor performance status the combination of Gemcitabine plus Carboplatin may be considered.

Progestin-only Contraceptives: Effects on Weight

Lopez LM, Edelman A, Chen-Mok M, Trussell J, Helmerhorst FM

Progestin-only contraceptives (POCs) can be used by women who cannot or should not take the hormone estrogen. Many POCs are long acting, cost less than some other methods and work well to prevent pregnancy. Some people worry that weight gain is a side effect of these birth control methods. Concern about weight gain can keep women from using these methods, or cause women to stop using them early, which can lead to unplanned pregnancy. We looked at studies of progestin-only birth control and changes in body weight.

We did computer searches for studies of progestin-only birth control compared to another birth control method or no contraceptive. We also wrote to researchers to find other trials. The focus was on change in body weight.

Of 15 studies, 4 showed the groups differed in weight gain or body mass. Differences were noted when a POC was compared to no hormonal birth control. In one study, the group using the injectable 'depo' had a greater increase in body fat at six months than a group with no hormonal birth control. The depo group also had a greater decrease in lean body mass than the 'no hormonal' group. In another study, the depo group gained more weight by one, two and three years compared to an IUD group. The difference was noted in the subgroups of normal weight or overweight (but not obese) women. Two studies showed a Norplant (implant) group had more weight gain at six months and one year than an IUD group. A Norplant group also gained more weight by six months than a group using another non-hormonal method or no birth control.

We found little evidence of weight gain when using progestin-only birth control. Mean weight gain was less than 2 kg for most studies up to 12 months. The groups using other birth control methods had about the same weight gain. Good counseling about typical weight gain may help women avoid stopping birth control early due to worries about weight gain.

Surgery for Stress Urinary Incontinence Due to Presumed Sphincter Deficiency after Prostate Surgery

Silva LA, Andriolo RB, Atallah ÁN, da Silva EMK

Urinary incontinence after prostatectomy for benign or malignant disease is a well known and often feared outcome. Although a small amount of incontinence may not cause a problem, larger degrees of incontinence can have a major impact on a man's quality of life. Improvement in urinary continence may occur 6 to 12 months after the prostatic surgery, but for men with persistent bothersome incontinence despite conservative therapy, surgery may be offered.

This review looked for trials, which had considered the effectiveness of the surgical treatments of urinary incontinence after prostate surgery. There are five main types of surgery and, despite

some of them being in use for more than two decades, only one trial that met the inclusion criteria was found.

There was some weak evidence that the implantation of an artificial urinary sphincter might be more effective than injectable treatment, but with more adverse effects and higher costs. There was no evidence about the other types of surgery.

Workplace Interventions for Neck Pain in Workers

Aas RW, Tuntland H, Holte KA, Røe C, Lund T, Marklund S, Moller A

Studies have shown that musculoskeletal disorders are the most common cause of sick-leave and disability in many industrial countries. Neck pain is more common in the general population than previously known. This Cochrane review presents what we know from research about the effect of workplace interventions for workers with neck pain who, for the most part, are not sick-listed. Ten trials with 2745 participants were included in this review. Two studies were rated as having low risk of bias. The workplace interventions comprised education about stress management, principles of ergonomics, anatomy, musculoskeletal disorders and the importance of physical activity. They taught 'pause gymnastics', how to use a relaxed work posture, proper positioning, the importance of rest breaks and strategies to improve relaxation. Some studies also included how to modify work tasks, work load, working techniques, working positions and working hours. Several studies suggested how to make adjustments and recommended alternatives to the existing furniture and equipment at the workplace.

The present review found low quality evidence that those who received workplace interventions did not get more pain relief than those who received no interventions. We found moderate quality evidence (1 trial, 415 workers) that workplace interventions reduced sick leave among the workers at six month, but not at 3 and 12-month follow-ups. This could be due to the fact that few participants in the study were sick-listed. Further research is very likely to have an important impact on our confidence in the estimate of effect and is likely to change the estimate for both pain and sickness absence.

Community Wide Interventions for Increasing Physical Activity

Baker PRA, Francis DP, Soares J, Weightman AL, Foster C

Not having enough physical activity leads to poorer health. Regular physical activity can reduce the risk of chronic disease and improve one's health and well being. The lack of physical activity is a common and growing health problem. To address this, 25 studies have used improvement activities directed at communities using more than one approach in a single program. When we looked at the available research, we observed that there was a lack of good studies which could

show whether this approach was or wasn't beneficial. For example, some research studies claimed that community wide programs improved physical activities and other studies did not.

It was not possible to determine what might work. Future research is needed with improved designs, measures of outcomes and larger samples of participants.

Electromagnetic Field Stimulation for Treating Delayed Union or Non-Union of Long Bone Fractures in Adults

Griffin XL, Costa ML, Parsons N, Smith N

Fractures, which do not achieve "union" in the normal time, can lead to a loss of function and pain. This problem leads to a reduction in a person's quality of life and may prevent their return to work with consequent costs to society. This review determines whether treatment with electromagnetic fields is effective in healing fractures that have not united based upon the best available evidence. The review only looks at fractures of the long bones. These are the upper arm bone, the two forearm bones, the thigh bone and the two lower leg bones.

Four studies, which involved 125 participants, were included in this review. The majority of participants had suffered a broken tibia that had not healed as quickly as expected or at all. The results of this review suggest that there may be a benefit on bone healing from electromagnetic field stimulation.

However, the available evidence was not good enough to be certain of this and it may not apply to current practice. Electromagnetic field stimulation appears to be safe. The two complications reported were minor involving irritation of the skin.