

Cochrane for Clinicians

Putting Evidence into Practice

Effectiveness of Moisturizers in the Treatment of Patients with Eczema

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Clinical Question

Are moisturizers an effective treatment for eczema?

Evidence-Based Answer

Moisturizers decrease the rate of eczema flare-ups by 3.7 times vs. no treatment (number needed to treat [NNT] = 4), as well as the amount of topical corticosteroids used per eczema flare-up (9.3 g less). Adverse effects are minimal.¹ (Strength of Recommendation: A, based on consistent, good-quality patient-oriented evidence.)

Practice Pointers

Over the past three decades, the prevalence of eczema has tripled in industrialized countries, with a prevalence of 15% to 30% in children and 2% to 10% in adults.² Severe eczema is associated with a higher frequency of health care system use, numerous chronic comorbid conditions, and a decrease in overall quality of health.³ This Cochrane review addressed whether moisturizers are an effective treatment for eczema.¹

The authors examined 77 randomized controlled trials involving 6,603 participants four months to 84 years of age (mean age = 18.6 years) who had mild to moderate eczema. Outcomes were not separated by age. Patients with contact dermatitis, nummular eczema, and dyshidrotic eczema were excluded. Various validated scoring systems were used to characterize eczema severity, including the Eczema Area and Severity Index (EASI), the objective SCORing Atopic Dermatitis (SCORAD) scale, and the Patient Oriented Eczema Measure (POEM). The authors included comparisons between different emollients and placebo for a variety of outcomes.

Compared with patients using placebo, vehicle, or no treatment, participants found that moisturizers more effectively treated eczema (NNT = 2; 95% confidence interval [CI], 2 to 3) based on a validated Likert scale survey. Moisturizers decreased the overall rate of flare-ups over six weeks to six months compared with control (NNT = 4; 95% CI, 3 to 5). Moisturizer use decreased topical corticosteroid use (9.3 g less; $P = .003$) over two months.

According to patient assessment on a validated Likert scale, a steroid- and paraben-free emollient barrier cream effectively treated eczema compared with placebo, vehicle, or no treatment (NNT = 2; 95% CI, 1 to 2). Patients also experienced fewer flare-ups (NNT = 3; 95% CI, 3 to 5) over a 50-day period. Urea-containing creams improved disease severity over four weeks (NNT = 5; 95% CI, 3 to 18), as well as the number of flare-ups over six months (NNT = 3; 95% CI, 2 to 11). With glycerol-containing moisturizers, patients noted disease improvement over four weeks as measured on a validated Likert scale (NNT = 6; 95% CI, 3 to 60). Oat-containing moisturizers were found to decrease flare-ups over six months (NNT = 2; 95% CI, 1 to 5). Adding a moisturizer to any active treatment reduced the number of flare-ups compared with active treatment alone over the course of three weeks of treatment (NNT = 6; 95% CI, 3 to 57).

Adverse effects of moisturizers were reported in 41 of the 77 studies. Patients using urea-containing creams experienced more adverse effects over one month compared with placebo (number needed to treat to harm = 4; 95% CI, 2 to 11). Adverse effects included odor, messiness, stinging or burning sensation, or skin irritation. In some cases, these led to the development of contact dermatitis.

Moisturizers applied soon after bathing reduce disease severity as well as the need for further pharmacologic intervention.^{4,5} According to the National Institute for Health and Clinical Excellence guidelines, moisturizers are the foundation of treatment and should be applied to a patient's entire body even when the patient has no visible eczema.⁶ The findings in this review support these guidelines.

The practice recommendations in this activity are available at <http://www.cochrane.org/CD012119>.

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Dietary Interventions for Recurrent Abdominal Pain in Childhood

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Clinical Question

Are dietary interventions effective in improving pain in school-aged children with recurrent abdominal pain?

Evidence-Based Answer

Probiotics relieve pain in children with recurrent abdominal pain in the short term (number needed to treat [NNT] = 8). There is no convincing evidence that fiber supplements improve pain in children with recurrent abdominal pain.¹ (Strength of Recommendation: A, based on consistent, good-quality patient-oriented evidence.)

Practice Pointers

Recurrent abdominal pain in children is characterized by pain that comes and goes without clear etiology. It represents a group of functional gastrointestinal disorders including functional dyspepsia, irritable bowel syndrome, abdominal migraines, functional abdominal pain, and functional abdominal pain syndrome.² About 13.5% of school-aged children worldwide experience recurrent abdominal pain that interferes with their activities of daily living.³ Although typically benign, recurrent abdominal pain is associated with school absences, hospital admissions, emotional disorders, and unnecessary surgeries. The authors of this review aimed to determine the effectiveness of dietary interventions for recurrent abdominal pain in children.

This Cochrane review included 19 randomized controlled trials with a total of 1,453 participants five to 18 years of age, with follow-up ranging from one to five months.¹ Most reported trials compared probiotics or fiber-based interventions vs. placebo. One trial described a comparison of fructose-restricted diets vs. a standard diet, and another trial described diets low in fermentable oligosaccharides, disaccharides, monosaccharides, and polyols

vs. a standard diet. No trials directly compared probiotics with fiber or other therapies. There was considerable heterogeneity in the strains and dosages of probiotics used in the trials; *Lactobacillus rhamnosus* GG (five trials) and *Lactobacillus reuteri* (three trials) were most common.

In most of the studies, the improvement in pain represented resolution of pain or a 50% decrease, although there were variations in the definition of and scales used to assess pain improvement. Probiotics were effective at improving pain in all children with recurrent abdominal pain when compared with placebo and evaluated at zero to three months (absolute risk reduction [ARR] = 12.1%; 95% confidence interval [CI], 2% to 22%; NNT = 8 [95% CI, 4.5 to 58.9]) and at three to six months (ARR = 14.7%; 95% CI, 2% to 24%; NNT = 7 [95% CI, 4.1 to 43.5]). Children diagnosed with irritable bowel syndrome who were treated with probiotics were more likely to experience pain improvement at zero to three months than those treated with placebo (ARR = 26.8%; 95% CI, 14% to 38%; NNT = 4 [95% CI, 2.6 to 7.2]).

There was no evidence that fiber supplements improve pain in children with recurrent abdominal pain. The trials for diets that restricted fructose or that were low in fermentable oligosaccharides, disaccharides, monosaccharides, and polyols were too small to draw any conclusions. No major adverse effects were reported with any of the treatments.

Current guidelines do not address the use of probiotics in the management of recurrent abdominal pain in children. Probiotics are not recommended for the treatment of childhood constipation.⁴

The practice recommendations in this activity are available at <http://www.cochrane.org/CD010972>.

Editor's Note: The absolute risk reductions, confidence intervals, and numbers needed to treat reported in this Cochrane for Clinicians were calculated by the author based on raw data provided in the original Cochrane review.

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