Evening Primrose Oil

Scientific Name(s): Oenothera biennis L.
Common Name(s): Common evening primrose, Evening primrose

Medically reviewed by Drugs.com. Last updated on Nov 20, 2024.

Overview Family Dosage Pregnancy Interactions Side effects

Clinical Overview

Use

Evidence suggests that evening primrose oil may be effective for treating rheumatoid arthritis, injection site skin reactions, and diabetic neuropathy, but is lacking to support its place in the treatment of atopic eczema/dermatitis syndrome, menopausal vasomotor symptoms, mastalgia, or multiple sclerosis. In combination with vitamin D, evening primrose oil has improved glycemic and lipid profiles in women with gestational diabetes.

Dosing

Evening primrose oil has been administered orally in clinical trials at doses between 1 and 8 g/day in adults and 2 and 4 g/day in children. The typical content of gamma-linolenic acid (GLA) in the oil is 8% to 10%.

Contraindications

No contraindications have been identified.

Pregnancy/Lactation

Information regarding safety and efficacy in pregnancy and lactation is lacking. A case report exists of transient petechiae in a newborn following oral and intravaginal use of evening primrose oil for cervical ripening for a week prior to the infant's birth. Both linoleic and GLA are normally present in breast milk, and it is reasonable to assume that evening primrose oil may be taken while breast-feeding.

Interactions

See Drug Interactions section.

Adverse Reactions

Evening primrose oil was previously suspected to lower the seizure threshold in schizophrenic patients; however, this is now disputed.

Toxicology

No toxicity, carcinogenicity, or teratogenicity has been reported.

Scientific Family

- Onagraceae

Botany

The evening primrose is a large, delicate wildflower native to North America with blooms usually lasting only 1 evening, but it is not a true primrose. Primrose is a yellow-flowered annual or biennial and can grow from 1 to 3 m in height. The fruit is a dry pod approximately 5 cm long that contains many small seeds.1, 2, 3

Chemistry

Seeds from O. biennis contain 14% of a fixed oil known as evening primrose oil that can contain 50% to 70% *cis*-linoleic acid and 7% to 10% *cis*-GLA. Wild varieties of O. biennis contain highly variable amounts of linoleic acid and GLA; however, extensive crossbreeding has produced a commercial variety that consistently yields oil with 72% *cis*-linoleic acid and 9% GLA.2, 3 Also found are *cis*-6,9,12-octadecatrienoic acid; small amounts of oleic, palmitic, and stearic acids; steroids; campesterol; and beta-sitosterol. Mucilage and tannin in the plant parts have been analyzed.2

Uses and Pharmacology

Essential fatty acids are important as cellular structural elements and as precursors of prostaglandins. Essential fatty acids are the biologically active parts of polyunsaturated fats that cannot be manufactured by the body and must be provided by the diet in relatively large amounts.(2) Recommended intake of linoleic acid and alpha-linolenic acid are 12 g and 1.1 g, respectively, for women 19 to 30 years of age.(4)

In theory, the GLA provided by evening primrose oil can be converted directly to the prostaglandin precursor di-homo-gamma-linolenic acid and might be beneficial to individuals unable to metabolize *cis*-linoleic acid to GLA or those with low dietary intake of *cis*-linoleic acid. However, this relationship was not proven in a pharmacokinetic study in healthy participants.(5)

Atopic dermatitis/Dermatologic disorders

Clinical data

Atopic eczema/dermatitis syndrome has been recommended by an international task force to encompass all forms of eczema, including atopic dermatitis.(67) A number of reviews and randomized clinical trials show a lack of support for the use of evening primrose oil for atopic dermatitis.(6, 7, 8, 9) Many of the trials are of poor quality and have apparent issues of bias.(9, 10, 11) In 2013, a Cochrane review evaluated 19 placebo-controlled, randomized clinical trials conducted in adults and children that assessed evening primrose oil for the treatment of signs and symptoms of eczema. Meta-analyses conducted with 7 studies using participant-reported improvements (n = 176) and 8 using physician-assessed improvements (n = 289) support previous reports of the lack of effectiveness of evening primrose oil.(67)

While an older review suggested promising results(12) the most comprehensive meta-analysis to date did not establish efficacy.(10) Clinical studies continue to be conducted, with a gradual time-dependent improvement suggested.(13)

Cardiovascular disease

There is no recent evidence to support older studies(38, 39, 40) suggesting that evening primrose oil reduced platelet aggregation. An observational study suggests serum linoleic acid may protect against ischemic stroke.(41) Despite limited older trials in humans and numerous studies using rats and rabbits, there are no recent randomized, controlled trials demonstrating a beneficial effect of evening primrose oil on cholesterol levels or serum lipids. A more recent randomized, controlled trial found no effect on endothelial function or vascular tone with evening primrose oil supplementation.(42)

Diabetic neuropathy

A review of 3 randomized, controlled trials suggested evening primrose oil might improve symptoms of diabetic neuropathy. Dosages in these trials ranged from 360 to 480 mg GLA daily. Few adverse effects were noted in these trials, and there was no increase in blood glucose levels.(43, 44)

As a component of medical nutrition therapy for patients with type 2 diabetes, the American Diabetes Association Standards of Care (2014) recommends higher quality dietary fat intake, as an alternative to decreased fat intake, by replacing saturated and/or trans fats with mono- and poly-unsaturated fatty acids in the diet. This Mediterranean-style approach to eating may improve glycemic control and cardiovascular disease risk factors (moderate-quality evidence).(69)

Dyslexia/Brain development

Current interest in the use of evening primrose oil for enhancing intellectual performance in children is yet to be validated by rigorous research. Studies conducted in children with dyslexia suggest improved reading, spelling, and behavior(45, 46) while a Cochrane systematic review and a long-term study (39 months) showed no long-term benefit in infants fed formula supplemented with long-chain polyunsaturated fatty acids.(47, 48) An open study found benefit with the use of a fish oil and evening primrose oil combination in children with dyslexia.(49)

Eye conditions

Study results disagree as to the effect of evening primrose oil on dry eye syndrome(37, 50, 51) and there is concern regarding high intake of linoleic and linolenic acid and the risk of cataract development.(52, 53)

Gestational diabetes mellitus

A prospective, double-blind, randomized placebo-controlled trial in 60 Iranian women with gestational diabetes mellitus investigated the effect of vitamin D_3 (1,000 units) plus evening primrose oil (1,000 mg) on insulin resistance and lipid parameters. When compared to changes seen with placebo, supplementation with vitamin D and evening primrose oil for 6 weeks produced significant improvements in vitamin D levels (−0.1 vs +6.9 ng/mL, $P<0.001$); fasting plasma glucose (−3.6 vs +1.5 mg/dL, $P=0.04$); serum insulin concentrations (−2 vs +4.6 microunits/mL, $P=0.004$); homeostasis model of assessment-insulin resistance (HOMA-IR; −0.5 vs +1.1, $P=0.003$); HOMA-beta-cell function (−7.7 vs +17.4, $P=0.007$); triacylglycerol (−20 vs +34.3 mg/dL, $P<0.001$); very low-density lipoprotein (−4 vs +6.9 mg/dL, $P<0.001$), low-density lipoprotein (−18 vs +1.8 mg/dL, $P=0.001$), and total cholesterol (−22.1 vs +5.3 mg/dL, $P<0.001$); as well as the ratio of total to high-density lipoprotein (HDL) cholesterol (−0.3 vs +0.3 mg/dL, $P<0.001$). Changes in mean weight ($P=0.75$), body mass index ($P=0.52$), and HDL-cholesterol ($P=0.13$) were not found to be significantly different between groups. Quantitative Insulin Check Index ($P=0.007$) was found to be significantly different between groups.(70)

Hyperpigmentation

Topical application of saponified evening primrose oil reduced ultraviolet B-induced hyperpigmentation, while a decrease

in melanin production has been demonstrated in vivo with the saponified oil.(54)

Inflammation

Local injection-site reactions after subcutaneous injections of 5-azacitidine and bortezomib have been reduced with topical application of evening primrose oil.(55, 66) Additionally, the time to complete resolution of bortezomib-induced skin reactions was shortened (median, 4 days).(66)

Mastalgia

Clinical data

There is little evidence to support the efficacy of evening primrose oil in treatment of mastalgia, with most trials finding no advantage over placebo.(14, 15, 16, 17) Although 23% taking evening primrose oil experienced a complete response in a small randomized, comparator trial (n = 135) after 6 months of therapy, this response was statistically significantly less than the group receiving the study drug Centchroman, a novel nonsteroidal selective anti-estrogen oral contraceptive, which showed an 86% response ($P < 0.05$).(65) A meta-analysis of clinical trials found no evidence of effect in pain relief, with a mean pain score difference of -2.78 (95% confidence interval, -7.97 to 2.4).(18)

Menopause-associated vasomotor symptoms/premenstrual syndrome

Clinical data

A number of reviews and randomized clinical trials found no evidence of benefit with evening primrose oil use for menopausal vasomotor symptoms or premenstrual syndrome.(19, 20, 21, 22, 23, 24, 25) In 2004, the North American Menopause Society did not support the use of evening primrose oil for menopausal vasomotor symptoms given the lack of efficacy data, but this has not been recently reviewed.(26) The Society of Obstetricians and Gynaecologists of Canada's revised clinical practice guidelines (2021) on managing menopausal vasomotor symptoms do not recommend evening primrose oil based on a lack of evidence to support clinical benefit.(71) A 2013 randomized, double-blind, placebo-controlled trial in 56 menopausal treatment-naïve Iranian women (with at least 4 hot flashes a day) documented significant changes from baseline for hot flash severity, but not in their frequency or duration, in those randomized to receive 1,000 mg/day evening primrose oil extract for 6 weeks. Additionally, 3 Hot Flash Related Daily Interference Scale subscores improved significantly: social activity, relations with others, and sexuality. Mild self-limiting nausea was reported in 2 women in the intervention group.(68) The North American Menopause Society position statement for nonhormonal management of menopause-associated vasomotor symptoms (2015) notes that evening primrose oil is ineffective for hot flashes based on the single trial identified (Level II).(72)

Multiple sclerosis

Clinical data

Despite a seemingly valid theoretical basis for the use of evening primrose oil in multiple sclerosis, there is a lack of evidence to substantiate its use.(27) A review of 3 trials suggested an effect with a slower progression of disability and improved relapse (severity and duration) scores, but a randomized, controlled trial, not included in the review, showed no effect.(28, 29, 30, 31, 32) No new trials have been published since the 1980s.

Myalgic encephalomyelitis (chronic fatigue syndrome)

A theoretical model has been proposed for a place in therapy for evening primrose oil in this condition. Clinical trials are lacking.(56)

Rheumatoid arthritis

Clinical data

A Cochrane review of randomized trials comparing evening primrose oil with placebo suggests some benefit in using evening primrose oil for rheumatoid arthritis, despite the relative poor quality of the individual studies. A trend toward reduction of morning stiffness and joint tenderness, as well as pain relief, has been shown. The authors found the evidence to be sufficient to warrant further larger trials to provide conclusive results and define optimal dosage and duration of therapy.(34) These findings are supported by other reviews, especially with regard to effective duration of therapy.(35, 36) A more recent randomized, double-blind, placebo-controlled study enrolling 90 patients with primary Sjögren syndrome found no statistically significant in patient fatigue with a higher dosage after 6 months of therapy.(37)

Urolithiasis

An exploratory study found an increase in urinary citrate excretion following 1,000 mg/day of evening primrose oil.(57)

Dosing

Evening primrose oil has been administered orally in clinical trials at doses between 6 and 8 g/day in adults and 2 and 4 g/day in children. Wide-ranging doses of 0.27 g to 6.48 g GLA per day have been used in clinical studies in mastalgia.24 The typical content of GLA in the oil is 8% to 10%.2

Evening primrose oil 1 g/day in combination with vitamin D_3 (1,000 units/day) has been used to improve glycemic and lipid profiles in women with gestational diabetes.70

Pregnancy / Lactation

Information regarding safety and efficacy in pregnancy and lactation is lacking. Both linoleic and GLA are normally present in breast milk, and it is reasonable to assume that evening primrose oil may be taken while breast-feeding. A case report exists of transient petechiae in a newborn following oral and intravaginal use of evening primrose oil for cervical ripening for a week prior to the infant's birth. In vitro and in vivo animal studies suggest inhibition of platelet function in the newborn may have been caused by exposure to evening primrose oil.58

According to state-wide surveys in California, Texas, and North Carolina, evening primrose oil was one of the most common herbs used by certified or licensed midwives for labor induction.73

Interactions

Lithium: Evening primrose may decrease the serum concentration of lithium. Monitor therapy.(59)

Lopinavir: Evening primrose may increase the serum concentration of lopinavir. Monitor therapy.(60)

Evening Primrose Oil drug interactions (more detail)

Adverse Reactions

Two clinical studies conducted in the 1980s among individuals with schizophrenia led to a concern that evening primrose oil might lower the seizure threshold. However, other factors may account for the observed seizures: the few participants who developed seizures were taking concomitant medicines (phenothiazines) known to lower the seizure threshold, and

also a link has been described between schizophrenia and epilepsy. There are no further reports of seizures related to evening primrose oil, which may actually have a protective effect.63

A case report of lipoid pneumonia secondary to long-term evening primrose oil use exists.64

There is no recent evidence to support older studies suggesting that evening primrose oil reduced platelet aggregation.38, 39, 40

Related/similar drugs

FEATURED

Xeljanz

Xeljanz (tofacitinib) is an oral Janus kinase (JAK) inhibitor that may be used alone or with other ...

Reviews & ratings

5.7 / 10

145 Reviews

View more

Filsuvez

Filsuvez (birch triterpenes) is a topical, home-administered birch bark extract gel that may be ...

Reviews & ratings

Add a review

View more

Toxicology

Animal toxicological studies and extensive use of evening primrose oil over many years revealed no data of concern. As a nutritional supplement, the maximum label-recommended daily dose of evening primrose oil is approximately 4 g, containing 300 to 360 mg of GLA.2

References

Disclaimer

This information relates to an herbal, vitamin, mineral or other dietary supplement. This product has not been reviewed by the FDA to determine whether it is safe or effective and is not subject to the quality standards and safety information collection standards that are applicable to most prescription drugs. This information should not be used to decide whether or not to take this product. This information does not endorse this product as safe, effective, or approved for treating any

patient or health condition. This is only a brief summary of general information about this product. It does NOT include all information about the possible uses, directions, warnings, precautions, interactions, adverse effects, or risks that may apply to this product. This information is not specific medical advice and does not replace information you receive from your health care provider. You should talk with your health care provider for complete information about the risks and benefits of using this product.

This product may adversely interact with certain health and medical conditions, other prescription and over-the-counter drugs, foods, or other dietary supplements. This product may be unsafe when used before surgery or other medical procedures. It is important to fully inform your doctor about the herbal, vitamins, mineral or any other supplements you are taking before any kind of surgery or medical procedure. With the exception of certain products that are generally recognized as safe in normal quantities, including use of folic acid and prenatal vitamins during pregnancy, this product has not been sufficiently studied to determine whether it is safe to use during pregnancy or nursing or by persons younger than 2 years of age.

More about Evening Primrose Oil (evening primrose)

- Check interactions
- Compare alternatives
- Reviews (16)
- Drug class: herbal products
- Breastfeeding
- En español

Patient resources

- Evening Primrose drug information

Related treatment guides

- Chronic Fatigue Syndrome
- Asthma
- Eczema
- Diabetic Peripheral Neuropathy

1. *Oenothera biennis* L. USDA, NRCS. 2007. The PLANTS database (http://plants.usda.gov, 13 February 2007). National Plant Data Team, Greensboro, NC 27401-4901 USA.
2. Leung AY, Foster S. *Encyclopedia of Common Natural Ingredients Used in Food, Drugs, and Cosmetics*. 2nd ed. Hoboken, NJ: Wiley-Interscience; 2003.
3. DerMarderosian A, Liberti L. *Natural Product Medicine*. Philadelphia, PA: George F. Stickley Co; 1988.
4. *Dietary Guidelines for Americans 2010*. U.S. Department of Health and Human Services. U.S. Department of Agriculture. http://www.dietaryguidelines.gov. Accessed January 9, 2012.
5. Martens-Lobenhoffer J, Meyer FP. Pharmacokinetic data of gamma-linoleic acid in healthy volunteers after the administration of evening primrose oil (Epogram). *Int J Clin Pharmacol Ther*. 1998;36;363-366.9707349
6. Bendich A. The potential for dietary supplements to reduce premenstrual syndrome (PMS) symptoms. *J Am Coll Nutr*. 2000;19:3-12.

7. Ernst E, Pittler MH, Stevinson C. Complementary/alternative medicine in dermatology: evidence-assessed efficacy of two diseases and two treatments. *Am J Clin Dermatol*. 2002;3:341-348.12069640
8. Hoare C, Li Wan Po A, Williams H. Systematic review of treatments for atopic eczema. *Health Technol Assess*. 2000;4(37):1-191.
9. Williams HC, Grindlay DJ. What's new in atopic eczema? An analysis of the clinical significance of systematic reviews on atopic eczema published in 2006 and 2007. *Clin Exp Dermatol*. 2008;33(6):685-688.18691244
10. Van Gool CJ, Zeegers MP, Thijs C. Oral essential fatty acid supplementation in atopic dermatitis — a meta-analysis of placebo-controlled trials. *Br J Dermatol*. 2004;150(4):728-740.15099370
11. Williams HC. Evening primrose oil for atopic dermatitis. *BMJ*. 2003;327(7428):1358-1359.14670851
12. Morse PF, Horrobin DF, Manku MS, et al. Meta-analysis of placebo-controlled studies of the efficacy of Epogam in the treatment of atopic eczema. Relationship between plasma essential fatty acid changes and clinical response. *Br J Dermatol*. 1989;121(1):75-90.2667620
13. Senapati S, Banerjee S, Gangopadhyay DN. Evening primrose oil is effective in atopic dermatitis: a randomized placebo-controlled trial. *Indian J Dermatol Venereol Leprol*. 2008;74(5):447-452.19052401
14. Goyal A, Mansel RE, Efamast Study Group. A randomized multicenter study of gamolenic acid (Efamast) with and without antioxidant vitamins and minerals in the management of mastalgia. *Breast J*. 2005;11(1):41-47.15647077
15. Qureshi S, Sultan N. Topical nonsteroidal anti-inflammatory drugs versus oil of evening primrose in the treatment of mastalgia. *Surgeon*. 2005;3(1):7-10.15789786
16. Blommers J, de Lange-de Klerk ES, Kuik DJ, Bezemer PD, Meijer S. Evening primrose oil and fish oil for severe chronic mastalgia: a randomized, double-blind, controlled trial. *Am J Obstet Gynecol*. 2002;187(5):1389-1394.12439536
17. Pruthi S, Wahner-Roedler DL, Torkelson CJ, et al. Vitamin E and evening primrose oil for management of cyclical mastalgia: a randomized pilot study. *Altern Med Rev*. 2010;15(1):59-67.20359269
18. Srivastava A, Mansel RE, Arvind N, et al. Evidence-based management of mastalgia: a meta-analysis of randomised trials. *Breast*. 2007;16(5):503-512.17509880
19. Philp HA. Hot flashes—a review of the literature on alternative and complementary approaches. *Altern Med Rev*. 2003;8(3):284-302.12946239
20. Fugate SE, Church CO. Nonestrogen treatment modalities for vasomotor symptoms associated with menopause. *Ann Pharmacother*. 2004;38(9):1482-1499.15292498
21. Huntley AL, Ernst E. A systematic review of herbal medicinal products for the treatment of menopausal symptoms. *Menopause*. 2003;10(5):465-476.14501609
22. Kronenberg F, Fugh-Berman A. Complementary and alternative medicine for menopausal symptoms: a review of randomized, controlled trials. *Ann Intern Med*. 2002;137(10):805-814.12435217
23. Stevinson C, Ernst E. Complementary/alternative therapies for premenstrual syndrome: a systematic review of randomized controlled trials. *Am J Obstet Gynecol*. 2001;185(1):227-235.11483933
24. Whelan AM, Jurgens TM, Naylor H. Herbs, vitamins and minerals in the treatment of premenstrual syndrome: a systematic review. *Can J Clin Pharmacol*. 2009;16(3):e407-e429.19923637
25. Wong VC, Lim CE, Luo X, Wong WS. Current alternative and complementary therapies used in menopause. *Gynecol Endocrinol*. 2009;25(3):166-174.19347706
26. North American Menopause Society. Treatment of menopause-associated vasomotor symptoms: position statement of The North American Menopause Society. *Menopause*. 2004;11(1):11-33.14716179
27. Namaka M, Crook A, Doupe A, et al. Examining the evidence: complementary adjunctive therapies for multiple sclerosis. *Neurol Res*. 2008;30(7):710-719.18631428
28. Schwarz S, Leweling H. Multiple sclerosis and nutrition. *Mult Scler*. 2005:11(1):24-32.15732263
29. Dworkin RH, Bates D, Millar JH, Paty DW. Linoleic acid and multiple sclerosis: a reanalysis of three double-blind trials. *Neurology*. 1984;34(11):1441-1445.6387534
30. McGregor L, Smith AD, Sidey M, Belin J, Zilkha KJ, McGregor JL. Effects of dietary linoleic acid and gamma linolenic acid on platelet of patients with multiple sclerosis. *Acta Neuro Scand*. 1989;80(1):23-27.2782038
31. Horrobin DF. Multiple sclerosis: the rational basis for treatment with colchicine and evening primrose oil. *Med*

Hypothesis. 1979;5(3):365-378.313499
32. Namazi MR. The beneficial and detrimental effects of linoleic acid on autoimmune disorders. *Autoimmunity*. 2004;37(1):73-75.15115315
33. Calder PC, Yaqoob P, Thies F, Wallace FA, Miles EA. Fatty acids and lymphocyte function. *Br J Nutr*. 2002;87(suppl 1):S31-S48.11895154
34. Little CV, Parsons T. Herbal therapy for treating rheumatoid arthritis. *Cochrane Database Syst Rev*. 2000; (1):CD002947.
35. Darlington LG, Stone TW. Antioxidants and fatty acids in the amelioration of rheumatoid arthritis and related disorders. *Br J Nutr*. 2001;85(3):251-269.11299072
36. Belch JJ, Hill A. Evening primrose oil and borage oil in rheumatologic conditions. *Am J Clin Nutr*. 2000;71(suppl 1):352S-356S.10617996
37. Theander E, Horrobin DF, Jacobsson LT, Manthorpe R. Gammalinolenic acid treatment of fatigue associated with primary Sjögren's syndrome. *Scand J Rheumatol*. 2002;31(2):72-79.12109650
38. Walker T, Singh PK, Wyatt KM, O'Brien PM. The effect of prostanoid precursors and inhibitors on platelet angiotensin II binding. *J Obstet Gynaecol*. 1999;19(1):56-58.15512224
39. Pirich C, Gaszo A, Granegger S, Sinzinger H. Effects of fish oil supplementation on platelet survival and ex vivo platelet function in hypercholesterolemic patients. *Thromb Res*. 1999;96(3):219-227.10588465
40. Fan YY, Ramos KS, Chapkin RS. Dietary gamma-linoleic acid modulates macrophage-vascular smooth muscle cell interactions. Evidence for a macrophage-derived soluble factor that downregulates DNA synthesis in smooth muscle cells. *Arterioscler Thromb Vasc Biol*. 1995;15(9):1397-1403.7670954
41. Iso H, Sato S, Umemura U, et al. Linoleic acid, other fatty acids, and the risk of stroke. *Stroke*. 2002;33(8):2086-2093.12154268
42. Khan F, Elherik K, Bolton-Smith C, et al. The effects of dietary fatty acid supplementation on endothelial function and vascular tone in healthy subjects. *Cardiovasc Res*. 2003;59(4):955-962.14553835
43. Halat KM, Dennehy CE. Botanicals and dietary supplements in diabetic peripheral neuropathy. *J Am Board Fam Pract*. 2003;16(1):47-57.12583650
44. Ford I, Cotter MA, Cameron NE, Greaves M. The effects of treatment with alpha-lipoic acid or evening primrose oil on vascular hemostatic and lipid risk factors, blood flow, and peripheral nerve conduction in the streptozotocin-diabetic rat. *Metabolism*. 2001;50(8):868-875.11474472
45. Richardson AJ, Montgomery P. The Oxford-Durham Study: a randomized, controlled trial of dietary supplementation with fatty acids in children with developmental coordination disorder. *Pediatrics*. 2005;115(5):1360-1366.15867048
46. Stordy BJ. Dark adaptation, motor skills, docosahexaenoic acid, and dyslexia. *Am J Clin Nutr*. 2000;71(1 suppl):323S-326S.10617990
47. Simmer K, Patole S. Longchain polyunsaturated fatty acid supplementation in preterm infants. *Cochrane Database Syst Rev*. 2004;(1):CD000375.14973956
48. Auestad N, Scott DT, Janowsky JS, et al. Visual, cognitive, and language assessments at 39 months; a follow-up study of children fed formulas containing long-chain polyunsaturated fatty acids to 1 year of age. *Pediatrics*. 2003;112(3, pt 1):e177-e183.12949309
49. Lindmark L, Clough P. A 5-month open study with long-chain polyunsaturated fatty acids in dyslexia. *J Med Food*. 2007;10(4):662-666.18158838
50. Barabino S, Rolando M, Camicione P, et al. Systemic linoleic and gamma-linolenic acid therapy in dry eye syndrome with an inflammatory component. *Cornea*. 2003;22(2):97-101.12605039
51. Kokke KH, Morris JA, Lawrenson JG. Oral omega-6 essential fatty acid treatment in contact lens associated dry eye. *Cont Lens Anterior Eye*. 2008;31(3):141-146.18313350
52. Lu M, Taylor A, Chylack LT, et al. Dietary fat intake and early age-related lens opacities. *Am J Clin Nutr*. 2005;81(4):773-779.15817851
53. Seddon JM, Cote J, Rosner B. Progression of age-related macular degeneration: association with dietary fat, transunsaturated fat, nuts, and fish intake. *Arch Ophthalmol*. 2003;121(12):1728-1737.14662593

54. Koo JH, Lee I, Yun SK, Kim HU, Park BH, Park JW. Saponified evening primrose oil reduces melanogenesis in B16 melanoma cells and reduces UV-induced skin pigmentation in humans. *Lipids*. 2010;45(5):401-407.20352496
55. Platzbecker U, Aul C, Ehninger G, Giagounidis A. Reduction of 5-azacitidine induced skin reactions in MDS patients with evening primrose oil. *Ann Hematol*. 2010;89(4):427-428.19714330
56. Puri BK. Long-chain polyunsaturated fatty acids and the pathophysiology of myalgic encephalomyelitis (chronic fatigue syndrome). *J Clin Pathol*. 2007;60(2):122-124.16935966
57. Rodgers A, Lewandowski S, Allie-Hamdulay S, Pinnock D, Baretta G, Gambaro G. Evening primrose oil supplementation increases citraturia and decreases other urinary risk factors for calcium oxalate urolithiasis. *J Urol*. 2009;182(6):2957-2963.19846138
58. Wedig KE, Whitsett JA. Down the primrose path: petechiae in a neonate exposed to herbal remedy for parturition. *J Pediatr*. 2008;152(1):140, 140.e1.18154917
59. Osman M, Badawi E. Evening primrose oil reducing serum lithium concentration. *Ther Adv Psychopharmacol*. 2016;6(5):343-344.27721973
60. Beukel van den Bout-van den CJ, Bosch ME, Burger DM, Koopmans PP, van der Ven AJ. Toxic lopinavir concentrations in an HIV-1 infected patient taking herbal medications. *AIDS*. 2008;22(10):1243-1244.18525278
63. Puri BK. The safety of evening primrose oil in epilepsy. *Prostaglandins Leukot Essent Fatty Acids*. 2007;77(2):101-103.17764919
64. Rabahi MF, Ferreira AA, Madeira JG, Galvao PM, Pinto SA. Lipoid pneumonia secondary to long-term use of evening primrose oil. *J Bras Pneumol*. 2010;36(5):657-661.21085832
65. Sharma N, Gupta A, Jha PK, Rajput P. Mastalgia Cured! Randomized trial comparing centchroman to evening primrose oil. *Breast J*. 2012;18(5):509-510.22892074
66. Auberger J, Vogt S, Hopfinger G, Clausen J, Greil R. Topical evening primrose oil for reduction of bortezomib-induced skin reactions. *Ann Hematol*. 2013;92(7):995-996.23262668
67. Bamford JT, Ray S, Musekiwa A, van Gool C, Humphreys R, Ernst E. Oral evening primrose oil and borage oil for eczema. *Cochrane Database of Syst Rev*. 2013;4:CD004416.23633319
68. Farzaneh F, Fatehi S, Sohrabi MR, Alizadeh K. The effect of oral evening primrose oil on menopausal hot flashes: a randomized clinical trial. *Arch Gynecol Obstet*. 2013;288(5):1075-1079.23625331
69. American Diabetes Association. Standards of medical care in diabetes--2014. *Diabetes Care*. 2014;37(suppl 1):S14-S80.24357209
70. Jamilian M, Karamali M, Taghizadeh M, et al. Vitamin D and evening primrose oil administration improve glycemia and lipid profiles in women with gestational diabetes. *Lipids*. 2016;51(3):349-356.26781763
71. Yuksel N, Evaniuk D, Huang L, et al. Guideline No. 422a: Menopause: Vasomotor symptoms, prescription therapeutic agents, complementary and alternative medicine, nutrition, and lifestyle [published correction appears in *J Obstet Gynaecol Can*. 2022;44(2):227]. *J Obstet Gynaecol Can*. 2021;43(10):1188-1204.e1. doi:10.1016/j.jogc.2021.08.00334390867
72. Nonhormonal management of menopause-associated vasomotor symptoms: 2015 position statement of The North American Menopause Society. *Menopause*. 2015;22(11):1155-1172.26382310
73. Dennehy C, Tsourounis C, Bui L, King TL. The use of herbs by California midwives. *J Obstet Gynecol Neonatal Nurs*. 2010;39(6):684-693.21044150

Further information

Always consult your healthcare provider to ensure the information displayed on this page applies to your personal circumstances.

DRUG STATUS

Availability
OTC Over the counter

CSA Schedule*
N/A Not a controlled drug

User Reviews & Ratings

7.3 / 10

16 Reviews

Drugs.com Mobile App

Access drug & treatment information, identify pills, check interactions and set up personal medication records.

Subscribe to our newsletter for the latest medication news, new drug approvals and FDA alerts.

Drugs.com provides accurate and independent information on more than 24,000 prescription drugs, over-the-counter medicines and natural products. This material is provided for educational purposes only and is not intended for medical advice, diagnosis or treatment. Data sources include Micromedex (updated 7 Apr 2025), Cerner Multum™ (updated 13 Apr 2025), ASHP (updated 10 Apr 2025) and others.