

Composition

Myopax contains lavender oil (lavandula angustifolia herb top flowering essential oil) 127mg/g, rosemary oil (rosmarinus officinalis herb essential oil) 32mg/g, myrrh oil (commiphora momol essential oil) 27mg/g, stabilized emu oil (dromaius novaehollandiae) 36mg/g, peppermint oil BP (menthe x peperita) 44mg/g and eucalyptus oil BP in an easily massaged base. Myopax also contains phenoxyethanol 1.44mg/g and hydroxybenzoates 0.56mg/g as preservatives, and ethanol 80mg/g.

Pharmacology

The spasmolytic action of lavender oil appears mediated through cyclic AMPⁱ. It is postsynaptic and not atropine-like. Linalool appears to be the major spasmolytic compound in lavender oil. Lavandula stoechas oil has demonstrated calcium channel blocking activity in some animal models as well as anti-convulsant actionⁱⁱ. Lavender oil has also demonstrated dose dependant local anaesthetic activity where the active compounds appear to be linalyl acetate and linalolⁱⁱⁱ. Inhaled in the form of aromatherapy, lavender oil has been shown to increase beta wave EEG activity and produce a relaxed mental state associated with improved mathematical computational speed and accuracy^{iv}.

Rosemary oil has a relaxant effect on smooth muscle, with the apparent active compounds being caffeic and rosmarinic acids^v. Rosmarinic acid increases the production of prostaglandin E2 and reduces the production of leukotriene B4 in human polymorphonuclear leucocytes, and inhibits the complement system.

Emu oil has produced marked anti-inflammatory activity in several studies. Snowden^{vi} demonstrated emu oil samples to be comparable with prednisolone in anti-inflammatory activity in carageenan induced oedema in rats. Whitehouse^{vii} demonstrated similar anti-inflammatory action, with some emu oil samples displaying greater inflammation reduction than naproxen in the adjuvant induced arthritis rat model.

Myrrh oil has displayed local anaesthetic activity by blocking the inward sodium current of excitable mammalian membranes^{viii}. The most active local anaesthetic compounds in myrrh oil appear to be furanodiene-6-one and methoxyfuranoguaia-9-ene-8-one.

Indications

Myopax is indicated for the temporary relief of muscular and period pain and for the temporary relief of muscular pain and/or spasm associated with fibromyalgia, ankylosing spondylitis and related conditions. Myopax may also assist with easing neck tension headache.

Precautions

Avoid using Myopax if there are known sensitivity to lavender, rosemary, myrrh, peppermint, eucalyptus, lemon or emu oil or other components of Myopax such as phenoxyethanol or hydroxybenzoates. If sensitivity is suspected, a small test application is recommended prior to normal usage.

Avoid application to eyes, genitals, axilla or wounds. Not recommended for children under 1 year of age without medical supervision. For external use only.

Drowsiness may occur following larger applications of Myopax. Affected patients should not drive motor vehicles or operate machinery.

Do not use more than 100 drops of Myopax per application or more than 200 drops per day.

Use in pregnancy

Due to its rosemary oil content, Myopax should be used with caution during pregnancy, particularly in early pregnancy. Large oral doses of a rosemary extract in wistar rats produced a possible anti-implantation effect without interfering with the normal development of the concept after implantation^{ix}. Rosemary does not appear to affect pregnancy via any hormonal mechanism.



Rosemary's menstrual regulating properties appear due to FSH releasing action and, as such, would not be expected to affect hormone production in pregnancy (where graafian follicles are not present).

Rosmary, in culinary use, is widely consumed in small quantities during pregnancy without apparent ill-effect.

There is not evidence of teratogenicity with any of the components of Myopax. It is recommended to avoid using Myopax during the first 16 weeks of pregnancy and to avoid large Myopax applications during pregnancy.

Use in Lactation

Myopax is suitable to use for breast feeding mothers.

Paediatric Use

Myopax is suitable for use in children. Medical advice should be sought before using Myopax in children under the age of one year.

Interactions

There are no known interactions between Myopax and other medications. Myopax may be used in conjunction with oral analgesic and anti-inflammatory compounds.

Adverse Reactions

Myopax is well tolerated. Local irritation or rash may uncommonly occur. An allergic reaction involving erythema may rarely occur. Drowsiness may occur following larger applications of Myopax.

Dosage and Administration

Children and Adults

Apply directly to the affected area, using the dropper mechanism to allow counting of the required number of drops. Massage may be gentle or more vigorous depending on therapeutic requirements. Usually 10 to 20 drops are sufficient in most cases (see recommended doses for specific areas below).

Myopax may be applied two to three times daily.

- **Muscular aches** – apply 5 to 20 drops two to three times daily.
- **Period pain** – apply 10 to 20 drops to lower back and/or lower abdomen two to three times daily.
- **Neck tension headache** – apply 5 to 10 drops to the neck and shoulder area and massage in.
- **Bath** – generally 4 to 6 drops are sufficient for use in a bath.
- **Ankylosing spondylitis** – direct massage of 10 to 20 drops to the back or use 4 to 6 drops in a warm bath.
- **Fibromyalgia** – use 4 to 6 drops in a bath to help relieve morning stiffness. Massage 5 to 20 drops directly to affected areas up to three times daily. May be used prior to bedtime or prior to exercise.

Overdosage

Acute toxicity by oral ingestion may cause nausea, ataxia, drowsiness, hypothermia and gastritis. Treat as for lavender oil ingestion.

Gastric lavage with activated charcoal suspension may be required, along with general supportive measures. Inducing emesis with ipecacuanha is not recommended. If medical facilities are not immediately available, milk may be given to delay absorption and ameliorate gastritis.



Pack

15ml/0.51 US fl.oz Dropper Bottle

Storage

Store below 25°C/77°F. Avoid direct sunlight.

Availability

Non-prescription

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ⁱ Studies on the mode of action of the essential oil of lavender (*lavandula angustifolia*, P. Miller), Lis-Balchin M., Hart S., *Phytother. Res.* 1999, Sept; 13 (6): 540-2

ⁱⁱ Ethnopharmacological Evaluation of the anti-convulsant, sedative and anti-spasmodic activities of *Lavandula stoechas* L. Gilani A.H., et. al., *J. Ethnopharmacol.* 2000, Jul; 71 (1-2): 161-7

ⁱⁱⁱ Local Anaesthetic Activity of the Essential oil of *Lavandula angustifolia*, Ghelardini C., Galeotti N., Salvatore G., Mazzanti G., Department of Pharmacology, University of Florence, Italy, *Planta Med.* 1999 Dec; 65 (8): 700-3

^{iv} Aromatherapy positively affects mood, EEG patterns of alertness and math computations, Diego M.A. et.al., University of Miami School of Medicine, U.S.A., *Int J. Neurosci.* 1998, Dec; 96 (3-4): 217-24

^v Pharmacology of Rosemary (*Rosmarinus officinalis* Linn.) and its Therapeutic Potentials. Al-sereiti M.R., Abu-Amer K.M., Sen P., *Indian J., Exp Biol.* 1999, Feb; 37 (2): 124-30

^{vi} J. Snowden, P. O'Malley, T. Ellis, Emu Oil Its Anti-Inflammatory Properties Oct 1999, RIRDC Publication No 99/133

^{vii} M.Whitehouse, A. Turner, C. Davis and M. Roberts, Emu Oil(s): A Source of Non-toxic Transdermal Anti-inflammatory Agents in Aboriginal Medicine, *Inflammopharmacology* 1998; 6: 1-8

^{viii} Local Anaesthetic, Anti-bacterial and Anti-fungal Properties of Sesquiterpenes from Myrrh, Dolara P., et. al., *Planta Med.* 2000, May; 66 (4): 356-8

^{ix} Study of the Embryotoxic Effects of an Extract of Rosmary (*Rosmarinus officinalis* L.), Lemonica I.P., Damasceno D.C., di-Statsi L.G., *Braz J., Med Biol, Res.* 1996, Feb; 29 (2): 223-7

