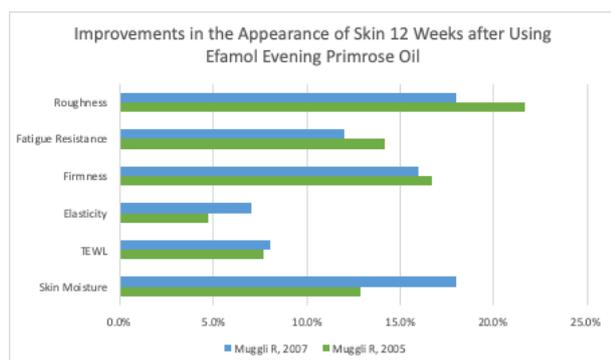


### Efamol Evening Primrose Oil for beautifully smooth and nourished looking skin.

Efamol Evening Primrose Oil has a long history in clinical research. The studies below demonstrate how Efamol's Evening Primrose Oil, with its unique traceability and extraction process has been studied as a beauty oil by L.P Muggli in 2005<sup>1</sup> and 2007<sup>2</sup>. Both pieces of research used Efamol EPO 500mg capsules at a dosage of 6 capsules a day.

#### Efamol Evening Primrose Oil, a proven beauty oil

In 2005, and again in 2007, 40 participants had their skin measured using skin measurement apparatus to determine any changes in series of appearance criteria as a result of taking 12 weeks of Efamol Evening Primrose Oil. Each participants skin was measured for a range of skin features including: skin moisture, amount of water lost through the skin, skin elasticity, skin roughness and more. Significant improvements in the appearance of their skin were measured after the 12 weeks of taking Efamol Evening Primrose Oil. See the chart below.



	<b>Muggli R, 2005, Systemic evening primrose oil improves the biophysical skin parameters of healthy adults, International Journal of Cosmetic Science, 27: 243-249</b>	<b>Muggli R, 2007, Systemic Evening Primrose Oil for Irritated Skin Care, Cosmetics and Toiletries Magazine, 122:2:49-56</b>
Number tested	40	40
Dosage per day	6 x 500mg	6 x 500mg
Duration	12 weeks	12 weeks
Results	Skin moisture: +12.9% TEWL: +7.7% Elasticity: +4.7% Firmness: +16.7% Fatigue Resistance: +14.2% Roughness: +21.7%	Induced skin irritation. Skin moisture: +18% TEWL: +8% Elasticity: +7% Firmness: +16% Fatigue Resistance: +12% Roughness: +18%

#### Evening Primrose Oil on Eczema Sufferers

Efamol Evening Primrose Oil has been tested repeatedly for efficacy in eczema including Atopic eczema; a condition where skin barrier function is compromised resulting in increased trans epidermal water loss (TEWL) and epidermal hyper-proliferation.

More than twenty years ago, scientists at the Efamol Research Institute discovered that people with atopic eczema had higher levels of Omega 6 linoleic acid in their blood than those without eczema<sup>3</sup>. They proposed that those who suffered with eczema were less able to use Linoleic acid and convert it to GLA, Gamma Linolenic Acid, the Omega 6 fatty acid found in Evening Primrose Oil<sup>4</sup>. The body can make GLA, however the Efamol Institute proposed there was a defect in an enzyme called delta-6-desaturase (D-6-D) that normally converts LA to GLA and that supplementation with EPO could improve skin health.

Efamol Evening Primrose Oil was tested in randomised controlled trials and a final meta-analysis on the efficacy of Evening Primrose Oil on eczema sufferers was published in 2006. A 2006 meta-analysis of 26 randomised, double blind trials with a placebo control clinical trials included over 1200 patients and demonstrated improvements in itch, crusting, swelling and redness associated with eczema. The improvements showed between 4 to 8 weeks after treatment was initiated<sup>5</sup>.

Another trial in 2011 studied 40 children aged 2-15 years taking two different quantities of Evening Primrose Oil, all had atopic eczema and the severity of their eczema symptoms was measured using the Eczema Area Severity Index (EASI). The group were split into high dose (8 capsules a day) and low dose (4 capsules a day) for 8 weeks. They avoided any other treatments during the study including steroid creams. Their EASI scores dropped significantly showing that their eczema symptoms had improved. Researchers confirmed that these improvements correlated with increases in GLA levels which were measured from blood samples throughout. The improvements in the symptoms of eczema were significantly higher in the groups that took the higher dose<sup>6</sup>.

In 2014 a small study analysed the impact of Evening Primrose Oil on a group with atopic dermatitis. It found that those whose GLA blood levels increased the most significantly over the 12 weeks demonstrated the most significant improvements in their symptoms<sup>7</sup>. The study used a tool called SCORAD which measures 6 aspects of dermatitis including crusting, swelling and skin dryness.

#### Topical Evening Primrose Oil for Nappy Rash

Evening Primrose Oil has also been studied as a natural topical treatment for nappy rash. It has been shown to be as successful as a branded nappy cream at reducing dryness, redness and rash in both groups with no significant difference between the two. Parents preferred EPO and considered it better than the control for spreadability, pleasant skin sensation and overall infant well-being. The study was conducted on babies from the age of 2 weeks to 6 months over an 8 week period<sup>8</sup>.

### Evening Primrose Oil for PMS and Cyclic Breast Pain

Premenstrual Syndrome PMS has many symptoms and causes. Evening Primrose Oil has been shown to be particularly successful for reducing the severity of breast pain associated with the menstrual cycle, known as cyclical mastalgia, although study results vary. A study conducted in 2010 evaluated the effectiveness of Vitamin E (1200IU a day) and Evening Primrose Oil (3000mg a day) on 41 women who had experienced breast pain that was relieved by the onset of a period and had suffered for two consecutive months. The study found that Evening Primrose Oil alone, Vitamin E alone and also the two in combination all improved symptoms but a placebo did not<sup>9</sup>. The dosage of Vitamin E in this study was very high.

A review of studies on Evening Primrose Oil in 2017 highlighted that women with cyclical breast pain have low levels of gamma-linolenic acid, the omega 6 fat found in Evening Primrose Oil. They conducted a meta-analysis that demonstrated that although Evening Primrose Oil is not as effective as medicines for the relief of breast pain, positive results have been shown against placebo and further testing should be pursued. Evening Primrose Oil was shown to be very well tolerated by the subjects in the studies reviewed in the analysis and should certainly be considered as before medication for mild to moderate breast pain<sup>10</sup>.

A study on 78 female patients who had presented with breast pain were given 1000mg of Evening Primrose Oil or a placebo and then studied over a 6 month period, the severity of their breast pain was measured using a pain scoring system. In those who were taking the Evening Primrose Oil, 74% reported that their scores had improved<sup>11</sup>.

Evening Primrose Oil has been studied for use in menopausal women. Study results differ from study design to study design. In 2013, 56 menopausal women participated in a study that measured the impact of taking two 500mg evening primrose oil capsules a day for 6 weeks on their hot flushes. The study found that using evening primrose oil may decrease the intensity of hot flushes and reduce the severity score using a standardised measurement<sup>12</sup>.

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