
PHILIPS
BlueControl
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Effective, wearable relief
from psoriasis vulgaris
UV-free blue LED light phototherapy

Why **blue LED light?**

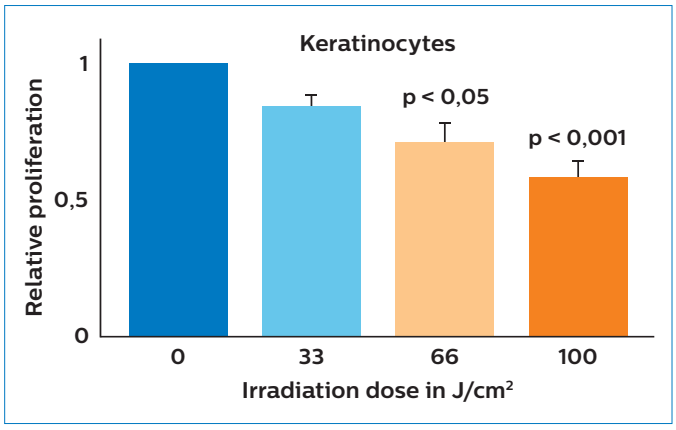
Light-emitting diodes (LEDs) are a highly efficient, long-lasting source of light. Thanks to their high spectral selectivity, the wavelength can be set precisely to achieve the desired effect in different applications.

No UV radiation. Blue light has a wavelength of 420–490 nanometers (nm). As part of the visible light spectrum, it is free of ultraviolet radiation.

Blue light is not toxic to the skin. Studies have shown that irradiation with blue light at a wavelength of 453 nm is not toxic for keratinocytes up to doses of 500 J/cm^2.[1]

Blue light **controls processes** that cause psoriasis

Studies reveal that blue light reduces the accelerated proliferation of keratinocytes and decreases the inflammatory response.[2,3] After long years of research and optimization, Philips Light & Health and its clinical and academic partners have successfully defined the optimal wavelength, intensity and LED settings to harness these properties for the treatment of plaque psoriasis.

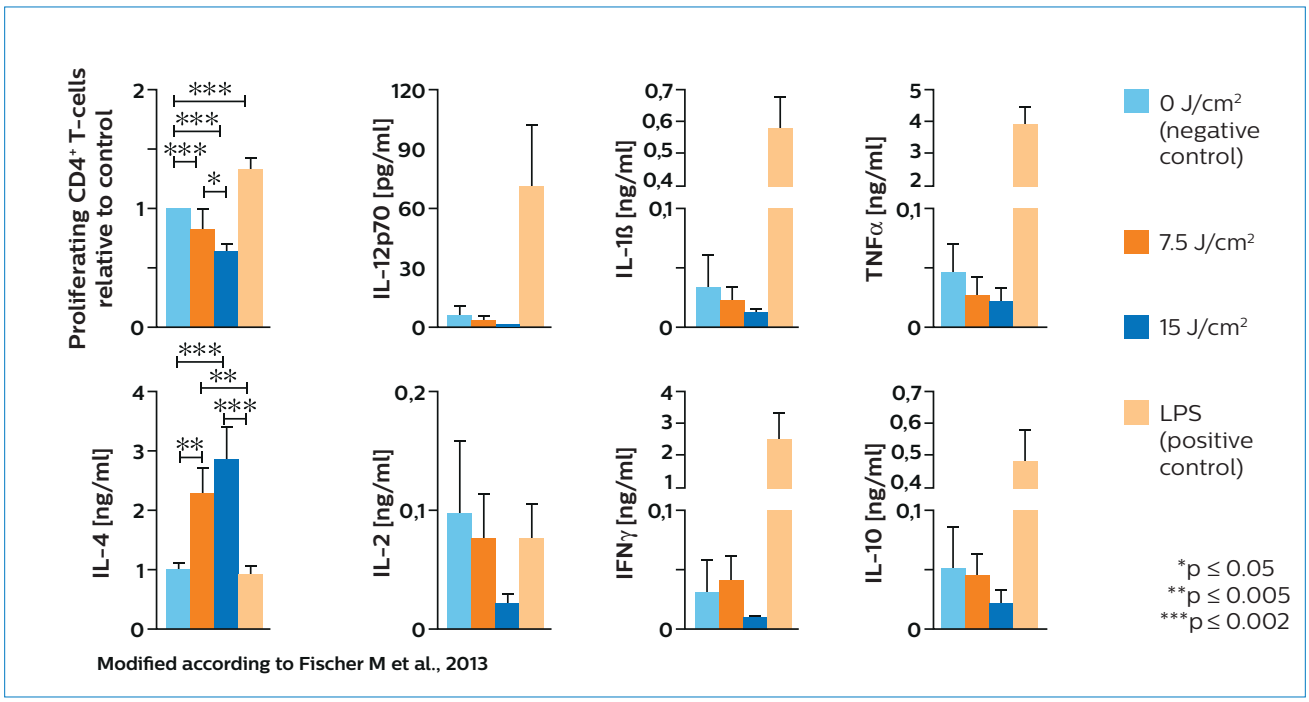


Blue LED light is anti-proliferative.

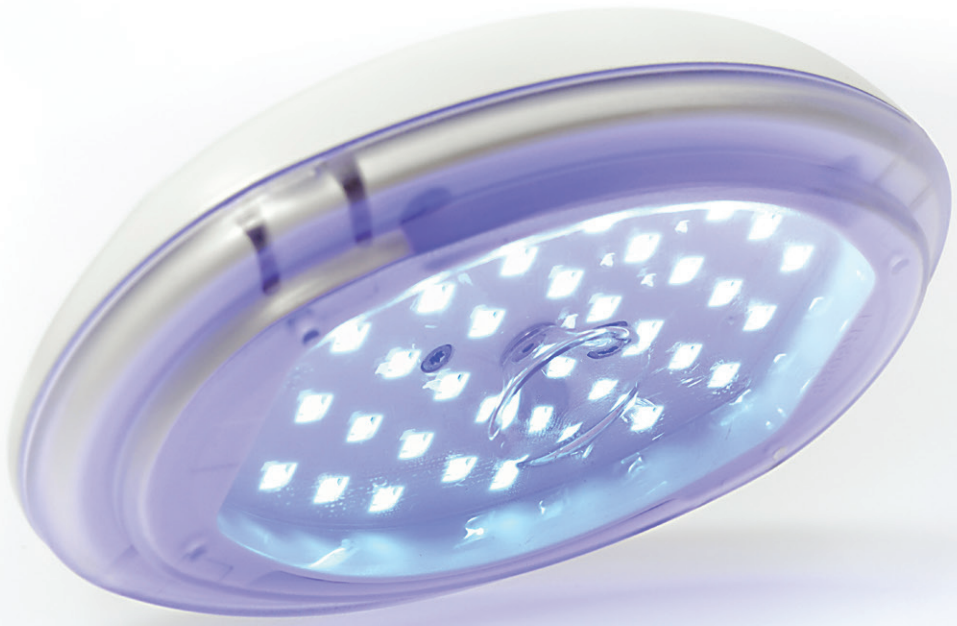
Irradiation with blue LED light at a wavelength of 453 nm reduces the proliferation of keratinocyte dose-dependently while inducing differentiation.[2]

Blue light is anti-inflammatory.

Irradiation with blue light leads to dose-dependent suppression of dendritic cell activation, resulting in a reduced proliferation of T-cells and release of cytokines.[3]



Modified according to Fischer M et al., 2013



Blue LED light therapy is clinically proven

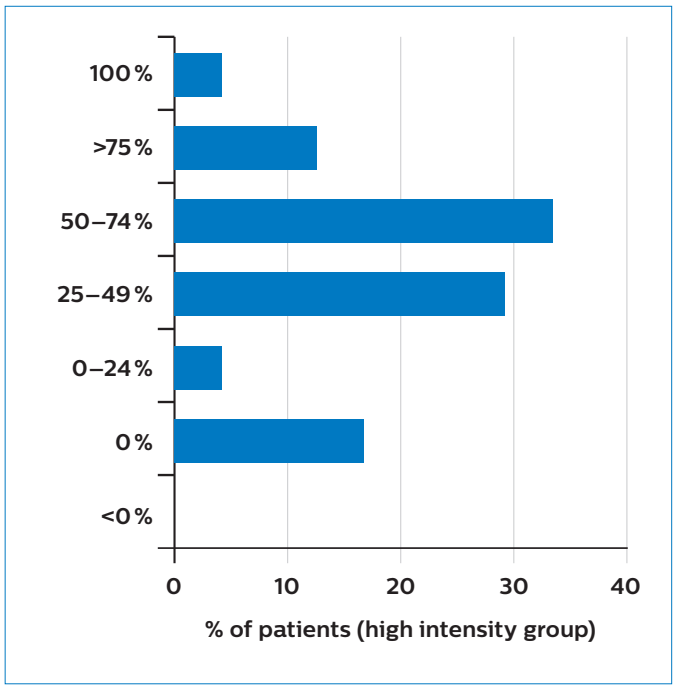
In an initial clinical study at the University Hospital Aachen in 2009, 40 patients with mild to moderate psoriasis vulgaris used blue LED light therapy (453 nm) for 4 weeks. It was found that exposure to blue LED light resulted in significant improvement of psoriasis plaques.[4]

In a second clinical study, 47 patients with mild to moderate psoriasis vulgaris performed blue LED light therapy at home for 3 months. Daily treatment (5–7 treatments per week) was carried out for the first 4 weeks only, followed by 3 treatments per week for the next 8 weeks.

No treatment was carried out during the 4-week follow-up phase.

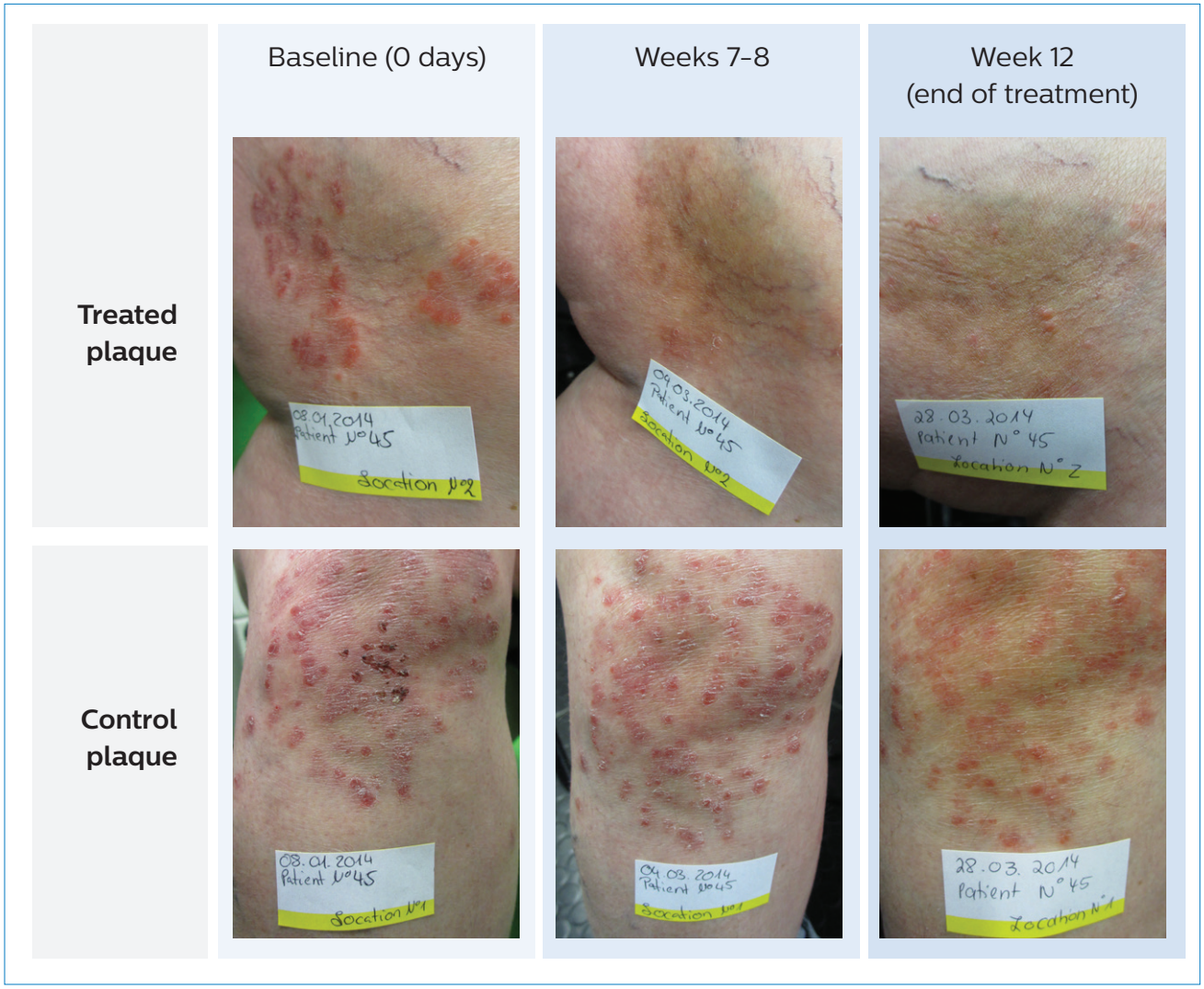
Compared to the untreated control plaque, therapy with high-intensity blue light resulted in a highly significant reduction of the LPSI (Local Psoriasis Severity Index). 84% of patients showed an improvement in plaque symptoms (thickness, redness and scaling) compared to baseline. In some patients, complete clearance of the plaque was observed. During the treatment-free follow-up phase, plaque symptoms improved slighlty further, rather than worsened.[5]

Percentage of LPSI reduction from baseline at week 12.[5]



Treatment compliance was excellent: 98% of the patients followed the treatment procedure with blue LED light. 83% of the patients rated the usability and comfort of the therapy device as ideal or excellent. **No adverse events associated with the blue LED light** therapy were observed.[5]

Clinical course of target and control plaques of a representative patient.[5]



Philips BlueControl

Convenient, UV-free phototherapy for exceptional compliance

Philips BlueControl is a wearable medical device that enables patients to benefit from blue light therapy while following their normal daily routines. An easily adjustable textile fixation strap ensures the device fits securely on the extremities. A daily treatment per plaque is recommended. After 30 minutes' treatment per plaque, the device shuts off automatically. No UV radiation or chemicals are involved, and no adverse effects have been observed. Patients confirm that Philips BlueControl fits right into their daily routine – for exceptional treatment compliance, and better outcomes.

Philips BlueControl – the blue LED light therapy to treat psoriasis vulgaris

- Clinically proven efficacy
- UV-free therapy without the side effects medication may have
- Fits into your patients' daily lives
- Exceptional treatment compliance

1 Awakowicz P et al. Biological Stimulation of the Human Skin Applying Health-Promoting Light and Plasma Sources. Contributions to Plasma Physics. 2009; 49(9): 641-647.
2 Liebmann J, Born M, Kolb-Bachofen MV. Blue-Light Irradiation Regulates Proliferation and Differentiation in Human Skin Cells. Journal of Investigative Dermatology. 2010; 130: 259-269.
3 Fischer M et al. Blue light irradiation suppresses dendritic cells activation in vitro. Experimental Dermatology. 2013; 22: 554-563.
4 Weinstabl A et al. Prospective randomized study on the efficacy of blue light in the treatment of psoriasis vulgaris. Dermatology. 2011; 223(3): 251-9.
5 Pfaff S et al. Prospective Randomized Long-Term Study on the Efficacy and Safety of UV-Free Blue Light for Treating Mild Psoriasis Vulgaris. Dermatology. 2015; 231: 24-34.

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Find out more about psoriasis vulgaris treatment with blue LED light on www.philips.co.uk/BlueLightTherapy

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