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Male facial rejuvenation using a combination 633, 830, and 1072 nm LED face mask

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Abstract

Home-based photobiomodulation is a popular treatment modality for patients seeking non-invasive aesthetic treatment. Studies demonstrate that photobiomodulation is effective for skin rejuvenation, which is aimed at improving the overall appearance of the skin by reducing fine lines and wrinkles and improving skin texture, skin tone, and dyspigmentation. Most current skin rejuvenation research focuses on treatments in women. However, men's aesthetics remains an underserved market. A combined red light (RL) and near-infrared (NIR) light-emitting diode (LED) has been designed specifically to target male skin, which may have different physiological and biophysical properties compared to female skin. Herein, the safety and efficacy of a commercially available RL and NIR (633,

830, and 1072 nm) LED array designed to be worn as a face mask was assessed. Primary outcomes included adverse events and facial rejuvenation as determined by participant-reported satisfaction scales and quantitative digital skin photography and computer analysis after 6 weeks of treatment. The participants reported overall favorable results and improvements in all individual categories, were satisfied with the treatment, and would recommend the product to others. The participants perceived the greatest improvement in fine lines and wrinkles, skin texture, and youthful appearance. Photographic digital analysis demonstrated favorable improvements in wrinkles, UV spots, brown spots, pores, and porphyrins. These results support the use of RL and NIR to treat male skin. Advantages of the LED facemask include its safety, efficacy, convenient home-based use, minimal associated downtime, simple operation, non-invasiveness, and appreciable results in as few as 6 weeks.

Keywords: Aesthetics; Face mask; LED; Low level laser therapy; Photobiomodulation; Skin rejuvenation.

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