

# The Efficacy and Safety of Red Light Therapy

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**Background:** Red Light Therapy (RLT) is a popular non-invasive treatment for skin rejuvenation, targeting wrinkles and loss of elasticity by stimulating collagen production and enhancing skin texture. Studies have shown significant improvements in skin appearance, yet comprehensive research on RLT's long-term safety and efficacy is limited (1).

**Objective:** Explore the research of RLT and its safety and efficacy of treating age related stress lines and wrinkles. **Methods:** This project conducted a review of articles in the fields of dermatology and anti-aging studies using PubMed as the database. Search criteria included: "Red Light therapy" WITH "Skin Treatment" from material published in 2020 and onward. Using this search logic, 20 articles were amassed for this literature review.

**Results:** Recent studies on Red Light Therapy (RLT) have demonstrated promising results in skin rejuvenation and anti-aging. Some studies show significant reductions in visible signs of aging, such as wrinkles and fine lines, following RLT treatment, with patients experiencing noticeable skin improvements (1). Similarly, another such study found a 30% reduction in periorcular wrinkle volume in their randomized controlled trial, indicating the effectiveness of RLT in targeted facial areas (2). Evaluation of the safety and efficacy of a home-use LED device, noting high user satisfaction and improvements in skin texture (3). However, despite these positive outcomes, the limited number of recent studies emphasizes the need for further research to solidify RLT's long-term safety and efficacy, ensuring its continued viability as an anti-aging treatment.

**Conclusion:** Despite promising short-term results, the rapid commercialization of RLT products, driven by consumer demand, may outpace scientific validation. Recent studies highlight user satisfaction but stress the need for more rigorous long-term trials (2,4). While RLT shows potential as an anti-aging therapy, providers should guide patients in making informed decisions, emphasizing the importance of evidence-based practice to ensure both efficacy and safety.

**Keywords:** Red Light Therapy, Anti-Aging

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