



SKIN BEAUTIFUL DERMACEUTICALS™

## *The Science Behind Topical Stabilized Oxygen*

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**Dermaplaning, topical oxygen, and photodynamic therapy: a systematic review of the literature.**

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### **Source**

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### **Abstract**

#### **BACKGROUND:**

Noninvasive procedures for facial rejuvenation are becoming an increasingly popular component of a comprehensive skin care regimen. Concurrently, many new treatment methods are now available to both the plastic surgeon and the aesthetician. Because these techniques have become an integral part of many cosmetic practices, this study aimed to assess the existing evidence-based literature as to their clinical efficacy; to provide an objective overview of some of the most popular noninvasive rejuvenation strategies such as dermaplaning, oxygen therapy, and light therapy; to discuss recent pertinent scientific evidence-based literature; and to provide treatment recommendations based on these findings.

#### **METHODS:**

A systematic review was performed in August 2009 using PubMed and the following keywords: "dermaplaning," "oxygen therapy," and "light therapy." All peer-reviewed articles then were screened independently by three plastic surgeons.

#### **RESULTS:**

The search identified 42 English-written, peer-reviewed manuscripts. The overall amount of scientific data supporting these methods was found to be scarce, anecdotal, and not well

documented. Nevertheless, all three noninvasive therapies have become increasingly popular in the cosmetic market because many patients and physicians or surgeons report being pleased with their results.

## **CONCLUSION:**

Although the evidence supporting these nonsurgical methods is suboptimal, their uses continue to expand. As with any plastic surgery procedure, providing patients with realistic expectations is essential to achieving optimal outcomes and patient satisfaction. Therefore, critical investigation is warranted. In addition, these methods are most effective when included within a comprehensive skin care regimen consisting of sunscreen, vitamin therapy, and lifestyle modification.

## **Topical Oxygen Emulsion:**

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A constant and adequate oxygen supply is important for cell and tissue homeostasis. It is well documented that oxygen can play a key role in energy production, cell membrane maintenance, mitochondrial function, and cellular repair. ..The tissue repair process requires an increased metabolic activity of a variety of cells, resulting in a high oxygen demand.<sup>1-2</sup>Recent research has demonstrated that increased oxygen tension...promotes [skin rejuvenation] by stimulating several processes, including phagocytosis (engulfing of microorganisms, cells, or debris by macrophages or neutrophils),<sup>3</sup>degradation of necrotic wound tissue,<sup>4</sup>collagen production,<sup>5-7</sup>neovascularization,<sup>8-9</sup>and neutrophil-mediated oxidative microbial killing.<sup>10</sup>

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