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# ADVANCED RETINOL CLINICAL STUDY

Superior Clinical Improvement with Minimal  
Dermatitis from a Novel Retinol Formulation

Dermatologist Formulated | Medical Strength | Clinically Tested



Advanced Retinol: Information Kit

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# ADVANCED RETINOL CLINICAL STUDY

Skin aging is characterized by a significant number of unwanted visible changes in appearance. All-trans retinoic acid (RA), also called tretinoin, is the most widely prescribed topical agent for improvement of aging skin.

The benefits of topical tretinoin on photodamaged skin were first described in 1986 by Kligman and colleagues (1). These investigators noted that skin irritation commonly occurs within four weeks of starting RA. Physicians warn patients to expect some degree of redness and peeling, known as Retinoid dermatitis, associated with regular use of RA. This dermatitis often limits use of the prescription drug. To address irritation, another non-prescription Vitamin A derivative, Retinol, has been shown to produce similar benefits to RA but with less skin irritation.

The present clinical testing was performed to determine the clinical efficacy of a new topical formulation of a 0.5% all-trans retinol in a lipophilic, glyco- and phospholipid base.

## STUDY SUBJECTS AND DESIGN

Ten testers, ages 47 to 72 years with Fitzpatrick skin types II, II and IV were enrolled. All displayed visible photodamage consisting of age spots, lip lines, wrinkles, loss of volume, dull skin appearance and crow's feet. Patients applied a new topical formulation, Advanced Retinol, to their faces as directed by a dermatologist for 12 weeks. Clinician and patient graded visible improvement in visible aging changes were assessed at baseline and at biweekly intervals for ten weeks.

Subjects were instructed to discontinue use of topical antiaging facial products at least 1 week before the study and to avoid cosmetic procedures 14 days before the study. For the first week, each morning, subjects used a mild facial cleanser, rinsed and dried, and applied their current sunscreen product to the entire face. In the evening, subjects applied cleanser, rinsed and dried, then applied Advanced Retinol to their entire face.

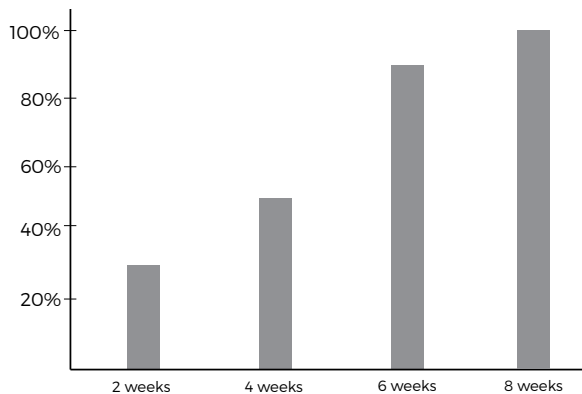
After two weeks, if no irritation, redness or peeling was experienced, patients were instructed to begin using the product twice a day. If any of these signs did occur, the patients were instructed to continue with bedtime-only application. All subjects were instructed not to apply the product to any areas that were peeling or felt irritated.

## RESULTS

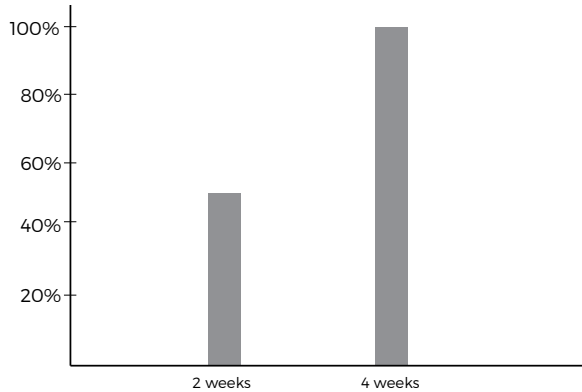
All participants showed good tolerance to product. When any degree of dermatitis was noted, the frequency of use was lowered. No testers stopped use of the product. Eight of the ten used the product twice daily after the first two weeks. One of the ten used it only three times a week. Visible improvement included lessening of appearance of crow's feet, lines and wrinkles and hyperpigmentation. There was also an increase in overall facial volume and lessening of sagging in some of the testers. Improvement was noted as early as 7 days. Improvement at 12 weeks was greater than 2 and 4 weeks.

### DERMATOLOGIST ASSESSMENT OF ALL TESTERS

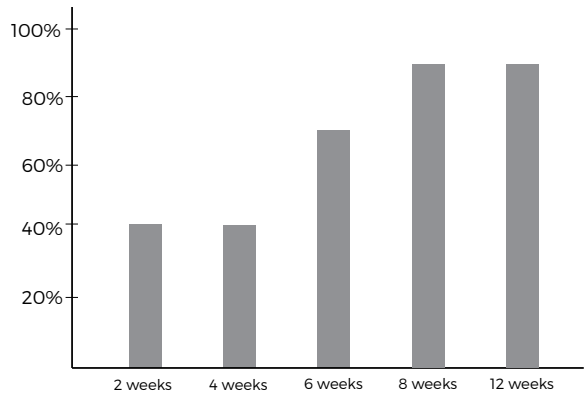
#### Decrease in Length and Depth of Lines and Wrinkles



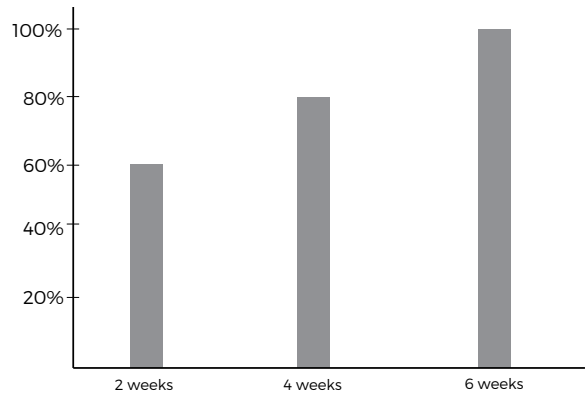
#### Increase in Skin Luminosity



**Evening of Skin Tone and/or Lessening of Age Spots**



**Increase in Skin Firmness**



STUDY SUBJECTS – BEFORE AND AFTER PHOTOS

**Improvement in Fine Lines, Wrinkles**



**Improvement in Age Spots, Lines, and Increase in Facial Volume**



BASELINE



8 WEEKS

**Improvement in Lip Lines**



BASELINE



2 WEEKS



### Improvement in Photodamage



BASELINE



12 WEEKS

### DISCUSSION

Significant visible improvement was seen in all subjects. The present formula has several advantages over other retinol formulas. It is more hydrating, leading to increased skin firmness and less incidence of retinoid dermatitis. Because the glyco- and phospholipids provide an occlusive base for the retinol, earlier clinical improvement was seen, presumably due to the enhanced percutaneous absorption of retinol.

Although it is well documented that retinoids lessen thickness of stratum corneum as they normalize and thicken viable epidermis, little attention has been given to barrier repair with retinoid use. The glyco- and phospholipids in the present formula address these issues, leading to high levels of tolerability and compliance associated with dramatic clinical improvement in major markers of photodamage.

### REFERENCES

- [1]: Kligman AM, Grove GL, Hirose R, Leyden JJ. **Topical tretinoin for photoaged skin.** J Am Acad Dermatol. 1986;15(4 Pt 2):836-859.
- [2]: (2) Reza Kafi, MD, Heh Shin R. Kwak, MD, Wendy E. Schumacher, BS, Soyun Cho, MD, PhD, Valerie N. Hanft, MD, Ted A. Hamilton, MS, Anya L. King, MS, Jacqueline D. Neal, BSE, James Varani, PhD, Gary J. Fisher, PhD, John J. Voorhees, MD, FRCP, Sewon Kang, MD. **Improvement of Naturally Aged Skin With Vitamin A (Retinol).** Arch Dermatol. 2007;143(5):606-612. doi:10.1001/archderm.143.5.606.

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# ADVANCED RETINOL - FAQs

## 1. What is Advanced Retinol?

Advanced Retinol is a new rejuvenating serum that combines 0.5% all-trans retinol with glycolipids and phospholipids, the skin's natural moisture barrier components. This highly potent Vitamin A serum results in substantial visible improvement and minimal peeling and redness.

Advanced Retinol:

- Increases skin vibrancy and luminosity
- Lessens the appearance of age spots and uneven pigment
- Lessens depth and length of lines and wrinkles
- Increases skin firmness

## 2. What improvement is seen when skin treated with retinol is biopsied?

Retinol is widely recognized as the most effective topical ingredient for aging and UV-damaged skin. Histologically, we see the following changes in skin treated with retinol:

- Thickening of epidermis
- Lessening (normalization) of stratum corneum
- Thickening of dermis
- Increase in elastic fibers
- Increase in dermal collagen

## 3. What is retinoid dermatitis and how does Advanced Retinol minimize it?

Retinoid use is associated with erythema, dryness, scaling, pruritus, and variable degrees of irritation. This phenomenon, called retinoid dermatitis, has been reported to occur frequently with topical tretinoin and has been associated with other forms of topical vitamin A, including retinol, retinyl palmitate, and retinoate. Clinicians attribute these side effects to loss of stratum corneum lipid content. Advanced Retinol combines 0.5% retinol with glycolipids and phospholipids to provide lipid replacement along with the benefits of 0.5% retinol, minimizing the risk of retinoid dermatitis.

## 4. What are glycolipids and phospholipids?

These naturally occurring water trapping molecules make up the barrier function of healthy skin. They form a layer of protective fats that are abundant in a newborn baby's skin, but are diminished by sun exposure, age, and extensive exfoliation. Lipid replacement increases skin hydration and smoothness and repairs the protective barrier function to trap in water.

## 5. What visible anti-aging benefits were noted by Advanced Retinol users in initial clinical testing?

Visible improvement was noted by all testers within 14 days, and optimal results were seen as soon as 8 weeks.

At 2 weeks:

- 100% of testers noted lessening in the appearance of lines and wrinkles
- 90% noted evening of skin tone
- 100% noted increased skin vibrancy and luminosity
- 70% noted an increase in volume of the skin

At 8 weeks:

- 90% showed a decrease in age spots
- 100% showed a reduction in the number, length, and depth of lines and wrinkles
- 100% showed increased luminosity

## 6. Will Advanced Retinol make the skin sun sensitive?

Retinol is a sun sensitizing ingredient. Use SPF 30 or greater every morning.

## 7. Can acne patients use Advanced Retinol?

Yes, Advanced Retinol is safe for acne patients. The product can help to unclog pores, preventing breakouts and increasing the efficacy of other targeted acne products.

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