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FINANCIAL & CONTENT DISCLOSURE: : At the time of publication, Richard D. Gentile, MD, MBA was a Medical Advisory Board member, consultant, and clinical research investigator for Apyx Medical and received compensation in the form of Apyx stock and hourly compensation. J.D. McCoy, NMD is a consultant for Apyx Medical. Apyx Medical provided scientific material to the author from internal studies on the Renuvion technology. The opinions contained herein are those of the author and do not necessarily represent the official position or policies of Apyx Medical, Inc. The author has not received any compensation for this article.

MANUFACTURING DISCLOSURE: Apyx Medical manufactures and owns the Renuvion/J-Plasma technology discussed in this article.

INDICATIONS FOR USE & INTENDED USE DISCLOSURES:

- The Renuvion® Dermal System is an electrosurgical device for dermatological procedures for the treatment of moderate to severe wrinkles and rhytides, limited to patients with Fitzpatrick skin types I, II or III. The treatment is achieved through controlled heating of the outer layers of the skin so that part or all of the epidermis becomes non-viable and there is controlled thermal modification to the underlying dermis.
- Apyx Medical wants to present you with current scientific discourse. Specific usage outside of the cleared indications may not be safe or effective.

RISKS:

- Risks associated with the use of the Renuvion Dermal System include but are not limited to hypertrophic scarring, milia/acne, telangiectasia (spider veins), skin discoloration/hypopigmentation, dormant infection reactivation, infection, bruising or bleeding. Warning: Application of more than one treatment pass in the perioral area, on the forehead, and along the jawline has been associated with hypertrophic scarring.

As with any procedure, individual results may vary. As with all energy devices there are inherent risks associated with its use, refer to the IFU for further information.

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Pulsed and Fractionated Techniques for Helium Plasma Energy Skin Resurfacing



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KEYWORDS

- Helium plasma energy skin resurfacing • Techniques • Pulsed • Fractioned
- Renuvion J-plasma laser skin rejuvenation

KEY POINTS

- Energy-based skin rejuvenation has, like other forms of aesthetic treatments, the capability of achieving desirable end results.
- These end results must be balanced with the degree and duration of morbidity, which affect recovery from treatment.
- Renuvion skin resurfacing protocols include a free hand approach and we describe our preferred approach of pulsing and fractionating the helium plasma resurfacing energy.

ENERGY-BASED SKIN REJUVENATION

Energy-based skin rejuvenation/resurfacing uses various forms of energy delivery to produce heat in the epidermis and dermis, in a controlled dose-dependent fashion. Heat produced from treatment can allow for precision tissue ablation or subablative changes with inflammatory remodeling of the reticular dermis, while limiting collateral thermal damage. The ideal outcome from energy delivery is a safe wound healing response with remodeling of tissue that improves a multitude of age-related changes: dyschromia, rhytides, elastosis/sagging, hydration, pore size, texture, and potentially volume loss. A new option for ablative skin rejuvenation Renuvion (Apyx Medical, Clearwater, Florida) was introduced in 2012. This device operates with a proprietary balance of helium plasma and radiofrequency (RF) and, unlike many skin rejuvenation devices that operate under pulsed duration exposures, the Renuvion can be used in continuous painting mode or intermittent pulsed technique mode. This article discusses a

pulsed technique option for using Renuvion for ablative skin rejuvenation that the senior author (RDG) has developed and used since 2016 exclusively for his Renuvion skin rejuvenation patients. The options for fractionating the energy coming from this device also are reviewed in a technical description.

METHODS OF ENERGY-BASED SKIN REJUVENATION

The market for nonsurgical, energy-based facial rejuvenation techniques has increased exponentially since lasers were first used for skin rejuvenation in 1983 and the concept of selective photothermolysis was presented.¹ Advances in this area have led to a wide range of devices that require the modern facial plastic surgeon to have a large repertoire of knowledge. Three broad categories of technology are leading non-energy-based rejuvenation technology: lasers, light therapy, and non-laser-based thermal tightening devices. Laser light therapy has continued to

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