At-home radiofrequency devices

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The field of body contouring and tissue tightening has expanded over the years, with many new devices appearing on the market that utilize radiofrequency (RF) energy to tighten and rejuvenate the skin. What originally began with a single monopolar RF device has progressed to a world in which there are skin-tightening devices that use bipolar energy and tripolar energy, as well as monopolar, and newer machines that boast five and eight poles of RF energy.

In addition to in-office radiofrequency devices, at-home devices are now available.

Radiofrequency energy uses the tissue’s resistance within the various layers of the skin to transform the RF energy given to the skin into thermal energy. This process induces collagen remodeling and neocollagenesis, resulting in skin tightening. Since RF energy produces an electrical current instead of a light source like lasers, tissue damage can be minimized, and epidermal melanin is not targeted or typically damaged. Therefore, RF energies can be used for patients of all skin types and colors. Adverse events to RF therapy in general may include pain, erythema, swelling, and rare reports of burns or fat atrophy with first-generation devices.

Many at-home devices delivering RF energy have been developed and are now on the market for skin tightening and rejuvenation. These devices range in cost from about $30 to more than $1,000, and are marketed for skin tightening as well as body contouring. Most machines require multiple uses, daily or weekly, to achieve desired results, compared with in-office devices that are typically used once, or not more than once every 6 months. A recent study published in the Journal of Drugs in Dermatology of a newer at-home device that uses phase-controlled multisource radiofrequency technology found statistically significant improvement using a Fitzpatrick wrinkle and elastosis scale of 62 patients when pre- and post-photographs of 62 patients were evaluated by three independent board-certified dermatologists.

At-home devices do not deliver energies as high as in-office devices, and no head-to-head studies comparing in-office versus at-home RF devices are currently available. As even in-office radiofrequency device results can be subtle, or occur over 6 months, patient expectations should be managed, and clinicians should be realistic when counseling patients about the use of these devices. Patient selection is key for successful therapy. If skin laxity is severe enough that the patient warrants a face lift or surgical correction to achieve the
desired results, then they may not be the best candidate for RF therapy alone.

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