

PRESTIGE LTF COMPETITIVE ADVANTAGES

RADIO FREQUENCY FAQ's

Radio Frequency is an alternating current (AC) with special properties. One such feature is **Capacitive Transfer**, or the ability of an RF current to appear to flow through paths that contain insulating material, like the insulator of a capacitor. The **Prestige RF** is a multiple frequency system utilizing **Capacitive Technology** to target selected tissue without allowing an electric current to flow through the body.

RF and Tissue Heat

The thermal effect of RF current on tissue depends on the electrical properties of the targeted tissue, which also determines depth of heat in tissue. Electrical properties in tissue are measured by its impedance, which is related to the hydration and thickness of the tissue. The frequency used also plays an important role in heat generation. As the frequency increases, penetration will improve and heat will be generated at greater depths.

Tissue with high water content has the highest conductivity, while bone has the lowest. **RF does not penetrate into bone.** The outer layer of the epidermis is primarily keratin with very low water content. RF does not generate heat in the outer epidermal layers, preventing thermal damage to the epidermis and eliminating the need for skin cooling or anesthetics.

Resistive vs. Capacitive Technology

RF current can be delivered using **Resistive** or **Capacitive** Technology. **Resistive Technology**, used in many RF systems, has current flowing from the hand piece through the body to a ground electrode. **There is electric (RF) current flowing through body tissue and contact resistance at the skin surface can result in skin burns.** **Resistive Technology** systems using low frequencies (RF) of .5 to 1.0 MHz are also used as Dermal Recuperators in physical therapy to heat muscle tissue and relieve joint pain.

The use of **Capacitive Technology** in the **Prestige RF** system **quickly and safely** heats dermal and subcutaneous tissue without damaging the epidermis or passing an electric current through the body. Because of Capacitive Technology a magnetic field is created between the insulated hand piece and ground electrode. This AC magnetic field acts on fluid rich tissue, creating molecular vibrations in water molecules that generate deep, controlled heat. RF energy can heat tissue at 15 - 20 mm, reaching subcutaneous tissue. Tissue temperature can be quickly elevated in the fluid rich, adipose tissue. The RF energy from **Capacitive Technology** **generates heat from the inside out, preventing thermal damage to the epidermis and eliminates the need for cooling devices or use of anesthetic.**

Controlling Depth of Treatment Heat

Depth of heat in the **Prestige RF system** is regulated by the surface area of the treatment hand piece. The heat generating field of energy is primarily concentrated under the hand piece. A larger diameter hand piece has a larger field of energy that extends deeper into the tissue than a smaller diameter hand piece. The concentration of this field of energy drops dramatically as the field extends towards the ground electrode where there is not enough energy to raise tissue temperature.

The smaller hand piece has a heat inducing energy field that extends into dermal tissue, resulting in new collagen stimulation and reordering of existing collagen. The larger hand piece will stimulate collagen production and also has enough heat depth to reach subcutaneous tissue. High enough sustained heat in subcutaneous tissue will break down the triglycerides in adipose cells into small enough molecules that can be released through the cell membrane. Three Prestige hand pieces are available: a facial, a body and pencil probe for use around the eyes and nose.

Mechanism of Action: Radio Frequency vs. Laser

Radio Frequency has **3 Mechanisms of Action** affecting collagen production, skin tightening and adipose tissue. The **1st Action** is a targeted attack on water within the cell. This makes RF a highly selective treatment for adipose tissue. The **2nd Action** is an inflammatory response created in the microvascular system that causes erythema and results in the release of cytokines. Cytokines effect on fibroblasts stimulates the formation of new collagen. The **3rd Action** is the reordering of existing collagen fibers by the heat.

Low Level Lasers (LLLT) will not reach the subcutaneous adipose cells.

Prestige Questions:

Who are candidates for a Prestige treatment?

30 – 65 year old patients show the best results. Collagen production drops as you age. Changes in lifestyle are also important. Continued exposure to smoke and sun will shorten and diminish treatment responses.

What will the Prestige RF do for My Skin?

Wrinkles are seen as either passive or active. Passive wrinkles respond very well to RF treatments as opposed to active wrinkles. **Fine lines will disappear and deep lines will lose up to 75% of their depth.** Skin is tightened and there is a lifting effect from the tightening.

Results are as follows:

After 1st Treatment: Softening and smoothing of the skin. Improved skin quality

After 2nd Treatment: Tightening of the skin due to reordering of existing collagen

Generally the patient will receive 6 treatments for the face. The first 4 are done every week and the 5th and 6th treatment can be done every two weeks. It takes 60 days to see the first new collagen production through fibroblast stimulation. There will be some edema for the first 2 ó 3 days that hides the fine lines. The fine lines will return after the swelling is reduced until they have completed their second treatment.

What can the patient expect after a treatment?

There is no post treatment recovery time. There will be a 2 -3 day period of slight erythema that hides fine lines before the lines return as swelling is reduced. After the 2nd treatment there will be a permanent reduction in wrinkling and skin begins to tighten.

How many treatments will I need?

Tightening and wrinkle removal on the face requires 5 to 6 treatments. The first 4 occur once a week and then treatments are every two weeks. The body requires more treatments than the face. The range depends on body fat and skin laxity. 12 ó 16 treatments are typical with significant results seen after the 5th treatment.

How long will my results last?

Part of the answer lies in lifestyle changes. Wrinkling is due in large part to oxidative stress from exposure to sun, smoke, stress and diet. If these factors are not reduced, the underlying causes of skin damage will create new damage. **Treatments will give long term results that may require a short maintenance program after approximately 6 – 12 months.**