

## **Nonsurgical skin-tightening of the face, neck and body - an update on new Ultrasound techniques**

**Micro-focused Ultrasound ( MFU )** initially, and now the addition of **high-intensity focused Ultrasound ( HIFU )** have brought very significant advances in nonsurgical skin-tightening.

MFU gives penetration up to 5 mm for mid to deep dermis and subcutaneous tissues in the face and neck while HIFU penetrates up to 13 mm, with application in the abdomen trunk and limbs.

The focused ultrasound heats small, discrete areas up to 65°C, producing " Thermal Injury Zones " (TIZ ) which cause collagen denaturation and contraction, resulting in wound healing and new collagen formation. The focused ultrasound passes harmlessly through the epidermis and superficial dermis, permitting the focal point to target mid and deeper dermis and subcutaneous tissue, with penetration depending on the transducer used.

In contrast to standard medical imaging ultrasound, focused ultrasound uses much lower energy (0.1 to 1.5 Joules ) to avoid cavitation or cell disruption, with the action based only on the heat produced.

### **Treatment details**

Cold gel is applied over the area to be treated and the treatment hand piece is held parallel to skin and fired and then moved to the adjacent untreated area.

Treatment of the neck takes about 30 minutes and of the face and neck about 45 minutes. Treatment involves the use of three transducers for penetration from deeper to superficial. Discomfort is more with deeper penetration and pre treatment analgesia is useful. The discomfort, while easily tolerated, can last up to 2 weeks. Erythema after treatment lasts for a very limited time, and there is no downtime after treatment.

### **Effects of treatment**

Will be noticed in 6 to 8 weeks and will continue to improve, for the first six months and last 2 to 3 years.

### **Choice of patient**

This is not a substitute for surgery - rather it is for those who have a problem with sagging skin but not bad enough for surgery.

### **Potential side effects and complications**

Transient tingling of skin due to stimulation of sensory nerves in the treated areas can last up to 2 weeks.

For more information, please feel free to contact me.

Chandran Arianayagam