

# SPRING a time for REJUVENATION

HERE'S THE **BEFORE**  
LOOK INSIDE FOR THE AMAZING AFTER!



Center for Facial Appearances

# newsletter

## Innovation

By John McCann, MD, PhD

### Ultherapy™: Using sound to improve appearances

There are many medical devices that have been invented to tighten the deeper layers of the skin but they have all suffered from one of two problems: too much recovery, or too little result. A new technology called Ultherapy™ has recently been introduced which overcomes these problems.

#### Too Much Recovery

In the too much recovery category, we have nearly all forms of using a laser to vaporize the outer layer of the skin so that when the skin heals it will be smoother. Examples are ablative CO2 skin resurfacing and erbium laser skin resurfacing. These procedures have often been successful in smoothing and tightening the skin but suffer from long recovery periods when new skin is growing over the area of vaporized skin. With all of these procedures it was noted that with greater degrees of vaporization of the skin deeper wrinkles could be smoothed but at the cost of having a very red face for months and sometimes years later developing loss of skin pigmentation. There is also risk that the skin will be vaporized too deeply causing scarring or that the skin will become infected as immediately after vaporization the protective outer layer of skin is gone. The best compromise

in the category has been fractional laser resurfacing which leaves most of the skin intact. Vaporizing a small percentage of the skin area has resulted in much faster recovery but has markedly diminished the amount of improvement one can achieve in deeply wrinkled skin.

#### Too Little Result

In the too little result category, we have all of the forms of using radio-frequency energy (RF) to heat the deeper layers of the skin to the point that it would tighten without causing any damage to the skin surface. An example of this technology is Thermage™. The RF procedures have been safer than ablative skin resurfacing but have suffered from not creating as much tightening of the skin and in many cases causing no measurable result. When the technology has been pushed by delivering higher levels of energy in hopes of achieving a result, it has at times resulted in an intolerably painful procedure or, worse yet, scarring.

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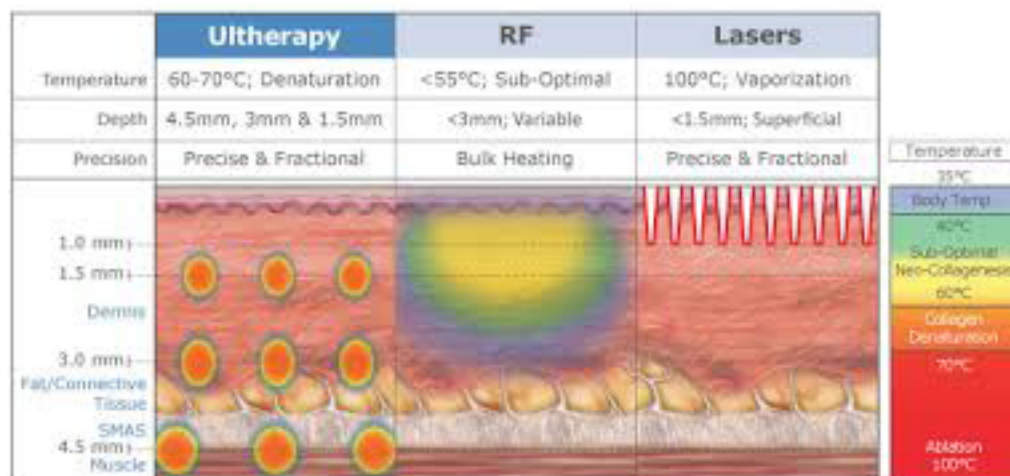
take a look  
**INSIDE:**

What's  
Happening

Relieving  
Migraine

Ultherapy™





**“Ultherapy™**  
is the only way to  
non-invasively lift  
and tighten the face,  
and it may prove  
to be the best way  
to non-invasively  
improve skin texture.”

-Dr. McSann

#### Ultherapy™

A new break through technology called Ultherapy™ has been introduced. Ultherapy™ is the only FDA cleared technology for lifting facial skin. It can be used to tighten the skin resulting in a non-surgical non-invasive brow lift, face-lift, or neck lift. It cannot replace the corresponding surgical procedure as the magnitude of lift is not as great as what can be achieved with surgery. For a younger patient with mild to moderate skin laxity it can achieve excellent results. It also works well for patients who have had surgery and are developing some mild to moderate laxity as the aging process marches on. It can be combined with other surgical modalities to reduce the amount of surgery done such as when the face is lifted with a miniatur lift while the neck is tightened with Ultherapy™.

It is completely different than laser or RF as the energy that is used in Ultherapy™ is sound energy. Sound energy (ultrasound) is able to penetrate to great depths. For instance, eye doctors use ultrasound to measure the length of the eyeball and cardiologists use ultrasound to measure the movements of the heart deep inside the chest. So getting sound to penetrate a few millimeters beneath the skin is easy, where as with laser energy this can only happen if the superficial layers of skin are first vaporized. The Ultherapy™ device focuses the sound energy at specific depths beneath the skin, which heats the tissue to temperatures high enough to make tiny cautery marks beneath the skin. When the body heals itself over a period of several months after the procedure, the collagen remodels and the skin is tightened. Ultherapy™ does not impact the superficial and visible portion of the skin so there is no visible sign of having treatment until months later when the skin tightens. Ultherapy™ has been found to be much more effective than radiofrequency procedures and is very different than laser procedures which require substantial times to recover.

#### Ultherapy™ Experience To Date

To date I have gotten a lot of experience with the Ultherapy™ technology which creates cautery marks 3 mm and 4.5 mm beneath the skin and have found it

effective for lifting and tightening the forehead, face, and neck. It causes about one-fourth the tightening and lifting one can achieve with surgery, and costs about one-fourth as much as surgery; and, unlike surgery, it does not require a trip to the operating room or weeks off for recovery. The 3 mm and 4.5 mm deep cautery marks do not alter the pigment or texture of the skin, but in just the last few days a technology that makes cautery marks more superficially, only 1.5 mm beneath the skin, has been introduced. I have already found this to improve skin texture in the décolletage area (chest) and will likely be used to improve skin texture (wrinkles) on the face.

#### Other Effective Treatment for Fine Lines and Skin Pigmentation

Some other procedures that also improve fine lines, brown spots, and red spots of the skin include medium depth TCA peels and Intense Pulse Light Therapy (IPL).

Medium depth TCA chemical peels are typically used at the time of a surgical procedure such as blepharoplasty or face-lift. It takes about 2 weeks to recover from the TCA peel and a similar amount of time to recover from surgery so the TCA peel is not rate limiting for recovery. With a TCA peel the skin does not slough off until days after the procedure such that new skin is already growing underneath before the old skin sloughs off. Because the patient is never without skin, they do not have as much risk of infection and the skin does not weep and ooze as it does after being vaporized by a laser. TCA causes the skin to slough off at the dermal epidermal junction so it can improve skin texture and remove blotchy brown skin pigment but will not tighten or lift the deeper layers of skin. TCA peels tend to work synergistically with surgery as surgery can tighten and lift skin but is not effective at improving skin texture or altering skin pigmentation.

If the patient is not undergoing surgery, then I prefer Intense Pulse Light Therapy (IPL) as this requires no

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recovery and is effective at getting rid of brown spots like the TCA peel. IPL can also treat redness of the skin such as the skin changes which occur in Acne Rosacea. IPL does not improve skin texture like a chemical peel, but it requires no recovery.

#### Summary

In my practice the TCA peel is used to improve fine lines and brown spots synergistically with surgery. IPL is used to improve brown and red pigmentary changes and requires no recovery. Prior to Ultherapy™ we did not have a non-invasive method to lift and tighten skin as this required surgery. We also did not have a way to improve deep wrinkles that did not require months of recovery. Ultherapy™ is being used to non-invasively lift and tighten the forehead, face, and neck. Ultherapy™ is also being used to improve skin texture in the chest and will likely be used to improve both deep and superficial wrinkles on the face. Ultherapy™ is the only way to non-invasively lift and tighten the face, and it may prove to be the best way to non-invasively improve skin texture. Ultherapy™ is a break through technology that will remain an important part of the armamentarium of procedures used at the Center For Facial Appearances as we continue to push the envelope in facial rejuvenation.



## SPRING *a time for* REJUVENATION

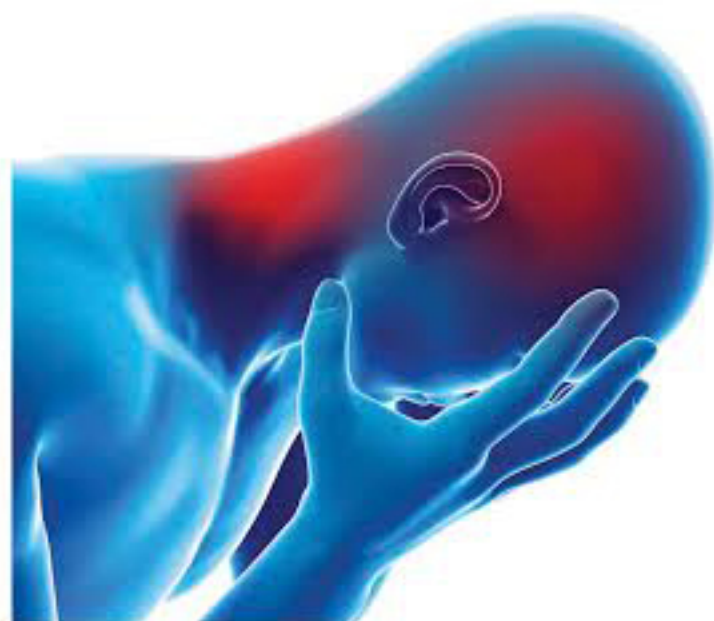


*"My sun sets  
TO RISE AGAIN."*

Robert Browning







# Migraine Headache Prevention with Botox™

By John McCann, MD, PhD

## Discovery of Botox™ Benefit for Migraine Prevention

Many years ago when treating cosmetic patients with Botox™ to reduce wrinkles in the forehead and eye-brow region some patients began to note an improvement in headaches which lasted as long as the Botox™ was effective for reducing wrinkles. I used to think the overlap was atypical but it is not surprising when you realize that 18% of women suffer from migraines. An over abundance of these patients collected in my practice because they liked both the reduction in wrinkles and the reduction in headaches. Eventually this was studied and it was found in double-blinded placebo controlled studies that Botox™ reduces the frequency and severity of chronic migraine headaches.

## Insurance Coverage

The major hold back to the treatment for years was that insurance companies would not pay for it. Now most insurance companies will pay for Botox™ treatment for headaches if the patient has what is defined as chronic migraine headaches and if they have failed standard treatment for chronic migraine headaches.

## What is a chronic migraine headache?

When screening for chronic migraine headaches the best question to ask patients is "how many days per month do you not have a headache." If the answer to this question is less than 15 days per month, then they will likely meet criteria for chronic migraine headache treatment. On the days they do have headaches, the headaches need to last 4 or more hours and at least 8 days of the month the headache needs to be associated with classical signs of migraine including: nausea, vomiting, sensitivity to light, or sensitivity to sound.

## Other insurance company requirements

Insurance companies do not consider Botox™ to be a first line of treatment for chronic migraine headache

and currently many have other exclusion criteria. If the migraines are causing missed days at work or interfering with other activities of daily living, this is important to note. Many insurance companies require that the patient has had a neurological work up including an MRI scan of the brain, which most of these patients have had. Nearly all insurance companies require documentation of a trial on other types of medication for migraine prevention with failure of at least three medications from at least two different classes with each treatment trial lasting at least 60 days. This is the hardest criterion to meet because patients have trouble recalling the names of the various medications, and I often have to ask them to elicit the help of their pharmacist in documenting prior treatment history. (See table on page 4.)

## Experience to date with treating Chronic Migraine

The initial clinic trials with Botox™ showed as much as a 60% reduction in the number of headache days. My own experience has been better than this with at least three of four patients having a marked reduction in the frequency and severity of headaches. I have found it very useful to have patients keep a headache diary that in most cases clearly documents resolution of headaches after each Botox™ treatment and recurrence at the end of the 90-day cycle. Most impressive of all is the impact of the treatment on the patients' ability to function. Many of these patients had trouble keeping a job because they missed so many days at work or had poor job performance because of the headaches. The treatments have helped them be at work more often and perform better and be more functional family members. Most of these patients were pretty hopeless prior to Botox™ treatments. They had tried nearly every known treatment for migraine yet still had a headache more than half of their waking hours. Botox™ treatments have undoubtedly improved the quality of life for

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## Chronic Migraine

is defined as **15 or more headache days a month**, with headache lasting **4 hours a day or more**, and with at least half of the headaches being migraine.



these patients. I have found the efficacy of Botox™ amongst such a treatment resistant population to be truly remarkable.

### The Future of Botox™ for Migraine Prevention

I have found Botox™ to be a very safe drug. I have used Botox™ more than any other medication for more than 20 years and have yet to encounter a single patient who had an allergy or any other form of systemic toxicity from treatment. When compared to every other drug in the Migraine Prevention Table, Botox™ has by far the lowest degree of systemic toxicity. It is true that Botox™ can cause local ocular side effects such as a droopy eyelid but this is not likely when using Botox™ for the treatment of migraine as Botox™ only spreads about 1 cm from where it is injected and the sites of injection for migraine are greater than 1 cm from the eyelid and orbit. It is reasonable to hypothesize that if Botox™ was a first line drug for migraine prevention it would be even more effective as we would be treating a less treatment resistant population of patients. So Botox™ is likely the safest and most efficacious treatment for migraine prevention. Migraine

headaches cost 13 billion dollars in lost worker productivity per year and cause 113 million lost workdays per year. Health insurance is largely purchased by employers who are the ones suffering from these losses. I would not be surprised if we saw a demand by employers that some of the exclusion criteria be loosened in order to keep the work force productive and at work. This also could improve the quality of life for many of the 14 million patients that suffer from chronic migraine headache who have not yet received effective treatment.

## Migraine Prevention Medication Table

| DRUG CLASS       | EXAMPLE DRUGS   |
|------------------|---|
| ACE inhibitors   | losartan, valsartan, lisinopril   |
| Anti-depressants | amitriptyline, clomipramine, doxepin, mirtazapine, nortriptyline, protriptyline |
| Anti-epileptics  | divalproex, gabapentin, topiramate, valproic acid                               |
| Beta blockers    | atenolol, metoprolol, nadolol, propranolol, timolol                             |
| Calcium channel  | diltiazem, nifedipine, nimodipine, verapamil                                    |



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**REJUVENATION**



# WHAT'S HAPPENING:



## New Orleans Academy of Ophthalmology

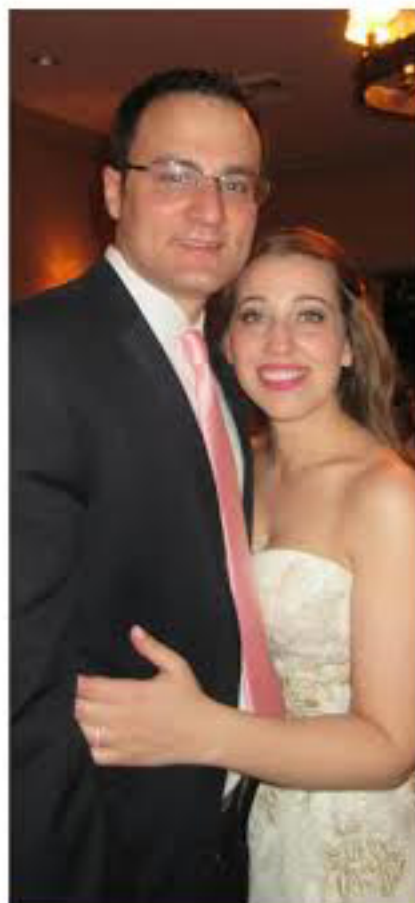
As a guest speaker in Oculoplastics at the New Orleans Academy of Ophthalmology held in New Orleans January 30th - February 1st, Dr. McCann was able to associate and share knowledge with the leaders in the Oculoplastics field and had the honor of being presented a Certificate of Recognition by the City of New Orleans Mayor, Mitchell J. Landrieu. He also had the opportunity to associate with one of his former fellows, Michael Worley, MD, who is currently splitting his time between University practice at Louisiana State University and setting up private practice.

## University of South Florida

Dr. McCann was honored to be the guest speaker for the West Coast of Florida Monthly Regional Ophthalmology Meeting hosted by the University of South Florida Eye Institute and Grand Rounds on March 19, 2015 in Tampa, Florida. He presented four talks at Grand Rounds entitled:

- 1) The Aging Face: Anatomy, Physiology, and Treatments
- 2) Rejuvenation of the Upper Lids and Brows: Mechanisms and Interactions
- 3) The Polar Approach to Facial Rejuvenation
- 4) Forehead and Midface Rejuvenation via Eyelid Incisions: Specific Techniques

While visiting, Dr. McCann had the pleasure to renew friendships & share with another former fellow, Ilya Leyngold, MD, now serving on the faculty in Oculoplastics at the University of South Florida.



## Congratulations

Last newsletter we were able to introduce Dr. Jonathan Pargament, Dr. McCann's newest fellow. We are now excited to welcome his new wife, Laura Hanson, MD, to Salt Lake. Dr. Pargament and Dr. Hanson were married on May 9, 2015. Dr. Hanson will join Dr. Pargament in Utah the first of July and begin her Neuro-Ophthalmology fellowship. She comes from the Columbus, Ohio area and is currently finishing her residency in Ophthalmology at Cincinnati Eye. Congratulations! Welcome to Utah Dr. Hanson!



Center for  
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Appearances

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