MEDICAL*LiveWire*

AESTHETICS & COSMETOLOGY 2016

EXPERT GUIDE

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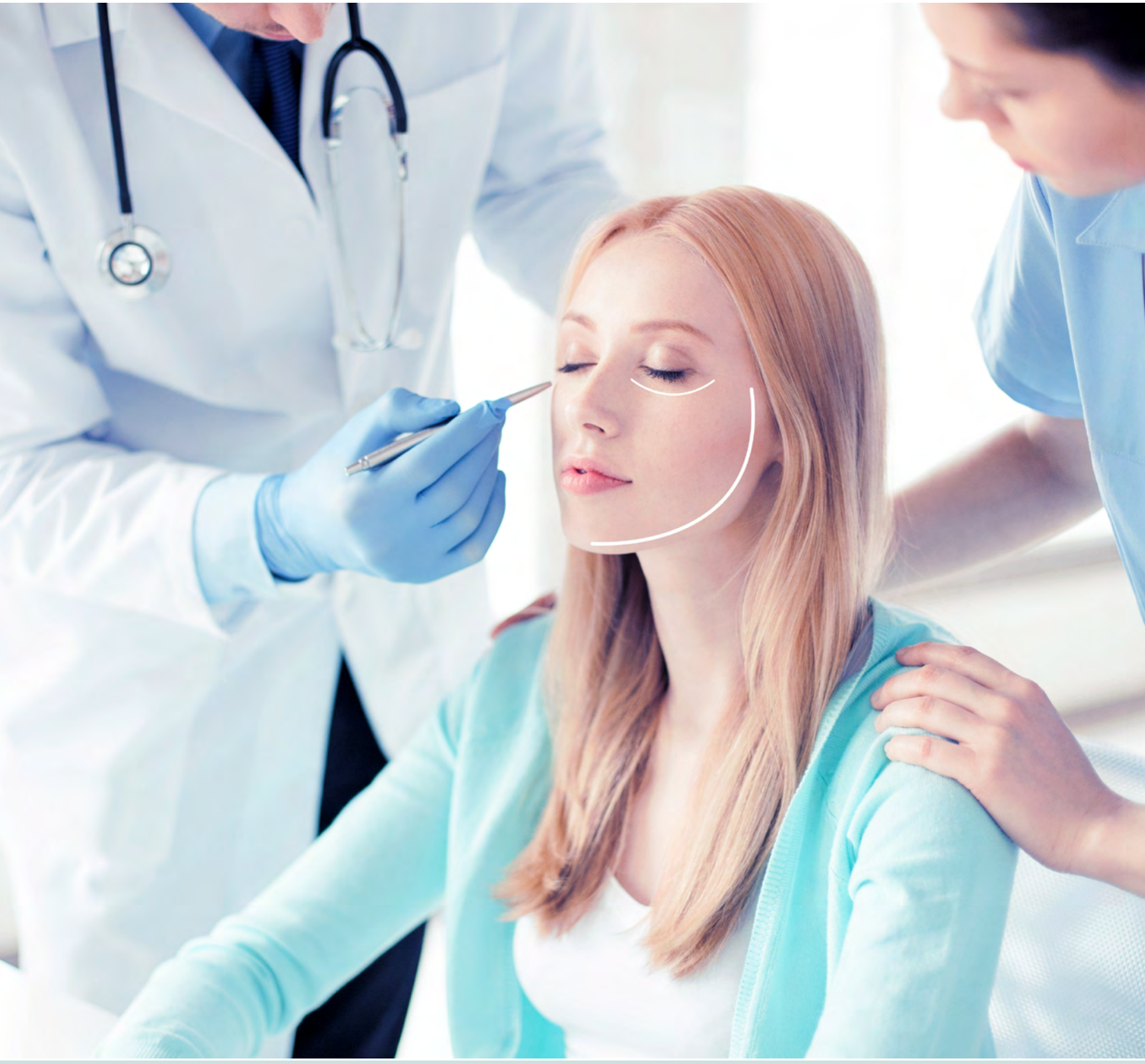

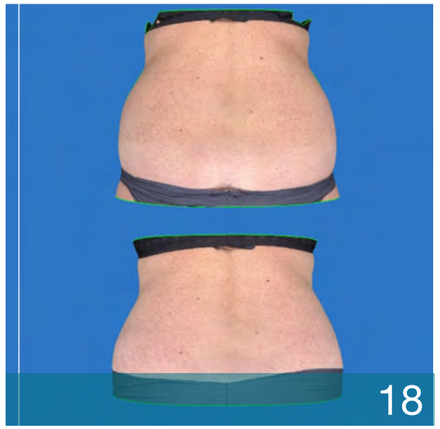

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Introduction

James Drakeford
Editor In Chief

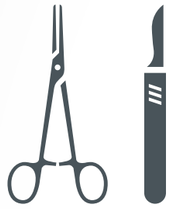
The growing popularity of cosmetic surgery procedures had taken a slight hit during 2014 following the scandal surrounding the botched procedures and faulty PIP breast implants. However, the industry underwent a quick resurgence last year, primarily resulting from a more educated public who have come to realise the superior long-term effects of surgical treatments versus less invasive methods. We have also seen an increase in regulation with doctors now being prevented from offering two-for-one deals and must also allow a minimum two-week cooling-off period before surgery or risk being struck off.

With over 51,000 Britons opting for cosmetic surgery in 2015, it's definitely been a record year for the industry. Overall, there was a 12.6% rise in invasive cosmetic procedures (with increased demand for ALL procedures). Meanwhile, new data released by the American Society of Plastic Surgeons (ASPS) show continued growth in cosmetic procedures over the last year, and a shift in the types of procedures patients have chosen since the start of the new millennium. According to the annual plastic surgery procedural statistics, there were 15.9 million surgical and minimally-invasive cosmetic procedures performed in the United States in 2015, a 2% increase over 2014.
Since 2000, overall procedures have risen 115%, but the types of procedures patients are choosing are changing.

"While more traditional facial procedures and breast augmentations are still among the most popular, we're seeing much more diversity in the areas of the body patients are choosing to address," said ASPS President David H. Song, MD, MBA, FACS. "Patients have more options than ever, and working closely with their surgeon, they're able to focus on specific target areas of the body to achieve the look they desire."

Europe

SNAPSHOT:
A RECORD YEAR
FOR UK COSMETIC SURGERY



51,000
Number of Britons opting for cosmetic surgery

12.6%
Rise in invasive cosmetic procedures

Slight increase on previous record of 50,122 in 2013

GENDER SPLIT

91% WOMEN
46,526 procedures

9% MEN
4,614 procedures

Cosmetic procedures in the UK by gender

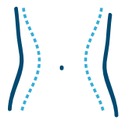
TOP 5 PROCEDURES

9,652 (↑ 12%)
Breast augmentation

8,689 (↑ 12%)
Blepharoplasty (eyelid surgery

7,419 (↑ 16%)
Face/Neck Lift

6,246 (↑ 13%)
Breast reduction

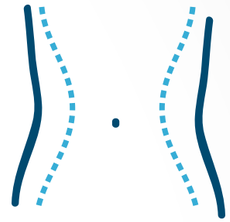


5,551 (↑ 20%)
Liposuction

WOMEN'S COSMETIC TRENDS

46,526 PROCEDURES
12.5% rise from 2014

MOST POPULAR: BREAST AUGMENTATION
9,642 (up 12%)

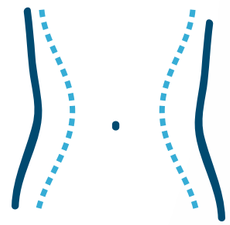


BIGGEST CHANGE: LIPOSUCTION
4,965 (up 20%)

MEN'S COSMETIC TRENDS

4,614 PROCEDURES
13.5% rise from 2014

MOST POPULAR: BLEPHAROPLASTY
976 (up 15%)



BIGGEST CHANGE: LIPOSUCTION
586 (up 20%)

X2

The number of men opting for Cosmetic Surgery has almost doubled in the past decade – having gone from 2,440 treatments in 2005, to 4,614 in 2015.

Source: British Association of Aesthetic and Plastic Surgeons (BAAPS)

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THE AESTHETIC SURGEONS
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The Facelift Transformation: Industry Developments & Best Practice Techniques

By Norman Waterhouse

Facelifting surgery has undergone both a revolution and an evolution in the last 25 to 30 years. Prior to the work of Mitz and Peyronie, which first highlighted the importance of the SMAS layer in re-suspending the musculature of the face, practically all facelifts were carried out simply by elevating a skin flap and re-draping it to take out the skin excess. Although in good hands this often produced excellent results there was a relatively quick relapse rate and the potential to over tighten the skin resulting in poor scars and less expression in the face. The SMAS facelift initially seemed to be the answer to this problem by taking the tension on the underlying muscular aponeurotic layer.

Over the following 20 years the number and variety of SMAS techniques was limited only by the number of surgeons prepared to find a new way to reposition or tighten the SMAS and publish it. I include myself in this number. Early SMAS lifts however were found to produce their own problems and re-directing the SMAS with an unnaturally lateral vector often gave rise to the so-called lateral sweep deformity which was very stigmatic of a SMAS facelift. There were also surgeons who argued that by tensioning the SMAS there was a tendency to flatten the face and ignore the natural "ogee" curve with prominent cheek bones and softer nasolabial folds.

There then followed a period where it seemed that the plane of facelift dissection got deeper and deeper. The work of Tessier in reconstructive surgery was adapted and popularised in aesthetic surgery by Darina Krastinova in Paris and the so-called mask lift enjoyed some years of popularity. It adhered to the idea that facelifting was not all about skin excision and that the improvement was achieved by re-suspending the entire face on the facial skeleton. I remember this era very well and was an enthusiastic proponent of the mask lift myself for particular cases. These included correction of problems related to lower eyelid surgery, transgender facelifts and so-called orthomorphic facelifts where the emphasis was on creating a better face shape rather than rejuvenating the face. At the same time a variety of deep plane facelifts also came into vogue.

It is interesting that now in the middle of the second decade of the 21st Century the popularity of many of these techniques has dwindled largely due to the extended downtime and facial swelling which can be protracted and last for several months. In addition in less

than expert hands the mask lift could often give a very stigmatic appearance of a different type to the over-pulled skin lift but stigmatic nonetheless.

So, following this period and a careful analysis of long-term results there has been a trend back to conservatism with facelift surgery and currently the strong emphasis is on the additional gestures of replacing volume in the face. The so-called lift and fill facelifts consist of some form of SMAS gesture but in conjunction with 20 to 30 ml of fat harvested from the abdomen or the thigh and prepared in a variety of ways and re-injected into the face with the idea of replacing the volume of youth.

The same trend to conservatism is, I think, also seen with contemporary surgery to the neck. Although the very extensive procedures, which involve opening the neck under the chin, removing the fat deep to the muscles, sometimes

"The benefits of the experience of the last 20 years are that experienced surgeons can choose from a variety of techniques that are designed specifically for each individual patient"

removing muscles and even part of the salivary glands, can produce a very sharp neck but again at the cost of an increased downtime and complication rate.

The ideal operation should be relatively straightforward to carry out and relatively easy for the patient to tolerate and return to normal activities within a few weeks. In addition it is desirable for patients to be able to recognise themselves and look refreshed and natural. I often think that facelifts are less about reversing the chronological age but more about improving the femininity and shape of a female face.

Male facelifts are subtly different but just as important to have a natural non-stigmatic result which means that modifications of scar design are employed.

The benefits of the experience of the last 20 years are that experienced surgeons can choose from a variety of techniques that are designed specifically for each individual patient. Using this principle I would still say that in my practice over 80-85% of patients will undergo a SMAS lift with some liposuction to the fat in the neck. The SMAS procedure will usually be a plication without removing any SMAS particularly if the face is thin although with a fatter face some SMAS may be removed. Although I often use some fat transfer I am generally very cautious in reflating the face with large volumes of fat. Although this can produce a full youthful volume it is often a very significant change in the patient's appearance which can be more than they would want. In my practice at the moment I will often use a little fat to augment the chin by a few millimetres and to help to clean the line of the jaw. I will also sometimes make the cheekbones look a little larger. However I rarely use more than 5-10 ml of fat at the same time as a facelift.

Scars have also changed in the sense that we now try to keep the scars to the smallest length possible. However I do think that it is important not to carry out a short scar facelift when there is a lot of excess skin in the neck or this can result in bunching of the scar behind the ear which takes a long time to settle down.

Lastly I am still a great advocate of gentle balancing lateral brow lifts for many patients who have facelifts as the overall effect is greatly enhanced by having balance throughout the face. The lateral brow lift is now a much smaller procedure than it used to be and I never remove muscles from in between the eyebrows.

Modern facelifting requires a great deal of experience in knowing what kind of results will be achieved by different gestures. Essentially it is always important to remember that a patient has a social, personal and professional life to return to and facelifts which are significant procedures need to be tailored to minimise the downtime. In this respect patients also have a responsibility to eat well and to avoid smoking and alcohol and dietary supplements that include active ingredients that impact on blood clotting.

A facelift only affects structural changes in the face caused by gravity. It is extremely important to take a holistic view about rejuvenation and to include skin care in the overall treatment. This often means a careful skin assessment prior to surgery and some tailored treatment either with antioxidants, gentle exfoliative treatments and pigment regulation. If we have learned anything over the last 25 years it is that an integrated holistic approach with the minimal surgical gesture possible is our aim. Strangely we have almost come full circle since the 70s in terms of the degree of surgery that is being carried out but with a much greater level of sophistication.

It is always difficult to know what the future holds and whether there will be further advances in surgical facial rejuvenation. My feeling is that most of the advances will be adjuvant treatments which improve skin quality and also help to maintain the results of surgery, either with some form of internal suture techniques or some form of externally applied energy that will maintain collagen production in the face. The rate of change is accelerating and the future is exciting.

Norman Waterhouse *graduated from Birmingham University in 1978. His early surgical training took place in Cambridge and Bristol and in 1982 he became a Fellow of the Royal College of Surgeons of England and the Royal College of Surgeons of Glasgow. His higher surgical training in Plastic Surgery was carried out in Bristol and London as well as periods spent at specialist centres in Bordeaux, Tokyo and Adelaide. In 1988 he gained the Specialist Fellowship in Plastic Surgery FRCS(Plast).*

He is a full member of the British Association of Plastic, Reconstructive and Aesthetic Surgeons, the British Association of Aesthetic Plastic Surgeons, The European Craniofacial Society, the International Society of Craniofacial Surgery and the International Society of Aesthetic Plastic Surgeons.

He is a former President of the British Association of Aesthetic Plastic Surgeons and a former President of the Royal Society of Medicine. He is included in the Specialist register established by the General Medical Council in 1995.

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Simon Eccles | Plastic Surgeon

Decision Making In Facial Rejuvenation

By Simon Eccles

The last 10 years has seen a huge increase in patients requesting facial rejuvenation. There are over 48,000 surgical procedures carried out annually in the UK, and this includes facelifts, eyelid surgery, and rhinoplasty (nose modifying) surgery. The range of treatments available to patients is bewildering, and the largest area of growth has been in the non-surgical aesthetic market. Complex facial surgical procedures still rate in the top 5 surgeries listed for men and women in the UK, but the non-surgical market has increased so that now it generates £3.6 billion a year.

Patients are subject to constant battering from the press, TV and celebrities, and the offer of 'quick fix' surgery and treatments. These offers seem appealing and low risk, but often this is not the case. Patients are left dissatisfied and unhappy, and do not achieve the results they seek. The department of Health has commissioned several reports to attempt to regulate non-surgical treatments, and ensure that those who are offering these treatments are adequately trained. This has not really had the effect that one might hope for, and the unwary patient may still not achieve the results that they desire despite spending a considerable amount of money. Likewise, the Royal College of Surgeons of England, supported again by the department of Health is going to introduce surgical standards for aesthetic surgery and this will provide a means of ensuring that your chosen surgeon is properly trained and has sufficient experience.

When choosing a surgeon, you should ensure that they are a member of a professional organisation such as BAAPS (British Association of Aesthetic Plastic Surgeons) or BAPRAS (British Association of Plastic, Reconstructive and Aesthetic Surgeons). Both of these organisations seek to ensure that their members are well trained and operate to the highest clinical standard.

I always see my facial aesthetic patients at least twice. The first consultation is a 'getting to know you' experience for us both, and the goal of this should be an understanding of what the patient wants to achieve. It also allows me to as the surgeon to examine them fully, and discuss how we may address their concerns. I encourage patients to bring photographs with them, and this can provide vital information and be very helpful in planning treatment, surgical and non-surgical. There is usually a 'cooling off' period between the appointments, and time for reflection by the patient and the ability to consider the surgery I have discussed.

It is not possible to design a universal facial rejuvenation process, but this needs to be highly individualised. It is important never to 'sell' an operation to a patient, and I think patients should be wary of this. My patients usually tell me that they want to look younger and not different, and for me this means facial rejuvenation. Patients are often surprised that I use surgical and non-surgical treatments, and I think now that many of my colleagues would advocate this. Nonsurgical treatments that I routinely carry out include use of Botox and fillers.

The only synthetic fillers I use are based on hyaluronic acid, and are semi permanent. By this I mean that they will if used correctly produce subtle changes in the shape of lips, nasolabial groves and cheeks, but their effects last for 6 months of so, and after this time will need to be repeated. Likewise Botulinum toxin, which has been used routinely in facial aesthetic treatments for 15 years only has a temporary effect, and may last for between 4 to 6 months.

These products offer very different things. Botox is used to soften creases or wrinkles in the skin, and is very effective around the eyes and forehead. It will, if used correctly still allow for movement of the eyebrows and forehead, but will give a softer appearance. Hyaluronic acid based fillers can treat deeper lines, particularly around the mouth, can fill out deflated lips, and fill out the cheeks. Again I always feel it is best to start subtly, and then add more if necessary. This may mean several visits, but I find my patients are happier, and I can achieve the results that they are seeking.

> *By tightening the deeper tissues of the face underneath the skin the SMAS, this can reposition the soft tissues and fat pads and will create a natural and more youthful look*

Most of the patients I see in my practice, however are seeking a more permanent solution to address their concerns, and come requesting facelift surgery. There has been a huge evolution in face-lifting techniques in the last 30 years, as we now understand the anatomy of the face in more detail, and understand what we need to do in order to reverse or halt the signs of ageing. The ageing face tends to deflate, giving a hollow and empty appearance to the midface, and a squaring off of the jawline, with the appearance of jowls. By tightening the deeper tissues of the face underneath the skin the SMAS (superficial musculoaponeurotic system), this can reposition the soft tissues and fat pads and will create a natural and more youthful look. It also addresses the looseness and sagginess of the neck that occurs with ageing. These procedures are often combined with eyelid surgery (blepharoplasty) and brow surgery, and it is important to harmonise the face.

I like to take photographs and use these to show my patients where the incisions will be placed, which areas I am going to address and demonstrate the improvements that can be made. I also make my patients aware of the healing time and risks associated with surgery. In planning surgery I like to emphasise that the healing time is just as important as the surgery, and to get a good result you must allow yourself a few weeks to recover from the surgery. I see all my patients until they are fully healed, and my nursing team will help them through the post-operative period.

Facial aesthetic surgery is a very rewarding process for the patient and the surgeon; I cannot stress enough how important it is to have a good working relationship with your patient. This will then lead to a successful outcome.

Simon Eccles qualified as a dental surgeon before undertaking his medical degree. He trained to be a plastic surgeon on London, undertaking fellowships in microsurgery, craniofacial and aesthetic plastic surgery. He has been a consultant craniofacial plastic surgeon at the Chelsea and Westminster Hospital for the last 10 years. He is a past President of the Royal Society of Medicine, and a surgeon working with the charity 'Facing the World'. His surgical interests are in paediatric and adult craniofacial surgery and in facial aesthetic surgery. He regularly teaches in aesthetic and craniofacial surgery, and recently organised the BAPRAS advanced course in Aesthetic plastic surgery in Manchester.

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KAZEM Aesthetica

"With the 3-in-1 CoolAdvantage applicator, CoolSculpting secures its position as the leader in non-surgical fat reduction"

Non-Invasive Body Contouring

By Dr. Farid Kazem

Introduction

The global demand for aesthetic procedures continues to grow considerably each year. The ageing "baby boomer" generation and the robust economy has led to ongoing growth in the aesthetic industry. In the US, more than $13.5bn was spent in cosmetic procedures in 2015, a $1.5bn increase from the previous years.[1] Patients cite a desire to appear more youthful, healthier, and need to remain competitive in the workplace as reasons for their surgical and non-surgical cosmetic expenditures.

While the majority of aesthetic procedures are surgical, non-surgical procedures accounted for 42% of the total expenditures.[1] With 22% increase in non-surgical expenditures compared to the previous year and 44% increase over the past five years, the demand for non-surgical alternatives is growing rapidly. Injectables, hair removal, and skincare are the most popular non-surgical procedures, but there is growing interest in non-surgical body contouring procedures. Liposuction remains the most popular surgical procedure and patients are increasingly asking for non-invasive options to avoid the surgical risks and downtime associated with surgery. Non-surgical fat reduction procedures increased 18.7% year over year and the demand is anticipated to increase.[1] At Kazem Aesthetica, I provide both surgical and non-surgical procedures to help patients achieve their aesthetic goals.

Non-Surgical Body Contouring

There is a wide array of methods for non-invasive body contouring. These energy-based methods include radiofrequency heating, non-thermal focused ultrasound, high intensity focused ultrasound, low level laser therapy, and external laser lipolysis. None provide the repeatable, reliable, dramatic results achieved by liposuction, but most patients don't want to undergo elective surgery. Some lack clinical studies and proven efficacy, some have moderate efficacy but poor patient tolerability, and some show occasional efficacy but poor reliability.

I've explored many innovative techniques at my practice and my chosen non-surgical body contouring procedure is cryolipolysis, which utilises controlled cooling to selectively target undesirable subcutaneous fat. Commonly known as CoolSculpting by ZELTIQ Aesthetics, the cryolipolysis procedure is the only safe, tolerable, effective, and reliable non-invasive body contouring procedure available. Patients come to my practice asking for the CoolSculpting procedure by name.

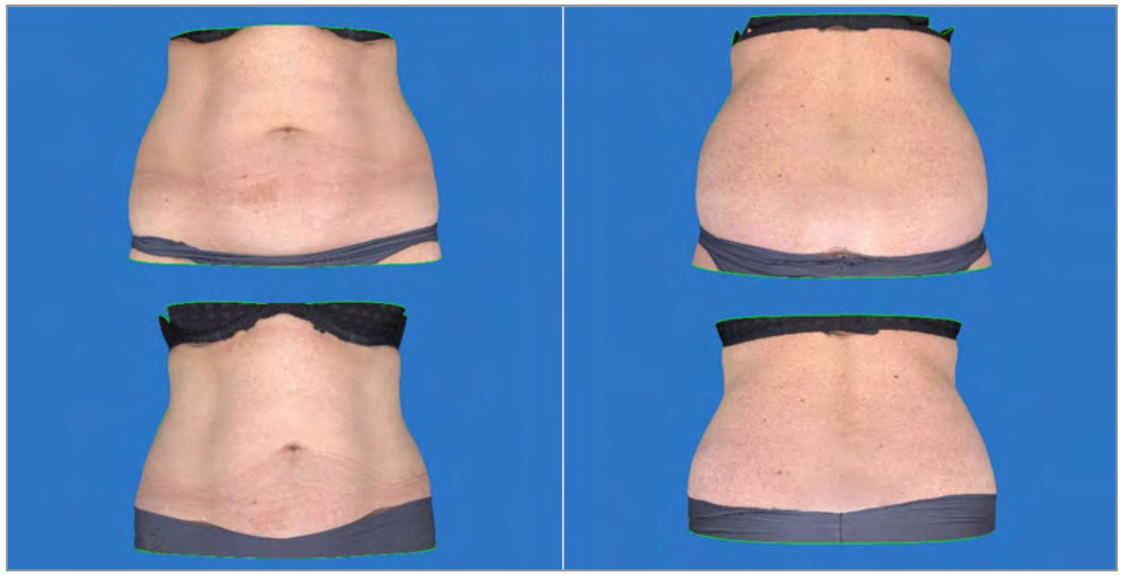


Figure 1: *CoolSculpting abdomen and flank treatment demonstrating the Treatment to Transformation protocol for dramatic fat reduction. Pre-treatment (top row) and post-treatment (bottom row). Procedure by Dr. Farid Kazem.*

CoolSculpting

The potential for cryolipolysis, controlled cooling to selectively target undesirable subcutaneous fat, was first recognized by researchers R. Rox Anderson, MD, and Dieter Manstein, MD, PhD, from the Wellman Center for Photomedicine at Massachusetts General Hospital, a teaching affiliate of Harvard Medical School. Based upon case reports of cold-induced panniculitis, they investigated controlled cooling and realized that lipid-rich fat cells are more susceptible to cold injury than surrounding water-rich cells. The cryolipolysis technology was exclusively licensed to ZELTIQ Aesthetics in 2005 and the CoolSculpting system was developed to non-invasively reduce subcutaneous fat.

CoolSculpting received FDA clearance in the US for non-surgical reduction of fat in the flank area in 2010. FDA clearance followed for the abdomen in 2012, for the thighs in 2014, the submental area in 2015, and back fat, bra fat, and underneath the buttocks in 2016. CoolSculpting is approved for fat reduction in over 70 countries worldwide, throughout Europe, and including Canada, Brazil, and Australia.

The CoolSculpting System consists of a control module and an array of applicators for contouring different areas of the body. There are several vacuum applicators which pull the targeted tissue into a cup and apply surface cooling from parallel panels. The vacuum applicator sizes and cup curvature accommodate a range of patient sizes and treatment areas, such as abdomens and inner thighs. A non-vacuum conformable surface cryolipolysis applicator allows treatment of fibrous, non-pinchable fat in areas such as the lateral thigh bulges. An example of one of my patients following CoolSculpting of the abdomen and flanks is shown in Figure 1.

“Following the successful introduction of the CoolMini applicator, the small cup applicator evolved to a larger volume cup for treating areas such as abdomens and flanks”

CoolSculpting Innovation

I’ve been pleased with my ability to non-invasively treat the whole body with CoolSculpting. The flanks and abdomen are the most commonly requested areas, followed by areas such as the back, thighs, arms, and chest. Lately, I’ve been very excited about the new small volume applicator which has a cooled cup rather than the traditional parallel cooling plates. Kazem Aesthetica was one of the European pilot evaluation sites for the CoolMini applicator.

CoolMini has been used for treating unwanted fat in small areas, such as the axillary and knee areas. But I’ve been mostly using it for the submental area and am pleased with the significant fat reduction, as shown in Figure 2.

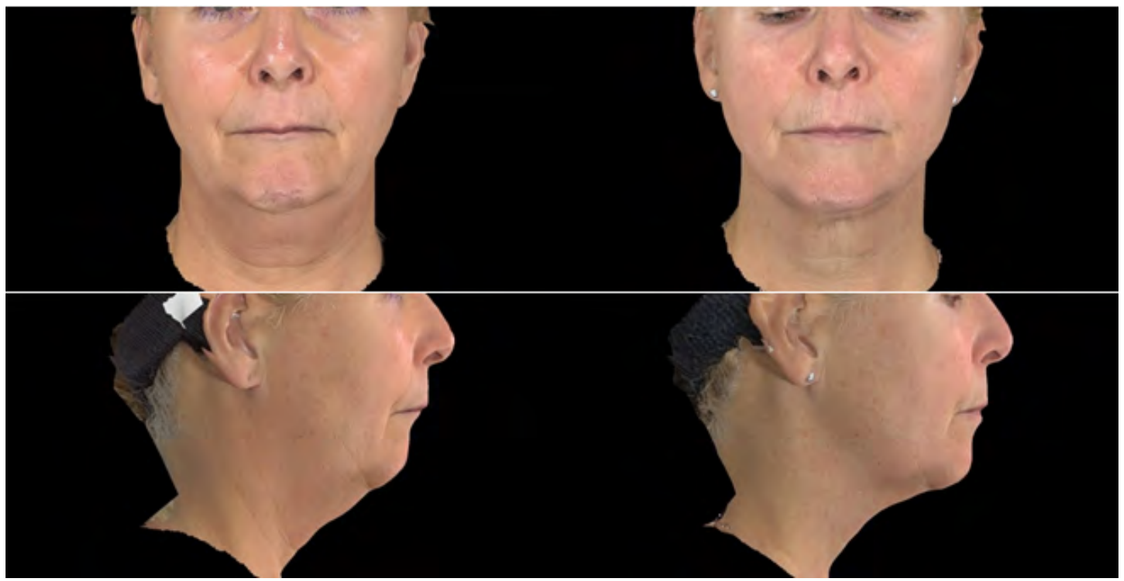


Figure 2: *CoolSculpting submental treatment on a female patient using the new CoolMini applicator. Baseline and 1 month post-treatment. Procedure by Dr. Farid Kazem.*

Following the successful introduction of the CoolMini applicator, the small cup applicator evolved to a larger volume cup for treating areas such as abdomens and flanks. The cup geometry maximizes tissue contact with the cooling surface, which increases treatment efficiency. The lower temperature protocol and applicator geometry reduce treatment time. The targeted tissue seats fully against the cooled cup and the reduced skin tension results in greater patient comfort during treatment. With the interchangeable contours, as shown in Figure 3, one applicator can treat a variety of body areas. With the flat contour (CoolFit Advantage), we can treat the inner thighs and arms. The sharply curved contour (CoolCurve+ Advantage) addresses areas such as the flanks. And the curved contour (CoolCore Advantage) is suited for the abdomen. And by reducing the treatment time from 60 minutes to only 35, I’m able to treat significantly more patients at my practice.

Conclusion

The demand for aesthetic procedures is growing and non-invasive body contouring is an area of tremendous potential. With the significant innovations in the CoolMini and CoolAdvantage applicators, I can safely and comfortably treat more patients and more areas of the body, in almost half the time. CoolSculpting is an integral part of my aesthetic practice and new patients

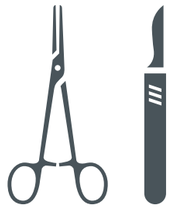
Figure 3: *The CoolAdvantage applicator features a cooled treatment cup and interchangeable contours for flat and curved treatment sites. .*

Dr. Farid Kazem *is a Plastic Surgeon. In 2000, he founded a private practice for aesthetic plastic surgery outside of Amsterdam, in Leimuiden, the Netherlands. Dr. Kazem has extensive experience in aesthetic breast surgery, oculoplastic surgery, and many non-invasive procedures, such as laser and skin tightening procedures. He is a member of the American Society for Aesthetic Plastic Surgery, International Society of Aesthetic Plastic Surgery, Dutch Society of Aesthetic Surgery, and Dutch Society of Plastic Surgery. He is well known for his interest in innovative technology.*

1. American Society for Aesthetic Plastic Surgery 2015 Cosmetic Surgery National Data Bank Statistics Report.

The Americas

SNAPSHOT:
A RECORD YEAR
FOR US COSMETIC SURGERY



15.9 MILLION
Number of cosmetic procedures performed in the United States

2% - Rise increase over 2014

A REAR VIEW

Buttock implants were the fastest growing type of cosmetic surgery in 2015

On average, there was a buttock procedure performed every 30 minutes of every day.

BUTTOCK AUGMENTATION WITH FAT GRAFTING
14,705 procedures, up 28%

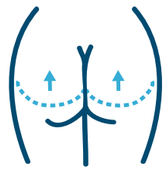
BUTTOCK LIFT
4,767 procedures, up 36%

BUTTOCK IMPLANTS
2,540 procedures, up 36%

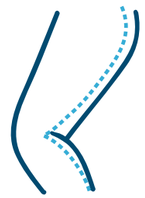
SINCE Y2K:

OVERALL PROCEDURES
have risen 115% since 2000.

BREAST LIFTS
up 89% (99,614 in 2015, up from 52,836 in 2000)



BUTTOCK LIFTS
up 252% (4,767 in 2015, up from 1,356 in 2000)



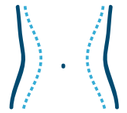
LOWER BODY LIFTS
up 3,973% (8,431 in 2015, up from 207 in 2000)

UPPER ARM LIFTS
up 4,959% (17,099 in 2015, up from 338 in 2000)

BOOM & BUSTS – THE TOP 5 COSMETIC SURGICAL PROCEDURES

Of the 1.7 million cosmetic surgical procedures performed in 2015, the top 5 were:

BREAST AUGMENTATION
(279,143 procedures, down 2% from 2014, up 31% from 2000)



LIPOSUCTION
(222,051 procedures, up 5% from 2014 but down 37% from 2000)

NOSE RESHAPING
(217,979 procedures, unchanged from 2014, down 44% since 2000)

EYELID SURGERY
(203,934 procedures, down 1% from 2014, down 38% since 2000)

TUMMY TUCK
(127,967 procedures, up 9% from 2014 and 104% since 2000)

THE TOP 5 – COSMETIC MINIMALLY-INVASIVE PROCEDURES

Among the 14.2 million cosmetic minimally-invasive procedures performed in 2015, the top 5 were:

BOTULINUM TOXIN TYPE A
(6.7 million procedures, up 1% from 2014 and 759% since 2000)

SOFT TISSUE FILLERS
(2.4 million procedures, up 6% from 2014 and 274% since 2000)

CHEMICAL PEEL
(1.3 million procedures, up 5% from 2014 and 14% since 2000)

LASER HAIR REMOVAL
(1.1 million procedures, unchanged from 2014, but up 52% since 2000)

MICRODERMABRASION
(800,340 procedures, down 9% from 2014 and 8% since 2000)

AESTHETIC BREAST REDUCTION
THIS IS A MAN'S WORLD

Among the 14.2 million cosmetic minimally-invasive procedures performed in 2015, the top 5 were:

40% MEN
27,456 out of 68,106 aesthetic breast reduction surgeries (gynecomastia) were performed on men.

For the first time, men account for more than 40% of aesthetic breast reduction surgeries
Up from 35% in 2015

Source: ASPS Annual Procedural Statistics

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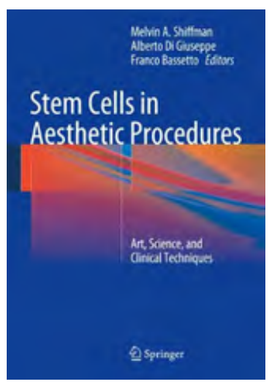
LEWIS J. OBI, M.D.
OBI PLASTIC SURGERY AND THE
CELL SURGICAL NETWORK OF FLORIDA

Integration of Adipose Derived Stem Cells in Plastic Surgery

By Lewis J. Obi, MD, ABPS, FRSA

Interest in the use of stem cells in plastic surgery procedures has been increasing rapidly, reflecting the widespread acknowledgment of the tremendous potential of stem cell fat transfer. Because of FDA restrictions and the need for Institutional Review Board guide lines, very few plastic surgeons in the U.S. have integrated advanced techniques of fat grafting. Because of this diverse and in depth background, Dr Lewis Obi is perhaps in the forefront of private practice plastic surgeons who are exploring this area. Five years ago, Dr Obi was asked to write a chapter in the first book ever to be published on the use of stem cells in aesthetic procedures. Springer Publications released the book in 2014:



The above photographs include pre-op, early post-op and 5 years post CAL to face.

Chapter 29 entitled "Specialized Stem Cell Fat Transfer to Face" written by Dr. Obi describes his early application of Dr Hee Young Lee's Medikan Lipokit fat processing unit. In 2010, Dr Obi met Dr Kotaro Yoshimura and began digesting Lipokit processed fat with collagenase to produce SVF (stromal vascular fraction). The addition of SVF to processed fat known as CAL (Cell Assisted Lipo transfer) is a technique published by Dr Yoshimura in 2007. Five years ago Dr Obi performed his first CAL procedure on a 50 year old with advanced photo aging.

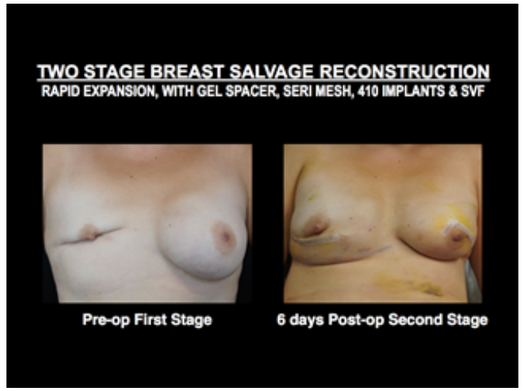
From Aesthetic Procedures to Reconstructive Surgery

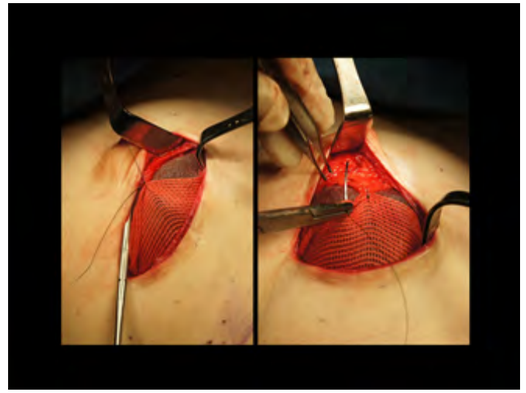
To date, more than 300 patients have been treated by Dr Lewis Obi with the Lipokit (Adivive™) specialized fat grafting technique. In 2012, Dr Obi joined the California Stem Cell Treatment Center which evolved into the Cell Surgical Network (CSN) USA. Since then he has been lecturing at numerous symposiums on stem cell fat grafting, 3D imaging and 3D bioprinting. The most recent was the SelectBio Symposium in Boston on 17-18 March 2016 on "Tissue Engineering, Biofabrication and 3D Bioprinting in Life Sciences". Included in his Boston presentation was a case study in which Dr Obi was able to avoid the use of an autologous flap with the novel use of Seri silk mesh as a scaffold for SVF (80 million stem cells) to thicken skin coverage for a 410 implant reconstruction.

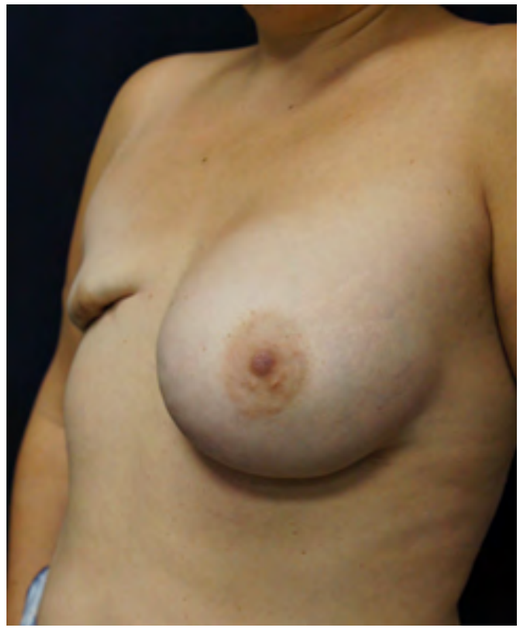
Integration of Regenerative Medicine into a Plastic Surgery Practice:

By 2013, Dr Lewis Obi established Cell Surgical Network of Florida with the integration of specialists in the fields of pain management, orthopedics, urology and other specialties.

Last October, Cell Surgical Network of Florida sponsored a successful stem cell symposium which was co-hosted by Memorial Hospital of Jacksonville. Co-founders of CSN, Dr Elliot Lander and Dr Mark Berman were major speakers and conducted a work shop at Dr. Lewis Obi's plastic surgery clinic.







Most recently, Dr Obi was a keynote speaker in Boston on 17 March 2016 at SelectBio's Biofabrication/Bioprinting symposium. At the meeting, an ambitious workshop on 3D Bioprinting for Healing on the Battlefield was planned in Boston by Dr Obi and co keynote speaker Dr Paul Gatenholm of Sweden.

The 3D bioprinter can position several cell types and thus reconstruct the architecture of complex tissues and organs. The cells cannot however be printed alone. They need a support structure or bioink which has to provide cues for cell adhesion, migration, proliferation and differentiation. Bioinks need to be cytocompatible (cell friendly), have shear thinning properties and solidify after printing. The technology platform combining biopolymer inks and a 3D bioprinter for printing larger 3D objects with cells have been recently developed. This workshop will be held at Dr. Lewis Obi's clinic in Jacksonville in early November, 2016.

3D Bioprinting and Stem Cell Expansion for the battlefield

The recent introduction of the Maxstem expansion/storage system by Korean plastic Surgeon Dr Hee Young Lee will allow Dr. Obi and his team to expand the millions of cells contained in 10 cc of stromal vascular fraction (SVF) into billions of cells that are needed for bioprinting tissues. Approximately 80 million characterized stem cells are needed per gram of printed tissue. The printed tissue, i.e. meniscus, ear, nose, aortic valve, etc., may then be maturated in an abdominal pouch prior to implantation. Implantation into the nose or ear may be performed in the foreseeable future but a knee meniscus poses many other challenges. A recent cover of the magazine "Outpatient Surgery" featured the potential use of a bioprinted meniscus as an alternative to knee replacement.

The more likely use of adipose derived stem cell in the near future will be in the area of angiogenesis and wound healing. This already has clinical application for both circulatory compromised wounds such as diabetic and ischemic ulcers in the lower extremity. The focus of Drs. Obi and Gatenholm workshop this fall will be the use of a biologic stem cell portable bandage for treating traumatic wounds on the battlefield.

Lewis J. Obi M.D., FRSA, is a board certified plastic surgeon who established the first licensed plastic surgery center in Florida. As an innovator, he has pioneered many procedures and recently worked extensively with lasers and adult stem cells derived from fat. He has lectured internationally on these topics as well as the broader scope of plastic surgery. His love and passion for art expressed through his international firm of Obiarts resulted in the induction of Dr. Obi as a fellow to the Royal Society of Art, London (FRSA) in 1986. Obiarts has contributed world class art to dozens of major museums and institutions.

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Treatment Options for Targeted Fat Reduction

By Dr. Raja Nalluri

While control of dietary intake and frequent exercise are the cornerstones of a healthy lifestyle as well as healthy weight loss programs that provide scientifically proven health benefits, there are cases in which limitations arise, particularly in spot reduction or resistant areas of fat excess. Massive weight loss of hundreds of pounds has also been achievable with low complication relates through surgical approaches to the stomach including banding, stapling, resections and other techniques. In some of these cases as well limitations of the aesthetic result may be reached when recoil of excess skin laxity does not occur.

Patients of all varieties present to the plastic surgeon with varying complaints. A medical judgment occurs initially such that patients who have not adequately reached maximal benefit from diet and exercise are directed accordingly. Medical weight loss is appropriate in some cases whether with a specific diet and/or pharmacological supplementation with amphetamine based or other supplement. Surgical approaches are considered in patients that are appropriate candidates for massive weight loss.

After maximising benefit from these initial approaches, some common resistant areas causing patients to seek plastic surgery include the flanks (love handles), thighs both medically and laterally), buttocks, abdominal, neck and arms. The limitations in some cases of diet and exercise including the inability to provide for spot reduction or targeted fat reduction. While aggressive continued weight loss beyond the patient's desired aesthetic could proceed, this may result in excessive thinning of body regions where further weight loss is not desired (such as breast volume loss or facial emaciation). The end result here could be smaller breasts or a more aged face with skin laxity in order to see a reduction in fat in the above referenced resistant areas. Skin laxity is another side effect that is more pronounced in cases of weight cycling where repeated weight loss and weight gain cycles stretch the skin. Multiple pregnancies, large weight gains with pregnancies exacerbate skin laxity in women.

Fortunately, the plastic surgeon has a toolset for assisting patient with these resistant areas and to target both localised fat depositions and skin laxity to effectively treat them to achieve a more balanced aesthetic result.

Zerona is a non-invasive cold laser that is painless. It is applied over the skin of the abdomen, flanks and thighs in six treatment sessions of 40-minutes each over a two week period. Mild reductions in overall circumference in the abdomen, hips and thighs have been achieved. The treatment is FDA approved. While extremely safe and a good consideration for patients who are not candidates for surgery, the downside is its extremely limited result, with typical results showing just 1 to 1.5 inch inches of circumferential reduction in each body area, as high as 3.5 inches in some cases. Further, the reduction is circumferential and not spot reduction. Treatment cost is approximately $2,000 for six sessions.

Radio frequency (RF) is a FDA-approved therapy for improvement of skin wrinkling. Here, the RF energy is applied to the target skin area. The sensation is of heat and mild discomfort but not painful and tolerated by most patients. Heating the collagen fibres beneath the skin surface promotes collagen stimulation and realignment for

“Laser Lipolysis is an adjunctive treatment applied wherein laser light energy is administered in the targeted area with the goal of smoothing the skin in the treatment areas”

smoothing skin. Similar in safety profile to Zerona, both treatments can be applied to virtually any skin type and patients with any medical conditions since they are safe and nonsurgical. Between 3-8 treatment sessions of 30-minutes each spaced 3-6 weeks apart are recommended for optimal results, at a cost of a few hundred dollars per session.

Traditional liposuction is a surgical procedure using long skinny tubes (cannulas) that are inserted through small incisions placed near the target area of fat reduction. Through this approach, fat is removed by application of vacuum. In traditional liposuction, there is targeted fat reduction, however approximately 50% blood and 50% fat is removed which markedly limits how much fat can be removed (about 1 litre) in one session. It is a surgical procedure and carries downside risks associated with surgery, a discussion to be carefully weighed with your plastic surgeon.

Wet, Superwet and Tumescent Liposuction are advances in the technique of liposuction wherein fluid containing lidocaine (to reduce pain and decrease the need for anaesthesia) and epinephrine (to reduce bleeding) are injected into the target fat prior to application of vacuum for suction. The refinement has dramatically increased the percentage of fat removed to 99% and blood removal to just 1%. Added risks associated with these medications need to be considered.

Power Suction Assisted Lipectomy (PSAL) has improved the technology in the cannulas used, allowed smaller cannulas to be inserted through smaller incisions but with a power oscillating function, the cannula is able to break up the fat prior to removal to ease the fat removal process. More precise and effective liposculpture is achieved.

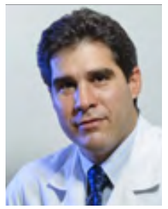
Ultrasound Assisted Lipectomy (UAL) utilises an advanced cannula tip that emits ultrasonic waves that cause the target fat cells to cavitate (implode on themselves). Not only does this ease the removal of fat but it is also particularly effective for cases of fibrous fat such as in breasts. Added risks include burns to the skin or other organs from the ultrasound waves.

Laser Lipolysis is an adjunctive treatment applied wherein laser light energy is administered in the targeted area with the goal of smoothing the skin in the treatment areas. Studies have indicated reduced pain with laser lipolysis.

Fees for all types of liposuction vary and are on the order of a few thousand dollars for each area treated.

Board Certification matters. Caution is advised to the reader in that these procedures carry risks and have the potential for complications or problems. With the improvements in technology and an increasingly self-conscious society, there has been a rise in the demand for plastic surgery procedures, both invasive and non-invasive. Due to the extensive and rigorous training with lengthy medical education and expense to become a plastic surgeon, along with the expense of properly meeting regulation standards, the cost for these procedures is substantial. Unfortunately, the marketplace for plastic surgery procedures has been flooded by the entry of non-plastic surgeons practicing procedures outside of their scope of board certification for financial gain. Dentists, family practice doctors, obstetricians and other doctors and non-doctors have chosen to take a weekend course or watch a demonstration video, even purchase equipment and take training from a device representative to then begin charging at reduced fees to offer these procedures. Having treated numerous patients with serious complications suffered at the hands of these unqualified individuals, caution is advised to the reader to seek a plastic surgeon that is Board Certified by the American Board of Plastic Surgery or corresponding International Board. Often, flashy advertising or misleading credentials such as Board Certification by the American Board of Cosmetic Surgery (which is not a Medical Board), confuses patients into a false sense of security. Any agency legally can create a title beginning with the word Board but not be an official Medical Board. Examined the results of the actual surgeon since variation in surgical skill and quality of training exist. Safety, effective results and ethical plastic surgery is of utmost concern at my practice. Consultations are taken from all over the world, whether in person, by Skype or FaceTime video-conference.

Repairs of complications and botched surgery of the face and body are a specialty of Dr. Raja Nalluri. He has been rigorously trained and has 15 years of experience in plastic surgical procedures. Performing the full breadth of plastic surgery procedures, he is ready willing and able to provide you with his individual attention to help guide you through your transformation. He is certified by the American Board of Plastic Surgery. Recognition is a Best Plastic Surgeon has been bestowed upon him by multiple independent agencies including U.S. News & World Report, Castle Connolly, Cosmopolitan Magazine, Sarasota Magazine, America's Top Doctors, the International Association of Plastic Surgeons and other organisations. He is a Clinical Assistant Profession for the Florida State University School of Medicine. He is frequently called upon for challenging and otherwise unsolvable cases by multiple hospitals in need of his expertise. Patient from around the world seek Dr. Nalluri's expertise for the utmost safe and effective result for their needs.



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MANUEL LAZZARO
CIRUJANO PLÁSTICO

Breast Augmentation: Surgical Secrets

By Manuel Lazzaro, M.D., Plastic Surgeon

Mammoplasty or breast augmentation is the surgical procedure performed to improve the size and shape of the breast. This surgical procedure is often completed for one of two reasons. Firstly, aesthetical or cosmetic surgery is often performed on those patients who want to improve their body or who do not like the size of their breasts. Secondly, reconstructive surgery is undertaken secondary to a mammary cancer surgery or to balance mammary asymmetry situations. The Plastic Surgeon inserts an implant behind the mammary gland thus increasing the size and projection of the breast to reach one or two sizes more in their bra. If you are considering an augmentation mammoplasty, this information provides you with basic concepts that you must know, nevertheless, many details, questions and expectations that would remain unanswered will depend on the individual evaluation of the patient and the criteria of each Plastic Surgeon. Thus it is important that the patient personally consults with the Plastic Surgeon on any question or concern they may have.

The Best Candidate for augmentation mammoplasty

To be a good candidate for augmentation mammoplasty the patient must have realistic expectations regarding the surgical procedure that can be achieved. Augmentation mammoplasty may improve the physical appearance and self-esteem, but remember that a change of "look" does not guarantee the ideal result or even change the way other people respond to the patient. Therefore, before having an augmentation mammoplasty surgery, think carefully about your expectations and discuss it with your Plastic Surgeon.

The best candidates for an augmentation mammoplasty are women who wish for an improvement but do not necessarily expect perfection from a mammary aspect. They must be physically healthy, psychologically stable, and certain of their expectations regarding what the mammary surgery can do for them.

Many women want to undergo an augmentation mammoplasty after pregnancy due to the reduction of the volume and size of the mammary glands, nevertheless, if the patient is planning or wants to have more children in the short term it is advisable for her to postpone the notion of having this surgery. The reason is that pregnancy may again repeat the cycle of enlarging and reducing the volume and size of the breasts voiding the results obtained by an augmentation mammoplasty. Likewise, it is important to emphasize that there are no risks that may affect future pregnancies because augmentation mammoplasty does not interfere with breast-feeding.

Usually augmentation mammoplasty is performed to balance the size of the breasts, to aesthetically improve the body contour and to reconstruct the breast in cases after oncological mammary gland procedures.

Types of implants

Currently there is a wide variety of implants with different volume, shape and characteristics that vary according to the needs of each patient, the preference and surgical technique of each Plastic Surgeon. Mammary implants can be prosthesis filled with silicone gel, cohesive gel or hydrogel. There are also the inflatable prostheses that are filled with saline solution during the surgery. There are implants or smooth and textured prostheses. The first type is placed behind the pectoral muscle due to its easiness for insertion. The second, the textured

"The balance of the Euro with other currencies ensures Portugal is a more attractive prospect to foreigner investment, especially with the pound."

prostheses, is placed in front of the muscle and this characteristic of external texture has shown to diminish the possibility of developing a capsule or contracture of the prosthesis, which is one of the most common complications in this type of surgery.

Every surgery carries a certain degree of risk and complications

Augmentation mammoplasty is a generally safe procedure as long as it is performed by qualified and trained Plastic Surgeons. Complications are usually minor and, luckily, they are not frequent. Nevertheless, as with every surgery, there is always a possibility.

The most common problem is the capsular contracture or the hardening that occurs around the prosthesis that causes the mammary gland to feel hard during palpation. As with any surgery, there can be excessive bleeding that causes an increase in volume and pain. If it continues it may require another surgery to control it and drain it.

Another small percentage of patients develop an infection around the implant, sometimes the implant must be removed for some time until the infection gets controlled. Later, a new implant can be placed.

Some women state that their nipples become more sensitive or less sensitive, and in some cases, they refer that they are not sensitive or that they feel numbness in the area.

Sometimes the mammary implant may break. This rupture may occur as the result of an impact or hit (car accident, direct trauma) that goes beyond the normal compression that the mammary space that the prosthesis can resist. If it is a saline solution implant, it will progressively deflate and the body will absorb the liquid. Lastly, there is no evidence that the mammary implants can cause or predispose mammary cancer. The only thing that is modified is the manner to perform a regular mammographic study.

Be sure to inform the radiologist or radiology technician that you have a mammary implant prior to the mammography because there are special techniques required to obtain radiological studies of breasts with implants. The Eco sonogram is another useful study to evaluate the conditions, not only of the breast but also of the implant.

Since most women do not experience complications, the patient must discuss each complication with the medical doctor. The patient must be sure that she has understood the risks and consequences of the Augmentation Mammoplasty.

All risks and complications can be reduced by closely following the Medical Doctor's recommendations before and after the surgery.

Planning the Surgery

Augmentation Mammoplasty must be an individual procedure for each patient. The initial consultation with the Surgeon is very important. It will evaluate the medical history and complete medical background. Therefore, be sure to inform you Surgeon about any particular allergies, if you are taking any medication (for example, aspirin), including vitamins or other drugs that may affect coagulation, and above all, your tobacco consumption background.

During this initial consultation, you must set your plans and expectations for this surgery. Remember that each patient and each medical doctor have different points of view about the desired shape and size of the breasts.

Be open to discuss this with the Plastic Surgeon, who must also be direct with the patient by describing and explaining the procedure and all its details, as well as the risks and limitations. Make sure that you understand the explanation on the final results and the after surgery stage. You must also discuss the anesthesia that will be used, the place and the costs required for this surgery.

The Plastic Surgeon must examine the breasts and measure them while sitting and lying down. Later, you will discuss the variables that may affect the success of the surgery such as the age of the patient, skin conditions, size and shape of the breasts.

Lastly, the Mastopexy or Mammary suspension together with the Augmentation Mammoplasty will be offered for those patients with sagging or flaccid breasts that might need them.

Finally, do never forget to ask your Surgeon regarding any doubts you may have, especially surrounding expectations, wishes and expected results.

Preparation for the Surgery

Depending on the age and family background of the patient, the Plastic Surgeon will request a mammography before the surgery. He will also give specific instructions on how to prepare you for the surgery's day, including provisions regarding the type of food, drinks, tobacco consumption, and the intake of some vitamins and specific medicine, or not.

If the patient develops a flu or skin infection, the surgery would need to be rescheduled.

If you smoke, it is particularly important for you to stop smoking at least 2 weeks or more before and after the surgery. Tobacco inhibits and blocks healing of the wounds. Follow the instructions carefully because they will help you experience a better evolution of your surgery.

Be sure to count on a family member or on a companion for your return home after the surgery.

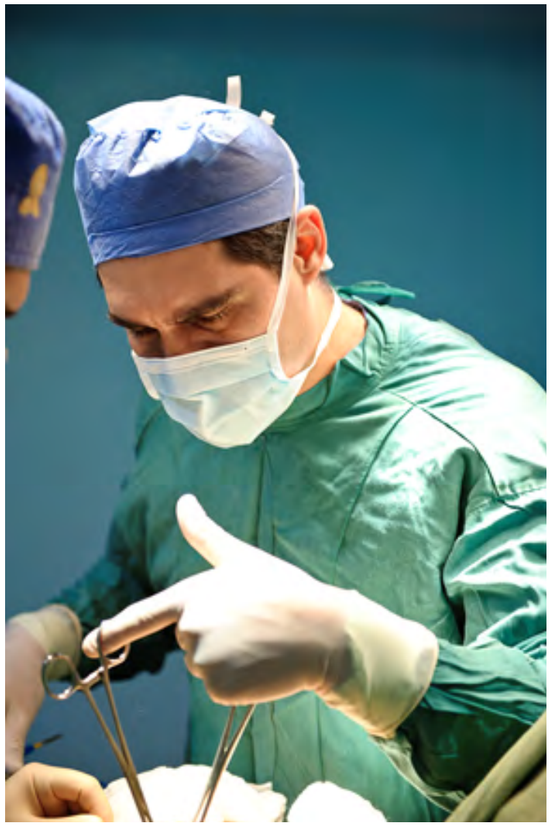
Where can the surgery take place?

Augmentation Mammoplasty can be performed at a hospital or at an outpatient centre.

Types of Anesthesia

Augmentation Mammoplasty is usually performed under general anesthesia but it can also be performed under local anesthesia or intravenous sedation, depending on the scope of the surgery and, of course, on the patient's and medical doctor's preference and tolerance. With the use of local anesthesia, the patient is conscious during the surgery but sedated and relaxed without feeling pain. Cases without complications of very well qualified patients are generally performed under local anesthesia. With the use of general anesthesia, the patient will be asleep during the entire surgery and will feel more security and control.

The Surgery



The time required to perform an Augmentation Surgery is between 1 and 2 hours. It may last more if it is combined with other surgical procedures such as Mastopexy (mammary suspension), local liposuction and mammary contour. Some surgeons prefer not to perform combined surgical procedures, but to perform individual surgeries to avoid lengthy surgeries. The method and the surgical technique to insert and place the mammary implant will depend on the patient's anatomy and on the Surgeon's criteria and recommendation. The incision can be done on the submammary fold (where the breast and the chest meet), around the areola and at the level of the underarm.

The incisions are made at an almost unnoticeable location on the submammary fold around the areola and at the level of the underarm. Through the incision, the tissue of the mammary gland is lifted thus creating a "pocket" or space that can be placed before the pectoral muscle, i.e., behind the mammary gland or also behind the pectoral muscle. The implant is placed in the centre in relation with the areola and the nipple. The mammary implant is placed directly under the tissue of the mammary gland or behind the pectoral muscle.

Some researches show that placing the implant behind the muscle may reduce the capsular contracture. Also, this location behind the muscle interferes in a minor degree with the performance of the mammography than when the implant is placed directly behind the mammary gland. Incisions are closed with fine non-visible suture under the skin. Then, the post op. treatment is done with gauzes and bandages to help immobilize the breast. After the surgery, the breasts look high and projected, firm and natural to the body contour. The scar of the incision vanishes with time.

After the Surgery, the Post Op. Treatment

After the surgery, the medical doctor uses an elastic bandage or a post op. bra on the patient's

wounds. Then, he substitutes the surgical elastic bandage or the post op. bra for a sports bra that the patient must use and maintain during 3 to 4 weeks. The suture may begin to be removed after the seventh day after the surgery. Usually, there is no significant discomfort after the surgery. If there would be any discomfort it would be minor and would be easily treated with an analgesic or anti-inflammatory medication prescribed by the medical doctor. The presence of severe or persistent pain, as well as any inflammation or a sudden increase in the volume of the breast must be immediately reported to the Surgeon. The medical doctor must also prescribe antibiotics to prevent any infection. The

patient may experiment loss of sensibility on the areola and nipple caused by the inflammation or edema. This sensation generally disappears and the sensibility is recovered progressively within 4 to 6 weeks after the surgery.

It is recommended to apply a humectant cream several times a day if the skin looks dry or dehydrated without applying it directly on the wounds and suture areas.

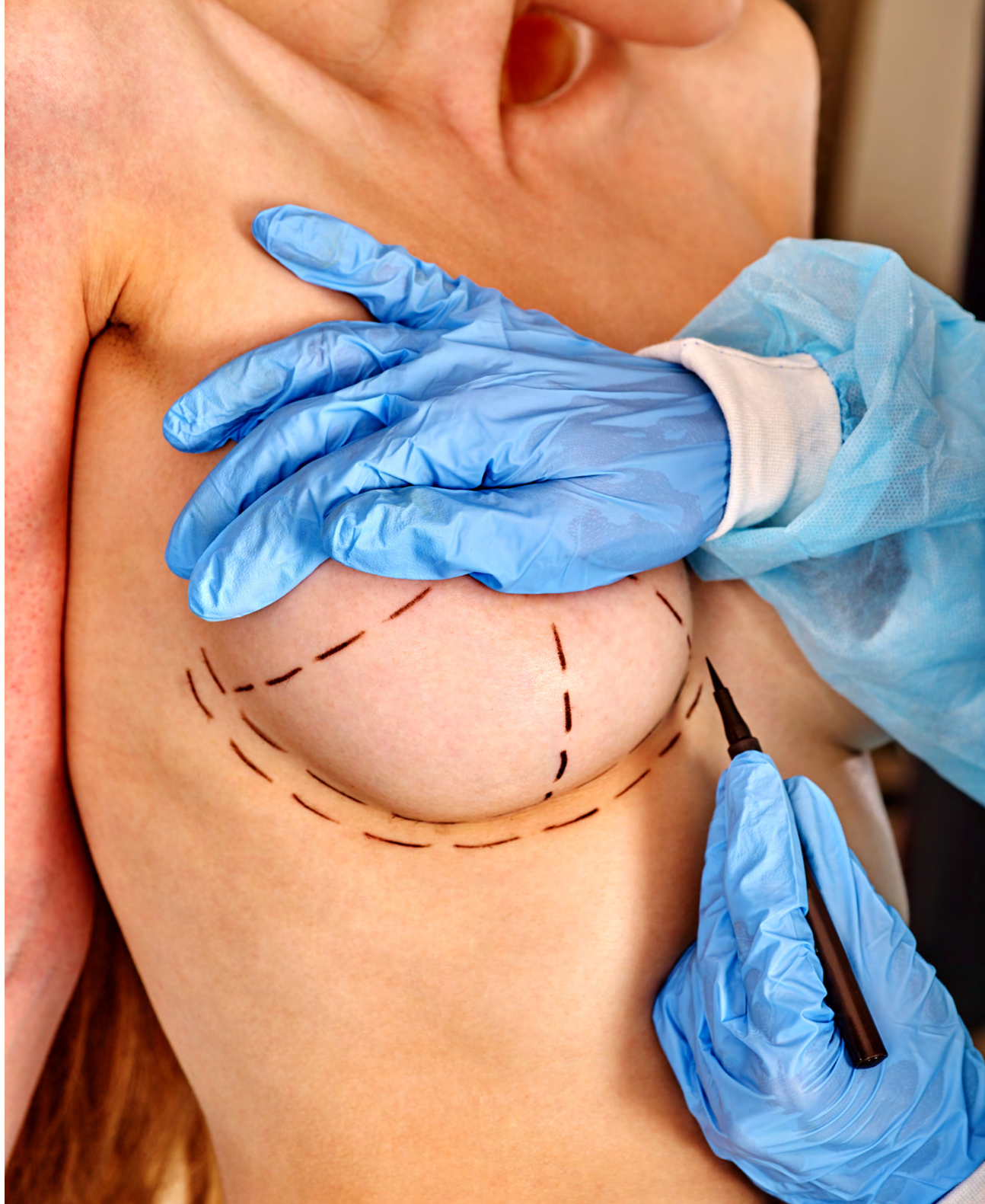
Back to Normal

The healing process is gradual. The Plastic Surgeon will instruct the patient to walk as soon as possible. In addition to being good for the health, it helps to diminish the edema and swelling. The patient will start to feel better after 1 or 2 weeks. A post op. control must be followed to verify and closely watch the evolution. In the event of a sudden unusual increase of the breast volume, the patient must call the specialist immediately. On the third week after surgery, the patient will feel and look considerably better.

Your New Look!

For many women, the results of an Augmentation Mammoplasty are very satisfactory. If the expectations of the patient are real, she will feel good and she will like the results of the surgery. The patient must be aware that Augmentation Mammoplasty will not maintain the breasts firm and high forever due to the effects of gravity, pregnancy, breast feeding, skin conditions and weight changes. These are the factors that may have an effect on the breasts. The decision to undergo an Augmentation Mammoplasty is very personal even to the point that perhaps other people may not understand it. The important thing is how the patient feels. If real expectations are met, then the surgery will be a success.

Manuel Lazzaro MD is a board certified Plastic Surgeon in Caracas, Venezuela, specializing in aesthetics plastic surgery of breast and body. Dr Lazzaro is member of Venezuelan Society of Plastic Surgery, Reconstructive, aesthetics and Maxilofacial (SVCPREM), Iberolatinoamerican federation of Plastic Surgery and Reconstructive, (FILACP). International Society of Aesthetic Plastic Surgery (ISAPS) and International Confederation for Plastic Reconstructive & Aesthetic Surgery. (IPRAS). He is also Aesthetic and Reconstructive Surgeon Specialist and Surgical Assistant Certified, member of American Board of Surgical Assistant (ABSA). Dr Lazzaro has excellent communication skills and proven patients satisfaction record. Multilingual in English, Italian, Portuguese and Spanish. He ranks amongst the best in his fields due to his impressive academic accomplishments, diligent work habits and unparalleled dedication to his specialty.



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Liposuction: Current evidence based practice guidelines and future trends

By Dr. Salil Bharadwaj

Modern Liposuction has evolved from humble beginnings as a rather experimental procedure some 40 years ago, to being one of the most popular procedures in aesthetic surgery today. It was the second most popular aesthetic procedure globally (1,372,901 cases) [1] in 2014, as well as in the United States (222,051 cases) in 2015, up 5% from 2014.[2]

Subsequent to Illouz's presentation of a technique for removing subcutaneous fat with a blunt cannula attached to a suction generating device at the 1982 Annual Meeting of the American Society of Plastic and Reconstructive Surgeons, the procedure has undergone many refinements and evolved with improvement in techniques and technology.[3]

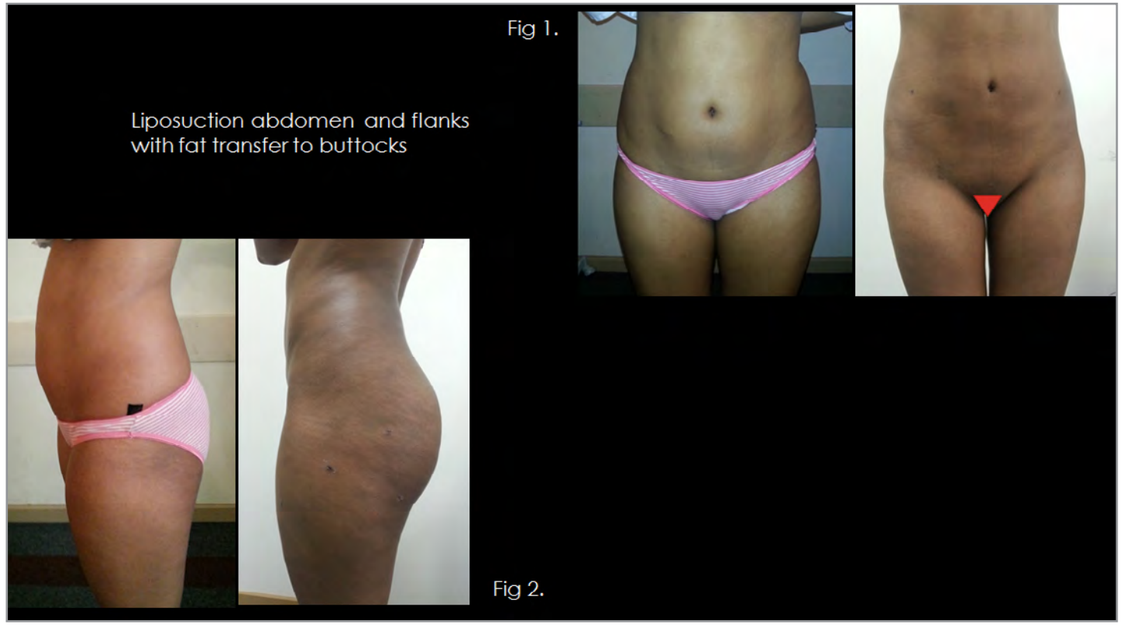
My endeavour in this article is to briefly discuss current evidence based best practice principles and highlight future trends.

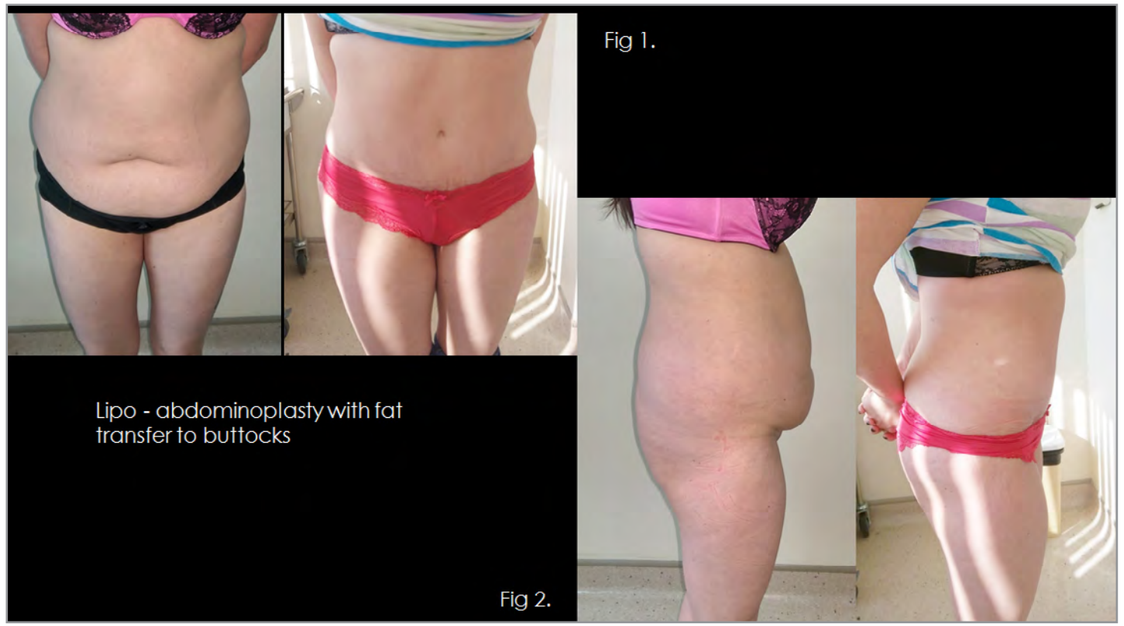
Potential liposuction patients who strive to improve their appearance through diet, exercise, and a healthy lifestyle are more likely to be satisfied with their long-term postoperative results.[4] It is paramount for both the patient and the surgeon to remember that liposuction is not a weight-loss technique, it is a body reshaping (contouring) technique.

A consensus statement on large-volume liposuction (defined as >5 litres of total aspirate), regardless of anaesthetic method, has underscored the recommendation for operating in either an acute-care hospital or in an accredited or licensed facility when removing large volumes.[5]

Depending on patient characteristics liposuction can be done either in a hospital or office based setting, but the American Society of Plastic Surgeons Practice Advisory recommends avoiding neuraxial anaesthesia (i.e., spinal, epidural) in office-based settings because of potential hypotension and volume overload issues.[6]

The superwet (infiltration of 1 mL per estimated mL of expected aspirate) and the tumescent (3 to 4 mL of wetting solution per mL aspirated) are the most widely used wetting techniques in operation. The maximum recommended safe dose of lidocaine is 55mg/kg and that of epinephrine .07mg/kg in the solution.[7, 8] Recent data suggest that, for patients undergoing general anaesthesia with the superwet technique, the lidocaine component may be reduced and/or eliminated without postoperative sequela of





increased pain. [9, 10] This is important in view of the well-known toxicity issues associated. Wetting fluids should be warmed to room temperature and the patient should be maintained at normothermic temperatures to decrease post-operative complications.

New devices continue to emerge for use in this procedure, most of them with little evidence to support their claims of superiority. It is a formidable task for surgeons to stay abreast of all the latest techniques, technologies and, more importantly, evidence surrounding their uses. The common technologies in use are suction assisted liposuction (SAL), power assisted liposuction (PAL), ultrasound assisted liposuction (UAL), laser assisted liposuction (LAL) and the more recent radio frequency assisted liposuction (RFAL).

Though UAL and its current avatar VASER has been found to have some benefit in treating fibrotic areas and in limiting blood loss, larger incisions required, concerns with burns, cost, long learning curve and slow procedure times have seen its popularity on the decline, with erstwhile advocates now employing it in only 7 - 10% cases.[11, 23]

LAL has shown in a randomized, blinded study to result in up to 17% skin contraction and 25% improvement in skin elasticity.[12] On the contrary Prado et al. conducted a randomised, double-blind, controlled study examining LAL and SAL that showed no clinical difference in aesthetic outcomes between these techniques. Cost, slow operative time, multiple stages, potential for skin injury and the learning curve limits its usage.[13]

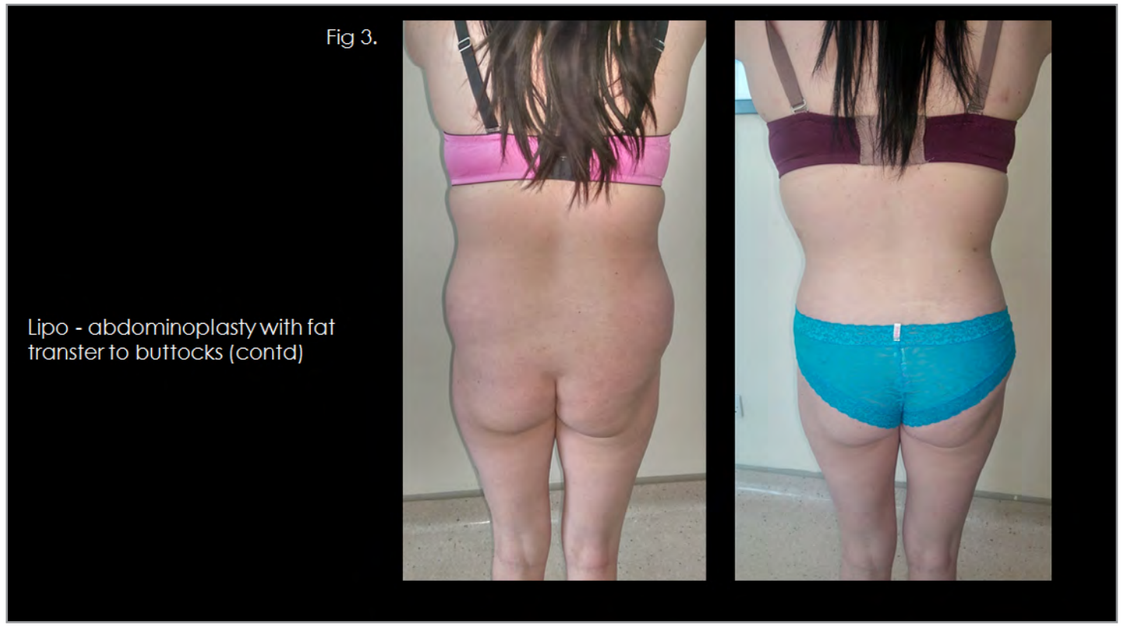
PAL fared well in a three-way comparison (SAL vs. UAL vs. PAL) for overall efficiency, reduced vascular injury and most favourable cost-benefit ratio.[14] More recently, PAL was quantified as being 17% more efficient than SAL and less influenced by the region of fat distribution, the reciprocating motion aiding cannula penetration into 'difficult' and fibrous areas.[15] This technique has been found to cause less trauma, swelling and ecchymosis in addition to shorter recovery and diminished operator fatigue, particularly in large volume liposuction.[16] The early drawbacks of machine noise and excessive vibrations to operator have been overcome with the newer devices. Currently PAL is the author's preferred technique.

RFAL is an emerging technology that produces a controlled thermal injury at the subdermal surface to enhance cutaneous contraction as it heals. There appears to be a biphasic skin contraction, with 14% and 24% noted at 6 and 12 weeks respectively; explained by a stimulation of neocollagenesis.[17] This technique has to be used in conjunction with SAL and though increasing operative time, it has shown promise.

At the end of the day it's not the type of device used but the surgeon's skill and patient characteristics that determine the final result.

All plastic surgeons that perform liposuction should be familiar with the risks, untoward sequelae, and complications associated with the procedure. Fortunately, most complications of liposuction are minor in nature and tend to resolve spontaneously. Venous thromboembolism following surgical procedures, particularly liposuction continues to generate a great deal of attention in the professional and lay media.

A recent article cited the incidence of deep vein thrombosis to be less than 1% in liposuction.[19] Newall et al. reported a 0% deep vein throm-



bosis rate in a retrospective series of patients who underwent large-volume liposuction and received chemoprophylaxis with low-molecular-weight heparin.[19] In 2011 the ASPS Venous Thromboembolism Task Force recommended risk stratification based on the 2005 Caprini scale for patients undergoing liposuction and the need for low molecular weight prophylaxis.[20] These guidelines should be incorporated by all plastic surgeons in their practice.

Although indirectly related to liposuction, the topic of fat transfer is among the most current and still debated topics in plastic surgery, despite initial investigations going back more than 25 years. Fat transfer may be performed as a primary procedure (e.g., breast or buttock augmentation), as an adjunct (e.g., face-lift surgery or breast reconstruction), or for the potential of "stem cell" therapy.[22] Adipose stem cell pluripotentiality and unlimited capacity for self-renewal, represents a great promise for tissue engineering. Cell-assisted lipotransfer is a novel approach to autologous fat transplantation in which adipose-derived stem cells are attached to the aspirated fat.[24]

The "holy grail" for body-sculpting technology is non-invasive technologies that minimise tissue morbidity, decrease downtime, and increase skin contraction/tightening, which lessens the need for skin excision by way of surgical intervention. This has led to a new industry: non-invasive body contouring.[21] In this regard are non-invasive technologies as cryolipolysis (e.g Zerona™, Coolsculpt™), high-intensity focused ultrasound – HIFU (e.g Liposonix™) and radiofrequency devices (e.g BodyFX™) for fat cell disruption and lysis.

The proven benefit of liposuction as an adjunct in procedures such as abdominoplasty, breast reduction, face-neck lifting and body lifts cannot be stressed enough. It is an essential tool for the three dimensional composite sculpting/remodelling of body structures.

When liposuction was first introduced and popularised in the early 1980s, it indelibly altered the field of body contouring surgery and redefined plastic surgery for future generations of surgeons. Unless a "cure" for obesity is discovered, or a tectonic shift in human nature, lifestyle, or fashion trends occurs, it is likely than our concerns with lipodystrophy will persist unabated. Moreover, as more practitioners and manufacturers become involved in this area and research continues into the understanding of adipocyte physiology, the fields of liposuction, lipolysis, obesity, and fat cell metabolism will continue to gain more interest and realize more advancement.[22]

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1. International Society of Aesthetic Plastic Surgery (ISAPS) Global statistics 2014
2. American Society of Plastic Surgery (ASPS) 2015 Plastic Surgery Procedural Statistics.
3. Lewis CM. Early history of lipoplasty in the United States. *Aesthet Plast Surg*. 1990;14:123–126.
4. Rohrich RJ, Broughton G, Horton B, et al. The key to longterm success in liposuction: A guide for plastic surgeons and patients. *Plast Reconstr Surg*. 2004;114:1945–1952.

Fig 2.

5. Haeck PC, Swanson JA, Gutowski KA, et al. Evidence-based patient safety advisory: Liposuction. *Plast Reconstr Surg*.2009;124:28S–44S
6. Iverson RE, Lynch DJ; American Society of Plastic Surgeons Committee on Patient Safety. Practice advisory on liposuction. *Plast Reconstr Surg*. 2004;113:1478–1490
7. Ostad A, Kageyama N, Moy RL. Tumescent anesthesia with a lidocaine dose of 55 mg/kg is safe for liposuction. *Dermatol Surg*. 1996;22:921–927
8. Matarasso A. Lidocaine in ultrasound-assisted lipoplasty. *Clin Plast Surg*. 1999;26:431–439, viii.
9. Hatef DA, Brown SA, Lipschitz AH, Kenkel JE. Efficacy of lidocaine for pain control in subcutaneous infiltration during liposuction. *Aesthetic Surg J* 2009;29:122-127
10. Perry AW, Petti C, Rankin M. Lidocaine is not necessary in liposuction. *Plast Reconstr Surg* 1999;104:1900-1902.
11. Hunstad JP, Aitken ME. Liposuction: techniques and guidelines. Clin Plast Surg 2006;33:13-25
12. DiBernardo BE. Treatment of cellulite using a 1440-nm pulsed laser with one-year follow-up. *Aesthet Surg J*. 2011;31:328–341
13. Prado A, Andrades P, Danilla S, Leniz P, Castillo P, Gaete F. A prospective, randomized, double-blind, controlled clinical trial comparing laser-assisted lipoplasty with suction-assisted lipoplasty. *Plast Reconstr Surg*. 2006;118:1032–1045
14. Scuderi N, Paolini G, Grippaudo FR, et al. Comparative evaluation of traditional, ultrasonic and pneumatic-assisted lipoplasty: analysis of local and systemic effects, efficacy and costs of these methods. Aesthetic Plast Surg 2000;24:395-400
15. Scuderi N, Tenna S, Spalvieri C, et al. Power-assisted lipoplasty versus traditional suction-assisted lipoplasty: comparative evaluation and analysis of output. Aesthetic Plast Surg 2005;29:49-52
16. Rebelo A. Power-assisted liposuction. Clin Plast Surg 2006;33: 91e105
17. Paul M, Mulholland RS. A new approach for adipose tissue treatment and body contouring using radiofrequency-assisted liposuction. Aesthetic Plast Surg 2009;33:687- 94
18. Stephan PJ, Kenkel JM. Updates and advances in liposuction. *Aesthet Surg J*. 2010;30:83–97; quiz 98
19. Newall G, Ruiz-Razura A, Mentz HA, Patronella CK, Ibarra FR, Zarak A. A retrospective study on the use of a low-molecular-weight heparin for thromboembolism prophylaxis in large-volume liposuction and body contouring procedures. *Aesthetic Plast Surg*. 2006;30:86–95
20. Murphy RJ, Alderman A, Gutowski K, Kerrigan C, Schechter L, Wilkins E. *Evidence-Based Practices for Thromboembolism Prevention: A Report from the ASPS Venous Thromboembolism Task Force Approved by ASPS Executive Committee: July 2011*. Arlington Heights, Ill: American Society of Plastic Surgeons; 2011
21. Shridharani SM, Broyles JM, Matarasso A. Liposuction devices: technology update Medical Devices: Evidence and Research 2014:7 241–251
22. Matarasso A, Levine SM. Evidence-based medicine: liposuction. Plast Reconstr Surg. 2013 Dec;132(6):1697-705
23. Ahmad J, Eaves FF, Rohrich RJ, Kenkel JM. The American Society for Aesthetic Plastic Surgery (ASAPS) survey: current trends in liposuction. *Aesthet Surg J*. 2011; 31:214–224.
24. Steridomas A, De Faria J, Nicaretta B, Papadopoulos O, Papalambros E, Illouz YG. Cell-assisted lipotransfer. *Aesthet Surg J 2010; 30: 78-81*.

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