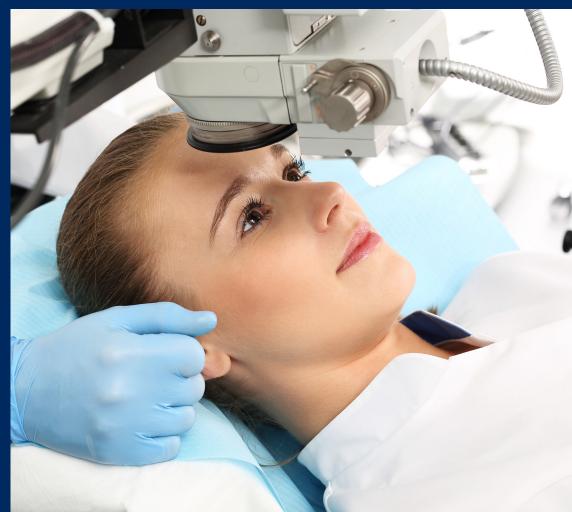


# All New Flapless & Bladeless Laser Vision Correction





# مستشفى الزهراء دبي

### AL ZAHRA HOSPITAL DUBAI Care in Style

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P.O. Box. 124412, Al Barsha 1, Dubia, UAE Fax: +971 4 378 6721 www.azhd.ae Thank you for choosing Al Zahra Hospital Dubai, LASER VISION CLINIC, for your laser vision correction. We appreciate the fact that this is an extremely important decision that could alter your life immeasurably. Like many patients, you may be feeling excited about the prospect of being freed from dependency on glasses or contacts, but at this point, you may also have some questions. In this package, we have attempted to answer the questions you may have regarding the nature of this procedure, the benefits, the risks and potential complications of the procedure as well as alternative treatments.

At Al Zahra Hospital Dubai, our mission is to deliver the highest standard of medical care at a reasonable cost to our patients.



Femtosecond machine – One machine does it all without any blade or making any flap

This new technique of ReLEx SMILE surgery for laser vision correction was developed by CARL ZEISS AG and its team of research scientists from Germany.

ReLEx means refractive lenticule extraction and SMILE stands for small incision lenticule extraction.

SMILE is the only technique available in the world, wherein the laser surgery is performed without using any blade and without lifting ant flap. In other words, your fear of cutting the cornea with a blade is absolutely removed by this procedure and at the same time unlike most of the FEMTOSECOND lasers in the market; we do-not make and lift a corneal flap. Thus the whole integrity of the cornea is preserved and there are minimal risks involved in this surgery compared to the conventional LASIK or FEMTO LASIK.

#### WHAT IS THE SMILE PROCEDURE?

The combination of precise refractive femtosecond laser technology and lenticule extraction marks the start of a new era in refractive surgery.





Intrastromal femtosecond laser lenticule cut

Tissue removal instead of ablation

#### **Unique Features:**

Flapless – creating a small incision rather than a full flap All-Femto – FS lenticule cutting substitutes excimer tissue ablation Single step – on laser device, one integrated procedure

#### ADVANTAGES OF THE NEW FLAPLESS RELEX SMILE PROCEDURE:

The ReLEx smile procedure bears a great number of advantages compared to conventional refractive correction methods due to its unique features.

- Minimal invasive surgery: %80 less side cut (compared to LASIK) %30 less cap cut
- Preserves integrity of upper corneal layers
- · Ensure preservation of corneal biomechanical stability
- · Less nerve damaged and therefore, less severity of dry eye syndrome
- Absence of flap eliminates the risk for flap complications such as epithelium in-growth, flap dislocation, infections and striae.
- Faster healing of epithelium

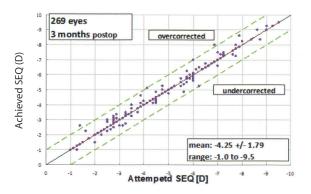
#### INDICATIONS AND RANGE OF TREATMENTS

ReLEx option for VisuMax caters to the following indication range:

| Myopic sphere range        | 0.5010.00 D |
|----------------------------|-------------|
| Cylinder range             | 0 5.00 D    |
| Spherical equivalent range | 0.7510.00 D |

- The ReLEx myopic treatment range covers almost %85 of the common patients population
- ReLEx shows excellent outcomes for higher corrections > 7- D

# Surgical results are not only highly predictive but also long lasting with minimal regression over time



#### ALTERNATIVE TO SMILE PROCEDURE

- Eye glasses are safe and relatively inexpensive and most people wear it.
- Contact lens can be used but needs maintenance and care and sometimes leads to severe complications like infection and allergy.
- Other alternatives are Intacs, Clear lens extraction and ICL (implantable contact lens).

#### WHO IS ELIGIBLE?

To be eligible for the SMILE procedure, you must be over 18 years of age and not have had a significant change in your glasses or contact lens prescription for the preceding 12 months. Other factors, such as the general health of your eye, will be examined at the preoperative assessment.

Certain conditions may make you a questionable candidate for the procedure or cause additional risks and complications, e.g.,

- Eye inflammation or infection
- Excessive corneal disease or scarring
- Degenerative disease of cornea
- Use of certain drugs
- Certain rheumatologically conditions (Lupus, Rheumatoid arthritis, Sjogrens etc.)
- Severe dry eyes
- Inadequate corneal tissue
- Uncontrolled diabetes
- Pacemaker



#### FINANCIAL RESPONSIBILITY

Our centre charges a single combined fee for the surgery and post – operative care and services, excluding the post-operative medications. Post-operative services also include post-operative visits on 24 hours check-up as well as the 1 week, 1 month and 3 months interval visits. Payment has to be made prior to the procedure and can be made by credit card, cash or bank certified cheque. Most insurance policies do not cover laser vision surgery.

#### **INFORMED CONSENT**

You have the right or consent to any treatment or procedure at any time. Please remember that your surgeon and other staff are available to help address your concerns, so do not hesitate to ask questions.

#### Steps of the consent process:

To assist you in making an informed decision, your surgeon will provide you with description of the procedure, the risks, the possible complications, the expected benefits and the alternatives available. Your surgeon will provide you with information that would be essential for a reasonable person in your position to use in deciding whether or not to undergo the procedure. If you have any unanswered questions or if you do not understand any topic, please ensure that the surgeon explains them to your satisfaction.

If after reading this material and speaking with your surgeon, you decide to undergo the procedure, you will need to sign the Patients Consent Form, indicating that you have been advised of the nature of the procedure, its risks, benefits and alternatives, and that you are making an informed decision to undergo the procedure. You can request a copy of your consent form.

#### **ENHANCEMENTS**

An overwhelming success rate is achieved in most cases after the initial procedure. However, due to an individual's prescription level and unique physiology, an additional treatment or enhancement procedures may sometimes be required. If this is the case, you would need to return to your original surgeon for re-evaluation and if possible for re-treatment. In general, patients must wait at least three months after the first procedure, and complete all mandatory post-operative appointments, before requesting an enhancement. In most cases, the decision about any need for enhancement can be made at the three month post-operative visit. You may also be required to complete an annual eye examination prior to requesting a re-treatment. Whether or not you experience the need for an enhancement, keep in mind that all patients will eventually require reading glasses as part of the unrelated and natural aging process of the eye.

#### **POTENTIAL COMPLICATIONS**

Like any surgical procedure, ReLEx or SMILE involves risk of unsuccessful results, complications or serious injury from unknown and unforeseen causes. Although the vast majority of our patients experience a significant improvement in their vision, neither your surgeon, nor your optometrist, nor the centre or its staff, can promise or guarantee that the procedure will be %100 effective or



make your vision better than it was before the procedure. During your pre-operative examination, the likely surgical efficacy outcome (e.g. the chances of you seeing well without glasses or contact lenses after one surgery) will be conveyed to you based on the level of your particular refractive error.

There is a small possibility that the procedure or a complication arising from the procedure could cause your vision to be either temporarily or permanently blurred, doubled, distorted, or have halos or other disturbances and that these would NOT be correctable with glasses or contact lenses. In the event this should occur, your surgeon will discuss and offer you advice on further treatment, which may involve medications and/or more surgery. If the outcome cannot be corrected by medications or external surface corneal surgery, the only way of restoring the vision may be a corneal transplant. However, it is believed that with the current techniques and technology, the combined risk of all causes of a corneal transplant being necessary is approximately 20,000 or less.

#### **Halos and Starburst**

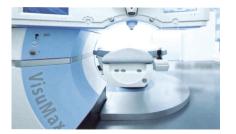
With the all-new SMILE technique the treatment is well designed to reduce the incidence of halos and star bursts. However, some patients do not see clearly at night or dim light and may notice glare and star burst around lights and illuminated objects after the procedure. This may be a temporary phenomenon or rarely a permanent problem. This is more commonly seen in patients with high levels of short-sightedness or long-sightedness and patients with larger than average pupil size.

#### **Equipment Malfunction**

In rare cases, the equipment can fail to operate and can reduce undesirable result. However, our maintenance standards are equivalent to the best in the world and tested by German technology from Carl Zeiss. The instrument goes through a testing protocol before each surgery.

#### **Under or Over Correction**

The all-new SMILE surgery corrects the precise amount of tissue to fix the desired refractive power. However, rarely under and over correction of results is possible and it may require re-treatment or use of glasses or contact lens.



#### **Light Sensitivity and Fluctuating Vision**

The smile technique reduces the chance of light sensitivity and fluctuation of vision mostly by precise correction and removal of tissue. In rare cases, light sensitivity and fluctuation of vision is possible, but will stabilize in most cases by 1 to 4 weeks. In %1 of cases it can be permanent.

#### **Dry Eyes**

SMILE technique reduces the chance of dry eyes due to less chance of cutting the corneal nerve, since the corneal flap is not developed in this form of treatment. However, in some cases dry eyes is possible and it can be treated with eye lubricants or punctual occlusion.

#### **Optical Imbalance**

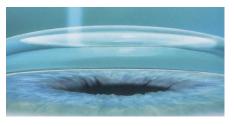
If the surgeon performs the procedure on each eye on different days, in the interim period the eyes may not be able to balance and focus properly until the procedure is performed on both eyes because there will be a power difference between the two eyes.

#### Regression

The cornea is a living tissue and once any part of it is removed to reshape the cornea and correct the refractive error, it can re-grow and thicken to compensate for the changes in the shape. Therefore, some effect of the correction may decrease over time and the patient may require either further treatment or correction using glasses or contact lens.

#### **Corneal Ectasia**

A certain amount of corneal tissue must remain after the SMILE procedure. This is believed to relate to the long-term stability of the cornea. In rare instances, less tissue is left which may lead to the bulging of the cornea thus reversing the intended flattening effect of the treatment. It can also lead to



progressive corneal deformity with thinning and increasing curvature changes, resulting in the cornea developing an irregular shape. The progressive corneal deformation is called ectasia, sometimes requiring a collagen cross linkage or a corneal transplant. This complication occurs in 1 out of 10,000 cases.

#### **Diffuse Lamellar Keratitis (DLK)**

1 in 500 patients experience a temporary inflammatory reaction beneath the corneal surface. This condition has been called "Sands of Sahara" or diffuse lamellar keratitis also known as "DLK". The exact cause of this complication has not been identified, and is likely due to many different factors. Patients with DLK may not show any symptoms at all or may experience blurred vision and tearing, which can last from several



days to several weeks, and which can delay the healing process. DLK generally can be treated with topical and/or oral steroids, occasionally with possible need for surgical intervention (the surgeon irrigates beneath the corneal surface).

#### SOME RARE SIDE EFFECTS

Epithelial in-growth, vascular occlusion, microscopic corneal surface irregularity, infection, hemorrhage, blockage and other unforeseen complications which may or may not be directly related to the surgical procedure, can occur rarely.

#### **Limits to Correction**

The procedure does not correct vision defects such as: cataracts, amblyopia (lazy eye), strabismus and presbyopia.

#### PRE-OPERATIVE, OPERATIVE AND POST-OPERATIVE GUIDELINES

Contact lenses users should discontinue using their contact lenses for a minimum of one week in case of soft lenses and 6-4 weeks in case of semi-soft or hard lenses, prior to the procedure.

#### **Preoperative Assessment**

- Be prepared for extensive eye test prior to laser vision surgery. The process includes: eye test using topical anaesthetic drops and eye dilatation.
- Please arrange for alternate transport and sunglasses when you come for the assessment, Al Zahra Hospital will not be held responsible for any costs incurred for travel and/or accommodation, lost employment income or any additional expenses incurred due to patient being deemed a non-candidate, requiring re-treatments, re-scheduling, or delays.

#### WHAT HAPPENS BEFORE EYE SURGERY?

- Please arrange alternative transportation after your surgery, as we do not advise driving for approximately 2-1 days after the procedure.
- Please don't use any eye make-up 24 hours prior to the surgery.
- We recommend avoiding alcohol 24 hours and 48 hours after your surgery.

#### The Day of the Surgery

- You can expect feeling nervous, anxious or excited prior to your procedure. This is a completely natural, normal response.
- Please refrain from wearing perfume or cologne on the day of your surgery. Please do not use any hair products containing alcohol; hair spray or mousse.

- What Happens After the Procedure?
  - Your first mandatory post-operative appointment will take place within 24 hours and additional follow ups will be at one week, one month and three months after the day of the surgery.
  - Each post-operative appointment takes approximately 30-15 minutes for evaluation.

## RECOMMENDED ACTIVITY SCHEDULE FOLLOWING ROUTINE SMILE PROCEDURE

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|  |   | 20/32  | FELOPZD  | 20/32  |
|  |   | 20/25  | DEFPOTEC | 20/25  |
|  |   | 20/20  | LEFODPCT | 20/20  |

#### Day of Surgery:

- The day of surgery should be a day of rest. At least one hour of sleep after the surgery with your eyes covered with protective eye shield is advised.
- Always be careful about activities where the eye may be poked, rubbed, or touched.
- Always avoid rubbing eyes (instead use lubricant drops for irritation).

#### 24 Hours after the surgery:

- Take a bath instead of a shower. Avoid soap or water in the eye.
- Restrict movement to light activities.
- Work at home is acceptable.
- Reading and watching TV is permitted as long as the eyes are lubricated.
- Travelling by air is allowed, provided eyes are lubricated every 30 minutes with lubricating drops or every 2 hours with lubricating gel.

• Bring good quality sunglasses.

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#### 48 Hours after surgery

- Driving can be resumed if adequate vision is confirmed at post-operative evaluation.
- Shower (but continue to avoid soap and water in the eyes).
- Office work can be resumed.
- Face make-up may be used (it is very important to keep eyes lubricated).

#### **Day 3 activities**

- Exercise without risk to the eyes (Treadmill, Stair master).
- Be careful while playing with children.
- Moderate alcohol consumption may be resumed

#### **Day 7 activities**

• Apply eye-makeup, jogging outdoor, roller blading, relaxed bicycling, playing golf and lifting weights are allowed.

#### Activities that can begin in 1 month (with eye protection)

• Racket sports, swimming, scuba diving, snorkeling, sailing, sun tanning, motorcycling, parachuting, baseball, and basketball.

#### Activities that can begin in 3 months (with eye protection)

• Water skiing, wind surfing, kayaking and surfing (proceed with caution as there are high risk activities).

