WATERFRONT PRIVATE HOSPITAL

Risks & Revisions

Rhinoplasty Patient Information — Part 4 of 6

This leaflet is provided for information purposes.

Please discuss any questions with your consultant.

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Information for patients contemplating Rhinoplasty
Helping you to make the right decision and providing you with the knowledge to give informed consent.
4 - RISKS AND REVISIONS

Risks and Complications of Rhinoplasty

Only surgeons who do not operate have no complications!

Any cosmetic surgical procedure results in a degree of scarring and has potential risks and complications.

The risks can be kept to a minimum when care is provided by an experienced surgical team who operate on carefully selected and properly informed motivated patients, at a modern accredited and well staffed hospital, offering quality aftercare and 24/7 access when required.

However, excellence cannot guarantee uneventful recovery nor a perfect or indeed a satisfactory outcome.

Risks and Complications of Rhinoplasty

A complication may be defined as an unexpected adverse medical or surgical event requiring separate attention during or following an operation. Recognizing obvious medical and surgical complications should present no difficulty, however, subtle aesthetic complications are harder to define and are based on **value judgments** related to the aesthetic sense of the surgeon and the body-image demands of the patient.

A knowledge of relevant complications and consequences is essential before an informed decision can be made.

A large study (Layliev et al) on approximately 5000 patients who underwent rhinoplasty reported the rate of major complications to be less than 1%.

The following list of complications is not exhaustive. If you have concerns these can be discussed prior to consenting for surgery.

Complications can happen at the time of surgery

Excessive bleeding:

This may relate to previously unrecognized bleeding tendency or drug induced (aspirin or other platelet reducing medications that should have been stopped 10-14 days before surgery). Bleeding contributes to operative difficulty and prolonged operating time.

Injury to the skin and tears of the lining of the nose could happen during the process of exposing the cartilages and bones:

A patient and meticulous technique usually prevents this complication, but it is difficult to avoid in noses that have been traumatized or that have had previous operations. Injury to the skin could lead to external scar. Septal perforation or internal adhesions could follow tears of the lining leading to functional issues.

Osteotomy complications (breaking the bones):

Osteotomies are **controlled fracture lines** created by the surgeon to mobilize and reshape nasal bone segments into a desired form. A variety of instruments and techniques are used to ensure that the released bone segments move predictably and remain in a stable position. Failure to do so may result in open roof or step deformities, asymmetries or even collapse of the bony pyramid. The risk of this complication is higher in patients who have had previous nasal trauma or if the structure of the nose had been weakened or altered by previous surgery.

Unintended separation of seams between cartilage and bone:

This could lead to collapse of the middle third of the nose (an inverted-V deformity) or asymmetry. The use of spreader grafts helps in minimizing the risk of collapse and the associated cosmetic-functional problems.

Injury to the structures surrounding the nose:

This could happen during osteotomies particularly in noses that have previously been traumatized. The proximity of the eye socket and the base of the skull renders these structures susceptible to such occurrences. Injuries could lead to hemorrhage, infection, leaks or injury to the tear ducts.

Early complications

Bleeding: Can occur after the operation and rarely (less than 1 in 100) may require a return to theatre. Heavy bleeding may require a blood transfusion. Bleeding can also occur in the first few weeks after surgery if there is infection affecting the lining of the nose.

Infection: Infection after rhinoplasty is generally much less frequent than one would expect from an operation in a potentially unsterile field. Prophylactic intravenous antibiotics are given, and the nasal cavity is washed with antiseptics prior to surgery. A topical antibiotic (ointment) is prescribed after surgery.

The wound infection rate following rhinoplasty is variously quoted as less than 2%. It usually responds to antibiotics and drainage. Deep infection very rarely can lead to collapse of the bridge of the nose and require re-operation. We avoid the use of foreign material as this could promote an infective episode. Life threatening infections could follow surgery, but these are exceptionally rare in rhinoplasty. Postoperative toxic-shock syndrome is a rare occurrence; most cases have occurred in the presence of nasal packing. In our patients, the packs are removed prior to discharge from hospital.

Early complications

Other complications

Septal hematoma (blood collecting between the lining of the nose and the septum): This may need daily aspiration until the return is free of blood. Some authors advocate a larger incision to aid drainage and subsequent packing for 48 hours. Antibiotic coverage is indicated to guard against formation of a septal abscess. We always quilt the lining of the septum before concluding a rhinoplasty procedure. This helps in reducing this risk.

Slow healing or separation of the open rhinoplasty incision.

Persistent swelling and incomplete resolution of bruising: Initial swelling (oedema) and bruising may last 10-14 days. The severity may be determined by difficult nasal bone work (osteotomies), long operating times, excessive nasal packing, postoperative vomiting, or raised blood pressure. Persistent oedema and numbness over the nasal tip region is encountered more often following open rhinoplasty and may last several months. This is not a problem if the patient has been forewarned. Very rarely, severe bruising can be followed by pigmentation under the eyes particularly in ethnic patients.

Cerebrospinal fluid rhinorrhea (leak): A medical term for a rare condition in which the fluid that normally cushions the brain and spinal cord, cerebrospinal fluid, runs from the nose. It could follow disruption of a thin bony plate that separates the top end of the nasal cavity from the base of the skull. Predisposing factors include previous trauma and congenital weakness. The clear fluid that runs from the nose has a salty or metallic taste and this may be associated with headache and lack of smell. Most leaks heal spontaneously. Persisting leaks need localization and surgical repair.

Numbness and pain: Temporary numbness of the tip of the nose follows open rhinoplasty. It usually resolves but may take months to do so. Transient numbness and pain behind the upper incisors may follow bruising of a nerve.

Disturbances in the sense of Smell: Transient reduction or loss of the sense of smell can follow nasal surgery and is related to several factors, including swelling, trauma to a small area of specialized lining at the top of the inside of the nose, and use of certain pharmacologic agents. Patients with past facial trauma may be predisposed to injury of the smell apparatus during osteotomy. Psychogenic factors also may be responsible. There are reports suggesting that permanent loss of smell (anosmia) occurs in 1% of rhinoplasties.

Early psychological complications: Transient episodes of anxiety or depression are not uncommon and may last several weeks after the operation. A small number of patients need the surgeon to repeatedly express that the nasal blockage will disappear, the smell and taste sensation will return, the teeth anesthesia will subside, the tip projection, asymmetries and swelling will decrease in time etc. **They need repeated reassurance.**

Breathing difficulty

Breathing difficulty due to complications affecting the lining of the nose

Postoperative trauma with the resultant oedema and swelling can cause transient nasal blockage. Reassurance is all that is needed initially. Persisting nasal blockage may be related to **vasomotor rhinitis** or allergic rhinitis. Patients who fail to respond to medical measures may require surgical treatment.

Rhinoplasty and indeed any other form of nasal trauma can trigger, worsen or unmask **vasomotor rhinitis**.

Vasomotor (non-allergic) rhinitis is a common disorder affecting noses that are overly-sensitive to air containing particulates whether it be smoke, hairspray, perfume, dust, etc. Such particulates irritate the nasal and sinus lining causing symptoms. These symptoms are nearly indistinguishable from symptoms experienced by patients with bad allergies or sinus infections and include nasal congestion, sneezing, post-nasal discharge, pain-pressure over the face and/or runny nose. The treatment is usually non surgical such as the use of regular saline flushes. Surgical treatment such as turbinate reduction may be considered in resistant cases.

Breathing difficulty

Breathing difficulty due to complications affecting the structure of the nose

While the most common cause of breathing difficulty following rhinoplasty is a form of rhinitis that responds to medical treatment, there are other causes that may require surgical correction:

1. Pre-existent, undetected, or diagnosed but uncorrected, **septal deviation.**
2. Turbinate hypertrophy (see anatomy of turbinates).
3. Adhesions and scar tissue web formation inside the nose.
4 Inadequate nasal tip support and **cartilage collapse**.

If breathing difficulty is a major concern you may need to be assessed by an ENT surgeon prior to undergoing rhinoplasty.

Postoperative discomforts and complications that could follow any surgical operation

Discomforts

The amount of discomfort following surgery depends on many things, including the type of surgery performed. With modern anaesthetic techniques, the immediate recovery of most patients is both quick and uneventful. However, it is inevitable that a minority of patients experience some discomforts, which may include:

- Nausea and vomiting from general anaesthesia
- Soreness, pain, swelling, and bruising in and around the surgical site
- Constipation and gas (flatulence)
- Sore throat (caused by the anaesthetic tube)
- Temporary disturbance of sleep rhythm
- Thirst

Complications

Deep vein thrombosis (DVT): is the formation of a blood clot in a large deep vein usually inside the leg resulting in pain, swelling, and redness. The thrombosis can be silent. If you have these symptoms, call the hospital or the emergency services.
Pulmonary embolism: this happens when the clot separates from the vein and travels to the lungs. In the lungs, the clot can cut off the flow of blood. This is a medical emergency and may cause death. Symptoms are chest pain, trouble breathing, coughing (may cough up blood), sweating, fast heartbeat, and fainting. If you have the symptoms, call the emergency services.
Lung (pulmonary) complications: sometimes, pulmonary complications arise due to lack of deep breathing and coughing exercises within 48 hours of surgery. They may also result from pneumonia or from inhaling food, water, or blood, into the airways. Symptoms may include wheezing, chest pain, fever, and cough (among others).
Urinary retention: Temporary urine retention, or the inability to empty the bladder, may occur after surgery. Caused by the anaesthetic, urinary retention is usually treated by the insertion of a catheter to drain the bladder until the patient regains bladder control. Sometimes medicines to stimulate the bladder may be given.
Reaction to anaesthesia: Although rare, allergies to anaesthetics do occur. Symptoms can range from mild to severe. Treatment of allergic reactions includes stopping specific medicines that may be causing allergic reactions. Also, administering other medicines to treat the allergy.

Late postoperative complications

Scar formation

External Scarring (The Skin):

The surgical scar that follows open rhinoplasty usually settles down very well. Occasionally, the scar remains visible at a conversational distance and may benefit from surgical refinement. Very rarely, skin loss from infection and necrosis can be followed by additional external scarring that requires treatments which could include intralesional steroids, dermabrasion, lasers, and/or surgical scar revision. Thread veins may appear on the skin of the nose particularly after repeat rhinoplasties. Preexisting blemishes may become exaggerated. Patients who bruise badly may be left with residual pigmentation.

Internal Scarring (The Soft Tissues):

Excessive accumulation of soft tissue scarring above the tip of the nose can result in the so-called **Polly beak deformity**. This deformity is characterized by fullness above the tip and may present in degrees. Patients with thick nasal skin, poor skin elasticity and large nasal reductions are at risk. Delaying treatment of Polly beak deformity for a year is prudent; this delay allows the normal healing process to occur. **A delay for more than a year may be necessary in patients with thick skin.** There are other causes of this deformity which include under resection of septal cartilage, over resection of the bone or loss of tip support.

Internal Scarring (The Lining of the nasal cavity):

Adhesions (the medical term is synechiae) could follow the creation of opposing raw surfaces inside the nose that heal together, causing a scar. They often form between the septum and the inferior turbinate (the long, narrow, curled shelf that protrudes into the breathing passage). Adhesions can make breathing difficult and require surgical release.

Late postoperative complications

Septal perforation:

A septal perforation occurs whenever there's a hole in the nasal septum. It is a rare complication of septoplasty or rhinoplasty. Septal perforations, particularly those located deep at the back of the nose may be symptom-free. Holes that are closer to the front of the nose can be associated with nasal crusting, nasal bleeding, breathing difficulty and runny nose and these symptoms could have a negative impact on the quality of life. Nonsurgical treatments (saline wash outs and the use of septal buttons) may control the symptoms, but a surgical solution could prove necessary.

Nasal valve collapse:

This happens when the airway's narrowest part becomes weakened and interferes with the flow of air through the nose and sinuses. Excessive removal of tip cartilage or inadequate support of the mid section of the nose following hump removal are factors that contribute to valve collapse. This complication can be treated by batten and/or spreader grafts.

Bossa formation:

A nasal tip boss is an irregular knoblike protuberance of the alar cartilages that creates a visible asymmetry of the nasal tip. This complication can occur any time postoperatively but is most frequently encountered within the first 12 months. Individuals with thin skin and strong cartilages are more prone to this complications.

Under correction or overcorrection:

Under correction or overcorrection of a preexisting deformity leads to either persistence of the deformity or to introduction of a new one. A new deformity may introduce a functional deficit.

Asymmetries and minor imperfections:

(see Aesthetic Complications)

Aesthetic complications

While major complications following rhinoplasty are rare (0.7-1%), residual or newly developed deformities are not uncommon (5-15%) and are considered to be the main risk of the procedure.

Rhinoplasty is arguably the most challenging of all facial surgical operations. It demands a thorough understanding of an art and science. Each case has its own challenges and requires a careful assessment of the deformity, a clear understanding of both the effectiveness and limitations of the techniques available for correction, a proposed plan of action and sequence, and a meticulous, uncompromising execution of the surgical technique.

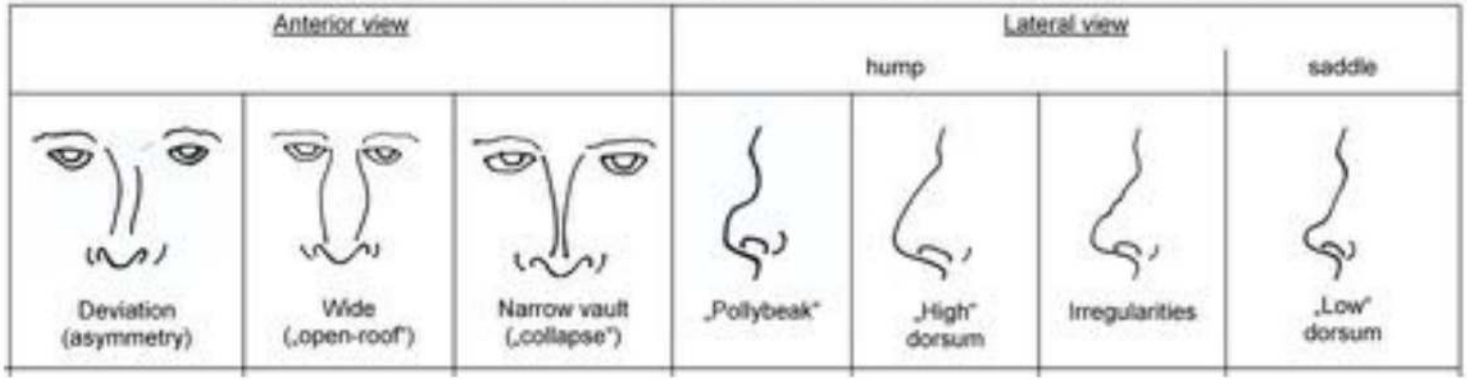
The postoperative deformities could be due to inadequate surgical planning, errors in technique, severe infection, missing or under correction of existing deformity, over resection of the structure of the nose, displacement or absorption of grafts, or instability of the structure due to insufficient reconstruction.

Most of the deformities are minor, some are acceptable and others may require small touch ups. At the other end of the scale, the nose could look much worse than it did before surgery (for example a shortened severely upturned nose or a nose with saddle deformity due to collapse of the nasal structure).

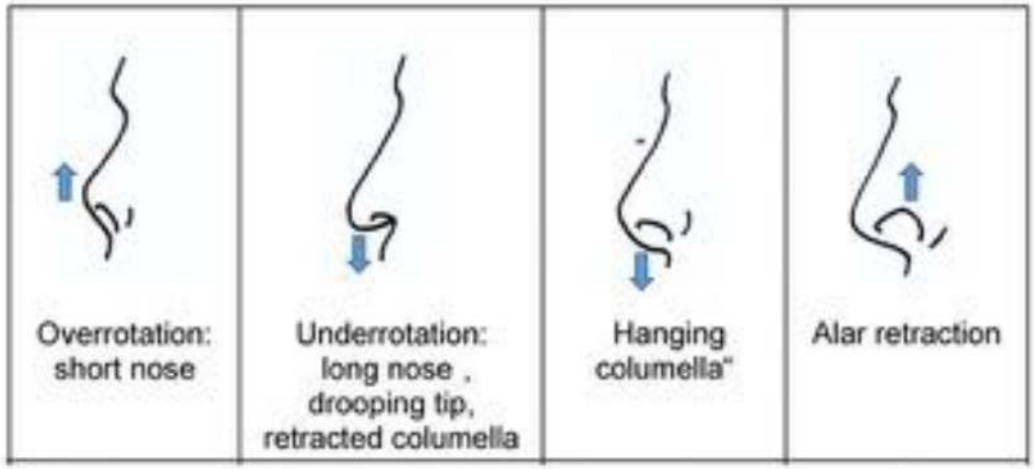
Examples of aesthetic postoperative deformities:

Asymmetries and steps (visible or palpable), persistent deformity (e.g. wide nasal tip or persistent hump), supra tip fullness (Polly beak deformity), under projected (droopy) or over projected tip, inverted V-deformity (collapse of the middle third of the nose), alar collapse, retraction of the nostril margins, hanging or retracted columella, saddle nose, open-roof deformity, pinched tip, slit-like nostrils, bossae, and over shortened upturned nose. An over-reduced hump will leave an otherwise normal nasal tip with a relative prominence.
(see diagrams)

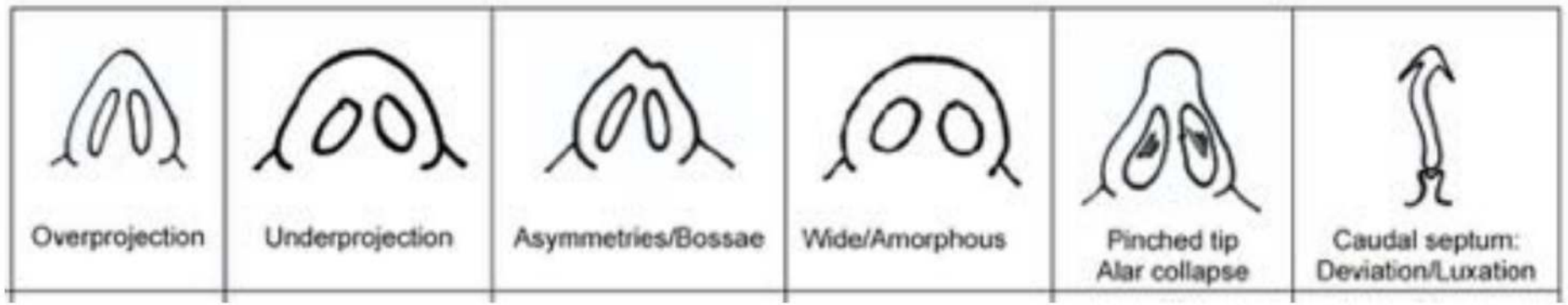
Postoperative deformities of the nasal dorsum (same relations in tables 4 and 5)



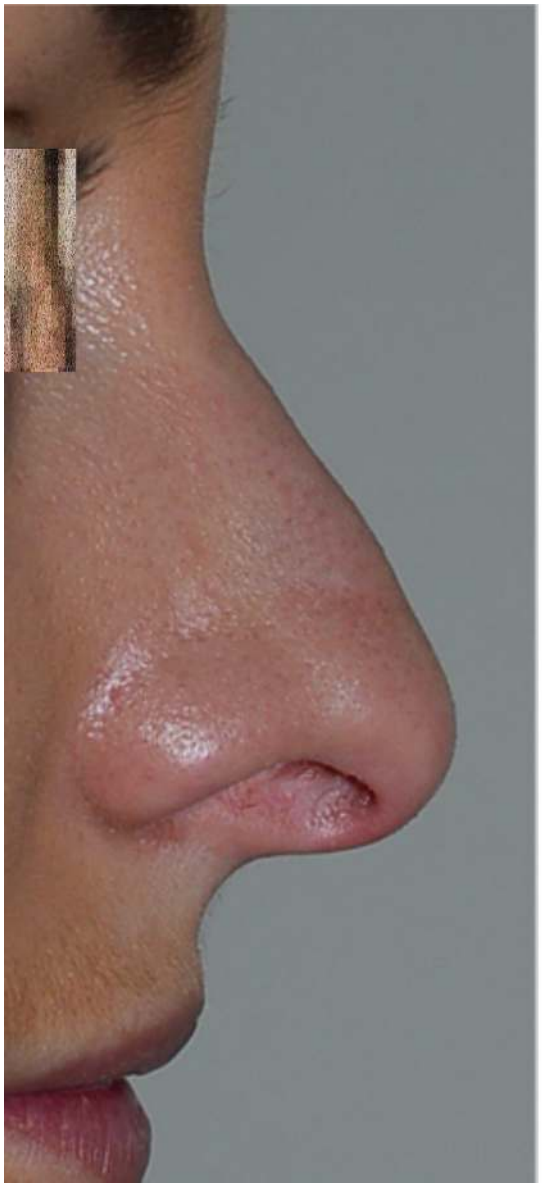
Postoperative deformities of tip, columella and alae in the side view



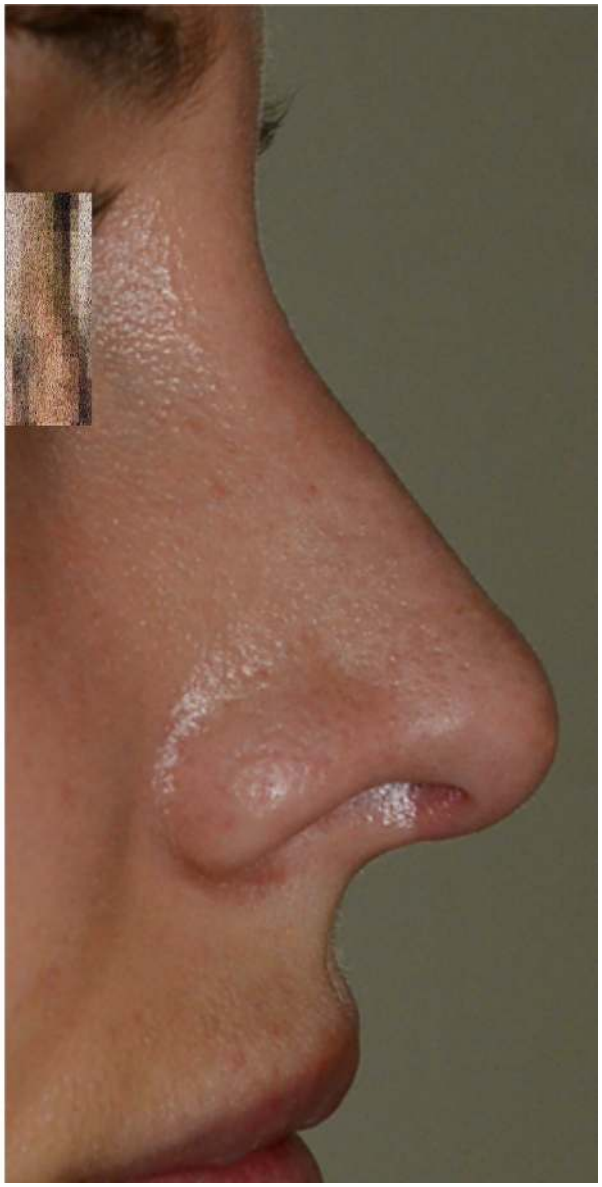
Postoperative deformities of nasal base and septum



After : Risks and complications in rhinoplasty
Gerhard Rettinger



Revision Rhinoplasty



Revision Rhinoplasty

Revision rhinoplasties (also called secondary or re do rhinoplasties) can be the most difficult in cosmetic surgery. There may be little normal anatomy. The skeletal framework had been changed with some parts distorted or missing. The scar tissue makes the dissection more difficult. The skin is harder to drape properly.

Mallets, chisels, grafts and sutures aside, all surgeons agree that **repeat rhinoplasty patients are often emotionally fraught ratcheting up the pressure of an already demanding procedure.**

A certain percentage of rhinoplasty patients are candidates for revisions. Revisions may include nonsurgical interventions (fillers or steroid injections), small surgical tweaking as well as big operations. Various statistics report revision rates of 5-15%.

There are a variety of indications for revision surgery. Examples include under correction leading to persistence of the of the preexisting deformity or over correction introducing a new one, functional difficulties due to structural collapse, asymmetries and problems that follows unsatisfactory healing.

Revision Rhinoplasty

Ideally, revision rhinoplasty should not be performed until at least 9-12 months after the initial operation. While revision rhinoplasty can be readily justified for repairing **obviously** misshapen noses and correcting structural functional problems, extra care must be exercised before considering further surgery for minor or perceived imperfections (or indeed a preexisting feature that was not among the targets for the primary procedure but becomes a focus of concern after correction of the more significant deformity).

A word of waring: If you insist upon having a perfect nose, your obsession may lead to heartbreak. Near perfection is difficult to achieve in rhinoplasty, so provided that adequate reduction of the main deformities had been achieved, think twice before you endanger a good nose with revision surgery.

Despite a surgeon's best efforts, revision rhinoplasty has a higher revision rate than primary rhinoplasty (no prior nasal surgery). It is important that you are aware of this as no ethical plastic surgeon can guarantee the outcome of revision rhinoplasty or any other cosmetic plastic surgical procedure for that matter.

Revision Rhinoplasty

Second opinions:

It is possible that the surgeon and patient disagree when assessing the cosmetic outcome of rhinoplasty. Patients are entitled to seek a second opinion from another consultant who may provide this free of charge if practicing within the same hospital. If the consultant providing the second opinion is not within the same hospital, then your surgeon may offer to settle the fee on your behalf. The Hospital and/or the surgeon will not guarantee to fund any recommendation for further surgery given by the second opinion.

Complaints:

If you remain unhappy with the result, or you think that the procedure was not carried out properly, you can enquire about the Hospital complaint procedure and write to the relevant hospital officer. Make sure that you're fair, and realistic and allow a reasonable amount of time for the officer to respond to your complaint. If you don't think they have dealt with your concerns properly, it's then up to you if you want take the matter further.

Revision Rhinoplasty

Who pays?:

The surgeon and his anaesthetist may waive their fees for revision rhinoplasty. When they do so, this should not be perceived as an indication that the standard of care offered by the surgical team was below acceptable standards (see "Happiness after rhinoplasty-Factors at play"). The hospital, under an inclusive care package, may reciprocate and not charge you if the indication for revision is a result of clinical complication, such as local infection or septal haematoma (leading to loss of structure and/or functional concerns) or if the cosmetic result is not in line with the expected outcome. This remains at the discretion of the hospital management team. The hospital may not cover the cost of refinements for minor imperfections which are not uncommon following rhinoplasty surgery. You may incur the full treatment costs when your initial surgery was carried out at a different hospital by another surgeon. These costs vary greatly, perhaps more than any other plastic surgery procedure depending on the steps required to achieve the desired result. Sometimes a revision rhinoplasty can be a minor tweaking while at other times it can be a major time-consuming reconstruction requiring the use of ear or rib cartilage grafts.

Refunds:

Although you and your plastic surgeon wanted the same thing: the best possible result, there are never actual or implied guarantees of a perfect or indeed a satisfactory outcome. Sometimes, what is considered a decent result may not be perceived as such by you. We try to resolve this issue through frank discussions and, when appropriate, through second opinions, revision surgery and/or the complaint procedure. Rarely, despite the aforementioned, patients remain dissatisfied and demand a refund. It is important to note that the cost you paid covered unlimited number of consultations before and after surgery, best surgical effort at the time of surgery, the consultant anaesthetist fee, the operating room charges, consumables and medications, hospital accommodation, specialist postoperative nursing, the compulsory surgeons indemnity insurance and general secretarial and overhead office costs. These services were already rendered. Plastic surgeons offering cosmetic surgery pay very large premiums for special insurance called **medical indemnity insurance**. This is to protect themselves and others financially and legally if they were sued for negligence, malpractice or mistakes. Usually, a surgeon does not entertain direct refunds, but a patient could be offered compensation if it could be shown that the care received fell below acceptable standards. You could seek independent legal advice.