

# Disturbances of breathing and initiation of other symptoms following nasal surgery

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## PURPOSE

The prime purpose of the nasal surgery, should be functional, neurologic, respiratory, corrective, constructive, conserving, limiting, preserving, cosmetic or rhinoplastic – and if done, should be all physiologically oriented.

Therefore, there are many demands placed on the Rhinologic Surgeon to obtain these goals, and if he does not, he can produce further obstructions, allergies, little deformities, gross deformities, and more important – neuro-vascular reflex reactions which can cause systematic effects.

## PRE-OPERATIVE EVALUATION

The pre-operative evaluation begins when the patient walks into the office and the process of selection of patients begins. There is more, therefore, to nasal surgery than technique and it is this process of selection, the history, the examination, the rhinomanometric tests which makes a good Rhinologist. One must know his limitations as a surgeon, and what he can do well, otherwise – he can save himself a lot of disappointment and embarrassments.

## HISTORY

The history can tell you three things:

1. Does the patient's physical and mental condition warrant an operation?
2. Why does he want surgery and what does he expect?
3. Will the patient benefit from such an operation?

History should be in detail and in depth. Early injury, previous nasal surgery, allergies, bleeding tendencies, psychiatric problems will play a role in selection. The symptoms of snoring, mouth breathing, headache, colds, crusting, bleeding, fatigue, post-nasal drainage seem always to be present to some degree in these patients.

If there are allergies, a time after management must be selected for surgery.

## EXAMINATION

Facial features, symmetry, dental alignment, acne, types of skin, presence of scars, pigmentation may play a role and influence the surgery. The decision to operate may come about after consultation with the Pediatrician, Internist, Allergist, Orthodontist, Psychiatrist, or the Hematologist.

## RHINOMANOMETRY

Cottle, in his many lectures and papers, has reviewed the interest in results of surgery performed in the last 75 years. Today, special equipment – both mechanical and electrical, and respiratory-pulmonary tests are now available to assess the cardio-pulmonary illness of the individual. Consequently, there has been renewed interest in the function of the nose other than in just filtering, moistening and olfaction.

We must assess the other functions and can do it by the study of pressure and flow in the role of the air stream. The understanding of rhythms, phases, patterns can also reveal further information that helps define the work of breathing through the nose.

The deformity of the nose and of the valve area can produce alterations in the air flow which can cause or produce neuro-vascular reflex reactions. These reactions, along with stress in the work of breathing, can produce a hypoxic state and can cause a condition of nasal neurosis which may produce allergies, post-drainage, vasomotor rhinitis.

Maxillary ostium region insufficiencies may produce headaches, sore throats, cough, ocular and crainal discomforts, as well as laryngeal and chest complaints. These neural reflexes from the nose, play an important role in the health of the individual.

## DISCUSSION

Therefore, there is a need for pre-operative evaluation and post-operative evaluation in order that we can learn whether or not our surgery has accomplished what we hoped it would. The functional examination may explain some of the complications with some of the unpredicted good results. Therefore, we must have detailed record of the surgical procedures.

The use of photographs taken at various ages post-operatively may be revealing. An injury in the first 5 years, may look and act reasonable. In the second 5 years – (within the 10–15 year age where there is an acceleration of growth) there may be scar tissue formation which may cause contractures later. Therefore, we must tell our patients, especially in children about further surgery which may be necessary at a later date.

In our techniques, cartilage which is replaced into the septum or dorsum may



grow, correct the deformity and yet it may disappear and produce a considerable amount of deformity and poor function.

Clinical benefits follow adequate properly performed functional nasal surgery, and the contrary can also take place if not properly performed.

To evaluate clinical benefits one must correlate the systemic problems of the patient with nasal and sinus disease. One must consider the total patient in the treatment of nasal problems. Age, heart disease, mental problems are not contraindications to nasal surgery. We must re-emphasize the importance of anatomical and physiologic examination of the patient with nasal problems, and that the primary function of the sinus is as an accessory organ of respiration.

We should be as concerned with nasal function studies as we are with audiological methodology in otologic practice and with cardio-pulmonary function tests in thoracic and lung disease.

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