

# Preperation to anaesthesia

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# Anaesthesia

The word is derived from the Greek words  
**an**, which means “without”  
and **aithesia** which means “feeling”

The first report of use of medical anesthesia comes from 1846

Anaesthesia techniques and constant development of anesthesia enables development of modern surgical techniques

# Preparing a patient for anaesthesia

- Preparing a patient for anaesthesia requires an understanding of
  - the patient's pre-operative status,
  - the nature of the surgery
  - the anaesthetic techniques required for surgery
  - the risks that a particular patient may face during this time.

- Patients often have comorbidities that require careful assessment and coordination.
- Preparation for surgery may take weeks to achieve, and could therefore potentially cause delay and cancellation of surgery if not done adequately.

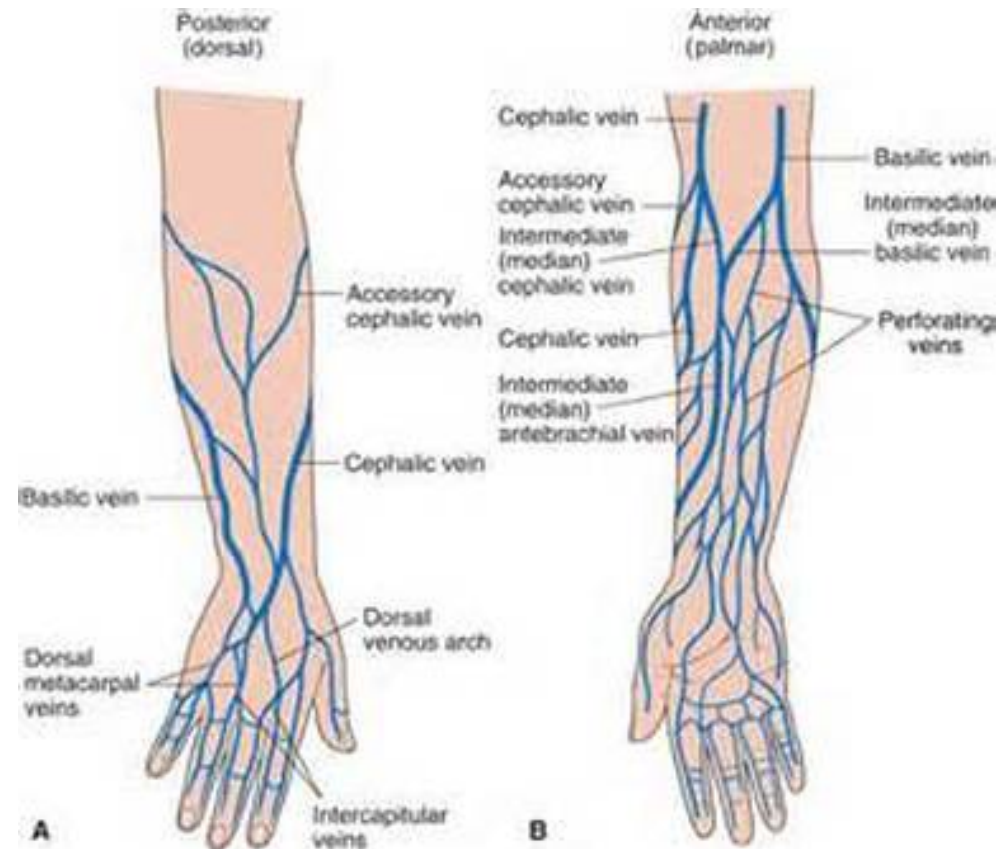
# Preoperative Visit

- Pre-operative anaesthetic assessment services decrease cancellations on the day of surgery, improve the patient's experience of their hospital admission, and may reduce complication rates and mortality.
- The pre-operative visit may relieve anxiety and answer questions about both the anaesthetic and surgical processes

# Superficial Peripheral Veins assessment



# Peripheral vein assessment





# Assessment of potential problems with intubation

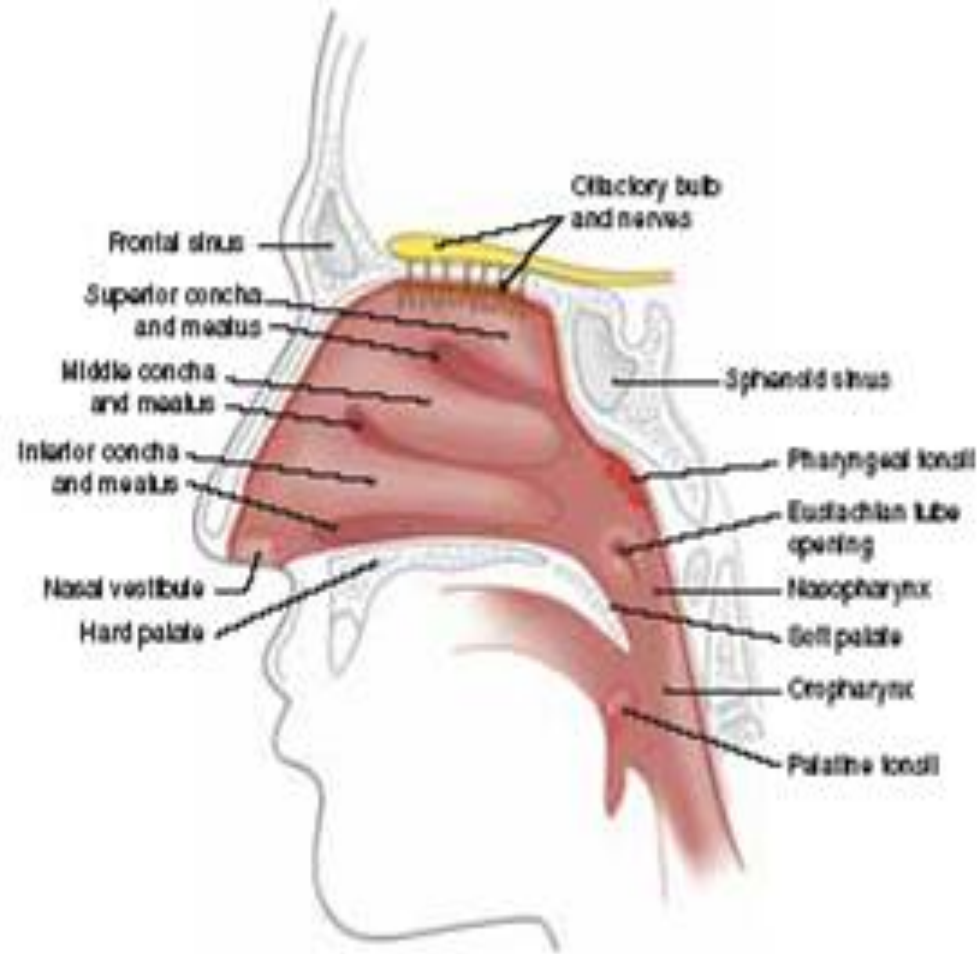


FIGURE 11.4. Internal nose.

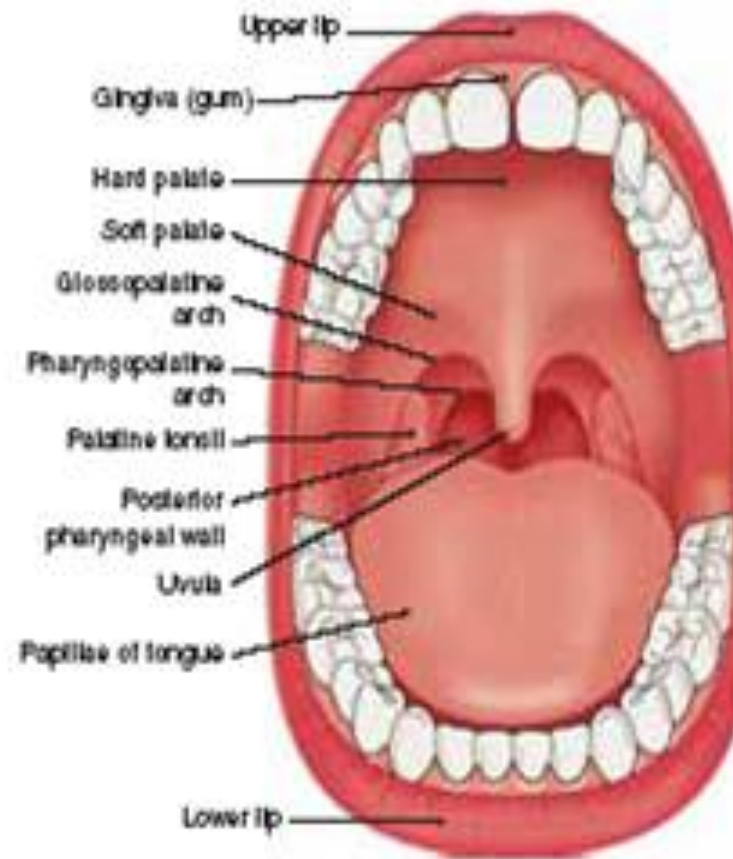


FIGURE 11.5. Structures of the mouth.



# Fasting guidelines for adults and children

## Adults

- Pre-operative fasting in adults undergoing elective surgery – ‘the 2-6 rule’:
  - ‘2’ – Intake of water up to 2 h before induction of anaesthesia.
  - ‘6’ – A minimum pre-operative fasting time of 6 h for food (solids, milk and milk-containing drinks).
- The anaesthetic team should consider further interventions for patients at higher risk of regurgitation and aspiration.
- Post-operative resumption of oral intake in healthy adults:
  - Patients should be encouraged to drink when ready, providing there are no contraindications.

# Fasting guidelines for adults and children

## Children

- Pre-operative fasting in children undergoing elective surgery – ‘the 2-4-6 rule’:
  - ‘2’ – Intake of water and other clear fluid up to 2 h before induction of anaesthesia.
  - ‘4’ – Breast milk up to 4 h before.
  - ‘6’ – Formula milk, cow’s milk or solids up to 6 h before.
- • The anaesthetic team should consider further interventions for children at higher risk of regurgitation and aspiration.

# Fasting guidelines for adults and children

Post-operative resumption of oral intake in healthy children:

- Oral fluids can be offered to healthy children when they are fully awake following anaesthesia, providing there are no contraindications.
- There is no requirement to drink as part of the discharge criteria.

# Fasting guidelines for adults and children

## Chewing gum

- Chewing gum may be allowed up to 2 h before induction of anaesthesia

# Surgical severity

- **Grade 1** examples: diagnostic endoscopy or laparoscopy, breast biopsy.
- **Grade 2** examples: inguinal hernia, varicose veins, adenotonsillectomy, knee arthroscopy.
- **Grade 3** examples: total abdominal hysterectomy, TURP, lumbar discectomy, thyroidectomy.
- **Grade 4** examples: total joint replacement, artery reconstruction, colonic resection; radical neck dissection.

# The Role of Preoperative services

- Ensure every patient is fully informed about their proposed procedure and the interventions that will need to be undertaken.
- Estimate the level of risk for every patient.
- Ensure every patient understands their own individual risk so that they can make an informed decision about whether to proceed to surgery.
- Identify co-existing medical illnesses and optimally prepare patients whilst taking into account the urgency of the operation.
- Identify patients with a high risk of complications in the peri-operative period and define the appropriate postoperative level of care (day stay, inpatient, ward, HDU, critical care).
- Plan discharge.

# ASA physical status

- **ASA grade 1** :A normal healthy patient: i.e. without any clinically important comorbidity and without a clinically significant past/present medical history.
- **ASA grade 2**: A patient with mild systemic disease.
- **ASA grade 3**: A patient with severe systemic disease.
- **ASA grade 4**: A patient with severe systemic disease that is a constant threat to life.
- **ASA grade 5**: A moribund patient who is not expected to survive without the operation.
- **ASA grade 6**: A declared brain-dead patient whose organs are being removed for donor purposes.



- In accordance with the published recommendations of the task force, there is no evidence to support obtaining serum chemistries, coagulation studies, or even hemoglobin levels unless indicated by a specific patient condition.
- Furthermore, a given test is indicated only if the results will be reviewed before the procedure and if it has the potential to affect the perioperative management of the patient.
- acceptable timing of testing, ranged from 4 weeks to 6 months before the procedure.

# Perioperative medication management

- Accurate documentation of preoperative medication
- Established decisions on stopping medications prior to surgery
- Monitoring of appropriate chemistry study results to determine dosages and the occurrence of adverse effects
- Appropriate management of pain
- Administration of adjunctive medications
- Use of appropriate formulations and alternative products when needed
- Review of discharge medications to ensure discontinuation of surgery-specific drugs (eg, anticoagulants, analgesics) to avoid polypharmacy

Table 1. Outline of Perioperative Drug Management of Patients With Coronary Artery Disease ([Open Table in a new window](#))

Drug	Day Before Surgery	Day of Surgery	During Surgery	After Procedure
Nitroglycerin	Usual dose	Usual dose	IV infusion if frank ischemia	Continue IV dose if needed or until medication can be taken PO
Beta-blockers	Usual dose	Usual dose plus beta-blocker protocol	Usual dose plus beta-blocker protocol	Usual dose plus beta-blocker protocol
Calcium channel blockers	Usual dose	Usual dose morning of surgery	Usual dose morning of surgery	Continue IV dose until medication can be taken PO
Aspirin	Discontinue 1 week before surgery			Restart postoperatively at discretion of surgeon
Ticlopidine	Discontinue 1 week before surgery			Restart postoperatively at discretion of surgeon

Table 2. Perioperative Drug Management for Patients With Hypertension ([Open Table in a new window](#))

Drug	Day Before Surgery	Day of Surgery	During Surgery	After Procedure
Beta-blockers	Usual dose	Usual dose on morning of surgery with sip of water	IV bolus or infusion (usually not required)	Continue IV dose until medication can be taken PO
Calcium channel blockers	Usual dose	Usual dose on morning of surgery with sip of water	IV bolus or infusion (usually not required)	Continue IV dose until medication can be taken PO
ACE inhibitors	Stop day before	Do not take day of surgery	IV formulations (usually not required)	Continue IV dose until medication can be taken PO
Diuretics	Stop day before		IV beta-blockers/IV calcium channel blockers	Restart when patient on oral liquids
Potassium supplements	Stop day before; consider checking potassium level			Restart when patient on oral liquids
Central-acting sympatholytics	Usual dose	Usual dose on morning of surgery with sip of water	Transdermal clonidine/IV methyldopa	Restart when patient on orals liquids
Peripheral sympatholytics	Usual dose	Usual dose on morning of surgery with sip of water	Any IV formulation (usually not required)	Restart when patient on oral liquids
Alpha-blockers	Usual dose	Usual dose on morning of surgery with sip of water	Any IV formulation (usually not required)	Restart when patient on oral liquids
Vasodilators	Usual dose	Usual dose on morning of surgery with sip of water	IV formulation (usually not required)	Continue IV dose until medication can be taken PO

Because a risk of digitalis toxicity and perioperative arrhythmia exists, some clinicians prefer to withhold the medication 12 hours before surgery.

Patients on quinidine should receive their dose on the night before surgery. Intravenous lidocaine may be used for ventricular arrhythmia, and intravenous propranolol or verapamil can be used for supraventricular arrhythmias. Quinidine is restarted as soon as patient is on oral sips.

Patients on procainamide, similar to those on quinidine, should receive their dose on the night before surgery. To control arrhythmia in the intraoperative period, intravenous procainamide or lidocaine may be used. Poorly tolerated supraventricular arrhythmia may be treated with propranolol and verapamil.

Disopyramide has a negative inotropic effect with adverse anticholinergic effects of urinary retention and constipation; therefore, it is discontinued on the night prior to surgery and substituted with intravenous lidocaine in the perioperative period.

Tocainide is an oral agent similar to lidocaine and may be used for the treatment of ventricular arrhythmia. Administer the night before surgery, and use intravenous lidocaine until the patient resumes oral tocinide.

Discontinue amiodarone, used in life-threatening arrhythmia, on the night before surgery. It has a long half-life (30-60 d); therefore, it can be restarted safely after the

Table 3. Perioperative Medication Management for Patients With Diabetes and Hypothyroidism ([Open Table in a new window](#))

Drug	Day Before Surgery	Day of Surgery	During Surgery	After Procedure
Oral hypoglycemics	Usual dose	Omit dose	Insulin (SC or IV)	Insulin until patient is no longer NPO
Insulin	Usual dose	Omit dose	Insulin (SC or IV)	Usual dose
Thyroxine	Usual dose	Usual dose on morning of surgery with sip of water		Restart the dose when patient is no longer NPO

Table 4: Perioperative Medication Management in Patients With Epilepsy ([Open Table in a new window](#))

Drug	Day Before Surgery	Day of Surgery	During Surgery	After Procedure	Substitute Drug if Needed
Phenytoin	Usual dose	Usual dose on morning of surgery with sip of water	IV phenytoin	Continue IV dose until medication can be taken PO	
Phenobarbital	Usual dose	Usual dose on morning of surgery with sip of water	IV phenobarbital	Continue IV dose until medication can be taken PO	
Carbamazepine	PO loading dose of phenytoin or phenobarbital	PO phenytoin or phenobarbital	IV phenytoin or IV phenobarbital	Continue IV dose until medication can be taken PO	Phenytoin/phenobarbital
Valproic acid	PO loading dose of phenytoin or phenobarbital	PO phenytoin or phenobarbital	IV phenytoin or IV phenobarbital	Continue IV dose until medication can be taken PO	PO phenytoin or phenobarbital



# Systemic disease

## Cardiovascular disease: 'mild'

- Mild angina pectoris (no/slight limitation of ordinary activity, e.g. > 1 flight of stairs).
- Myocardial infarction > 1 month ago (including Q waves on 12 lead ECG).
- Compensated heart failure (no/slight limitation of activity, comfortable at rest).

# Systemic Disease

## Cardiovascular disease: 'severe'

- Severe or unstable angina pectoris (marked limitation of ordinary activity).
- Myocardial infarction < 1 month ago.
- Decompensated heart failure (marked limitation of ordinary activity or symptoms at rest).
- Severe valvular disease (exercise-induced syncope, angina, dyspnoea, orthopnoea, fatigue, palpitations).

# Cardiovascular disease

- Preoperative electrocardiogram (ECG) is required for patients with known coronary artery disease (CAD), significant arrhythmia, peripheral arterial disease, cerebrovascular disease, or other significant structural heart disease.
- Routine resting 12-lead ECG is not useful for asymptomatic patients undergoing low-risk procedures.
- For patients with known CAD who may experience an intraoperative event such as sustained hypotension, the resting ECG remains a useful baseline standard against which to measure changes in the postoperative period

# Cardiovascular disease

Ischemic heart disease can contribute to adverse perioperative outcomes, routine preoperative pharmacological or exercise stress testing for patients with known CAD is not recommended before ambulatory surgical procedures, regardless of the patient's functional capacity, unless it is indicated for other reasons

# Cardiovascular disorders

- The patient with a history of prior coronary artery bypass surgery who remains asymptomatic requires no special diagnostic testing or documentation
- This does not apply for patients after balloon arthroplasty

- The current recommendations include delay of an elective procedure for 365 days after the placement of a drug-eluting stent, and for 30 days after placement of a bare metal stent.
- Urgent procedures that are required in the less- than-recommended timeframe should be performed in a facility with cardiac catheterization capabilities to minimize the time from recognition of ischemia to revascularization.
- The risk for discontinuation of dual antiplatelet therapy within 4–6 weeks of percutaneous coronary intervention with either drug-eluting or bare metal stents is significant with regard to the danger of in-stent thrombosis, and this threat decreases with increasing time.
- In patients with a bare metal stent placed more than 30 days before, and the drug-eluting stent placed more than 365 days before, and in whom the P2Y12 platelet receptor-inhibitor must be discontinued, aspirin should be continued if possible.
- The perioperative plan for dual antiplatelet therapy should be individualized to the patient, and the surgeon, cardiologist, and anesthesia provider should participate in the decision-making process, considering the risk of bleeding versus stent thrombosis.

# Cardiovascular disorder

- Patients with a history of congestive heart failure, should have left ventricular systolic function assessed
- preoperative echocardiography is recommended for patients with dyspnea of unknown origin or recently altered clinical status with known heart failure.
- Patients with an ejection fraction of less than 30% are more likely to experience postoperative complications, including heart failure.



# Valvular heart disease

- The patient with a severely stenotic lesion of the aortic or mitral valve is also a poor candidate for surgery in an ambulatory setting.
- The diagnosis of aortic stenosis in a patient, who is either symptomatic or has either a valve area of less than 1 cm<sup>2</sup> or a mean transvalvular pressure of greater than 40 mmHg, is at risk for perioperative complications, including myocardial infarction and death.
- Patients with critical mitral stenosis (valve area <1 cm<sup>2</sup>) or those who are symptomatic are at risk for perioperative pulmonary hypertension, pulmonary edema, dysrhythmias, and hypotension, and they may require resources available in stationary care centers.

# Cardiovascular implantable electronic devices

- Communication between the surgical team and the electrophysiology team that regularly follows the patient.
- Recommendations for care include ascertainment of the patient's underlying cardiac condition for which the CIED was placed, in addition to the identification of the hardware, settings, and programming features.
- The electrophysiology team may prescribe perioperative interrogation, reprogramming, application of a magnet during the procedure, or no intervention at all.

# Pulmonary disorders

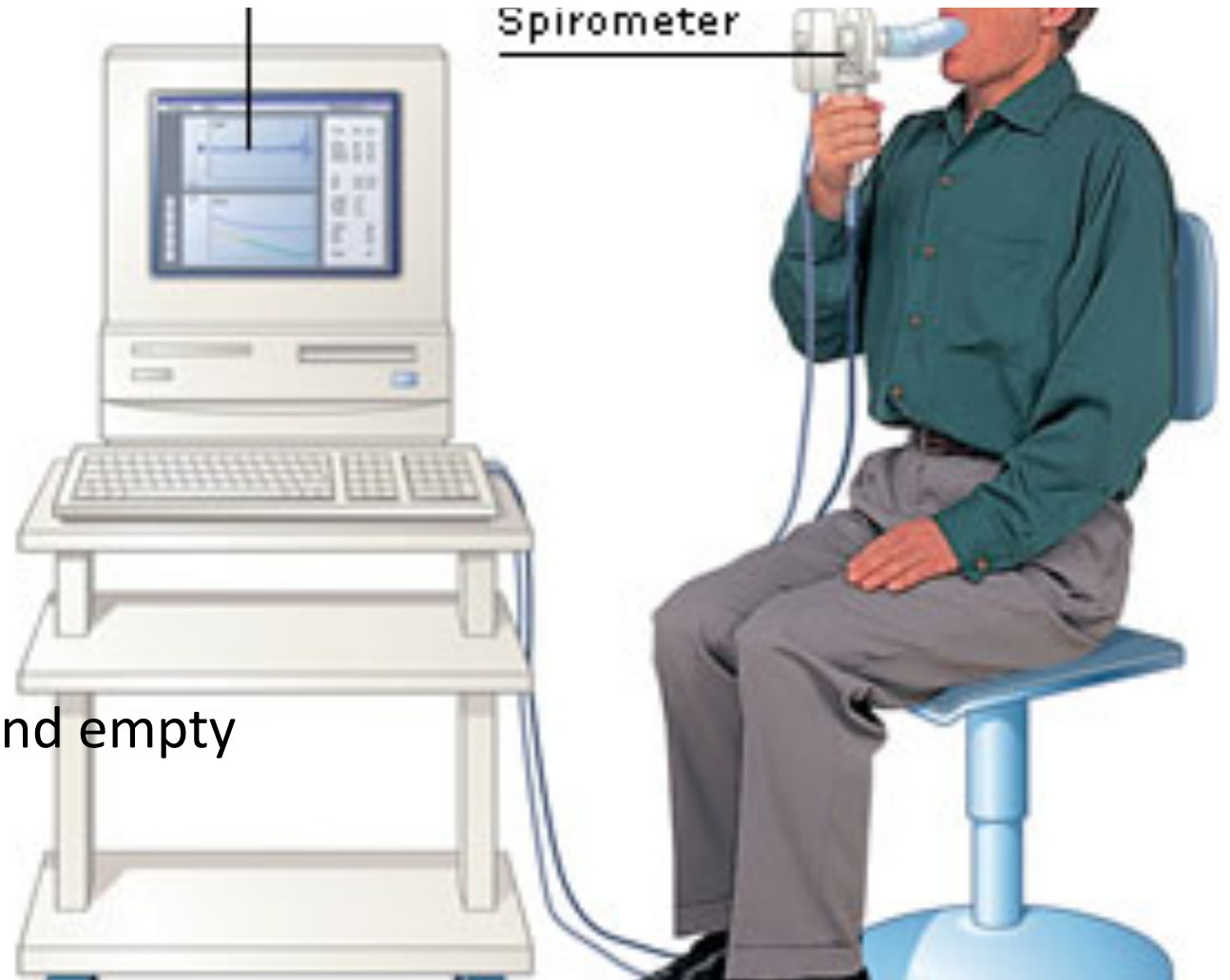
chronic obstructive pulmonary disease is the most commonly identified risk factor for postoperative pulmonary complications, with an odds ratio of 1.79.

# Pulmonary disorders

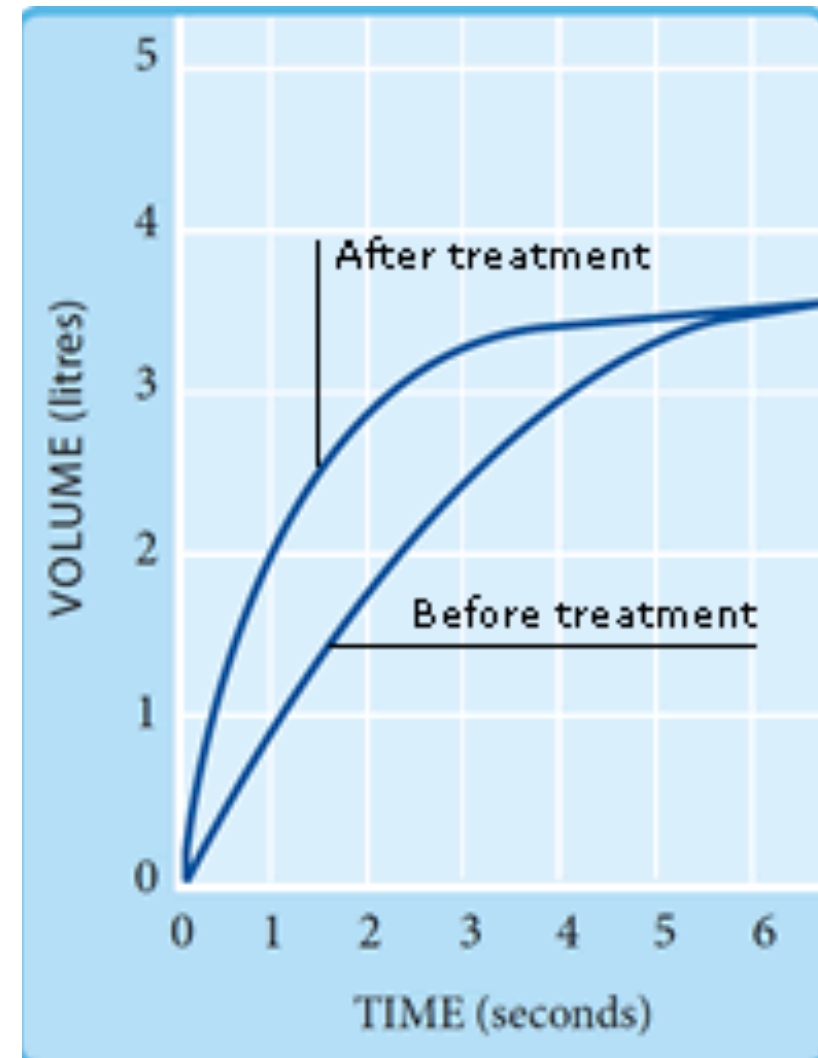
spirometry is useful in the initial diagnosis of chronic obstructive pulmonary disease or asthma, pulmonary function testing has not been shown to have any value in reducing postoperative pulmonary complications associated with ambulatory surgical procedures

# Pulmonary disorders

Spirometry – how quickly lungs fill and empty

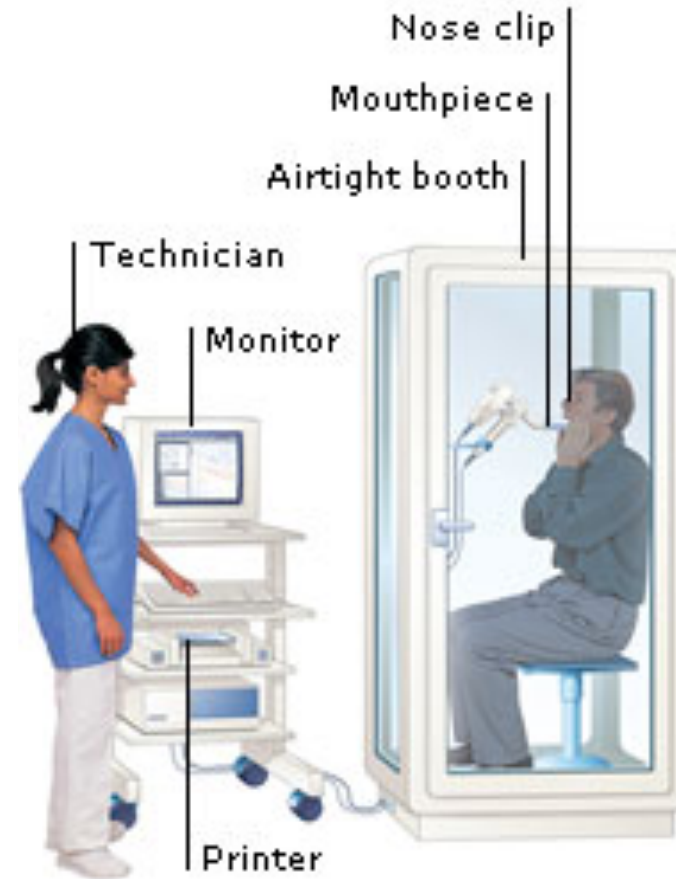


# PULMONARY DISORDERS



# PULMonary disorders

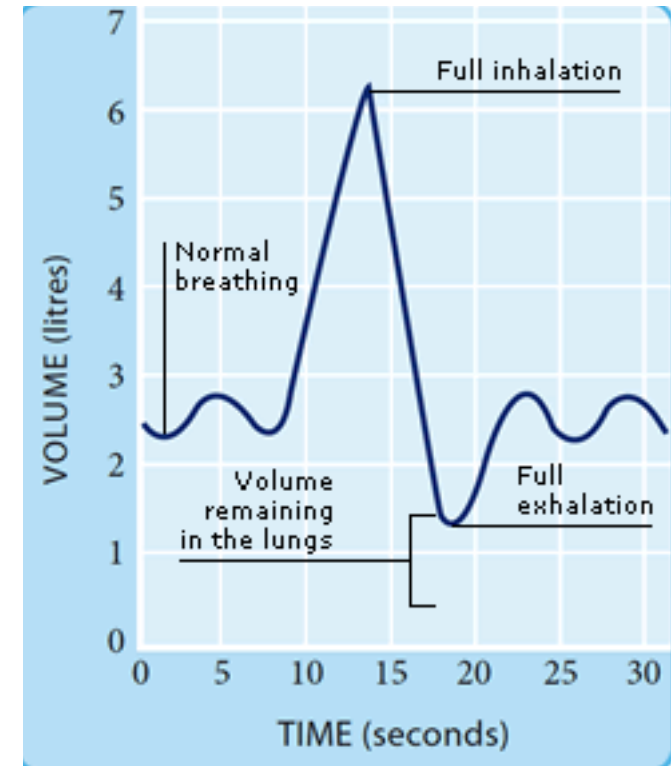
## Lung volume tests

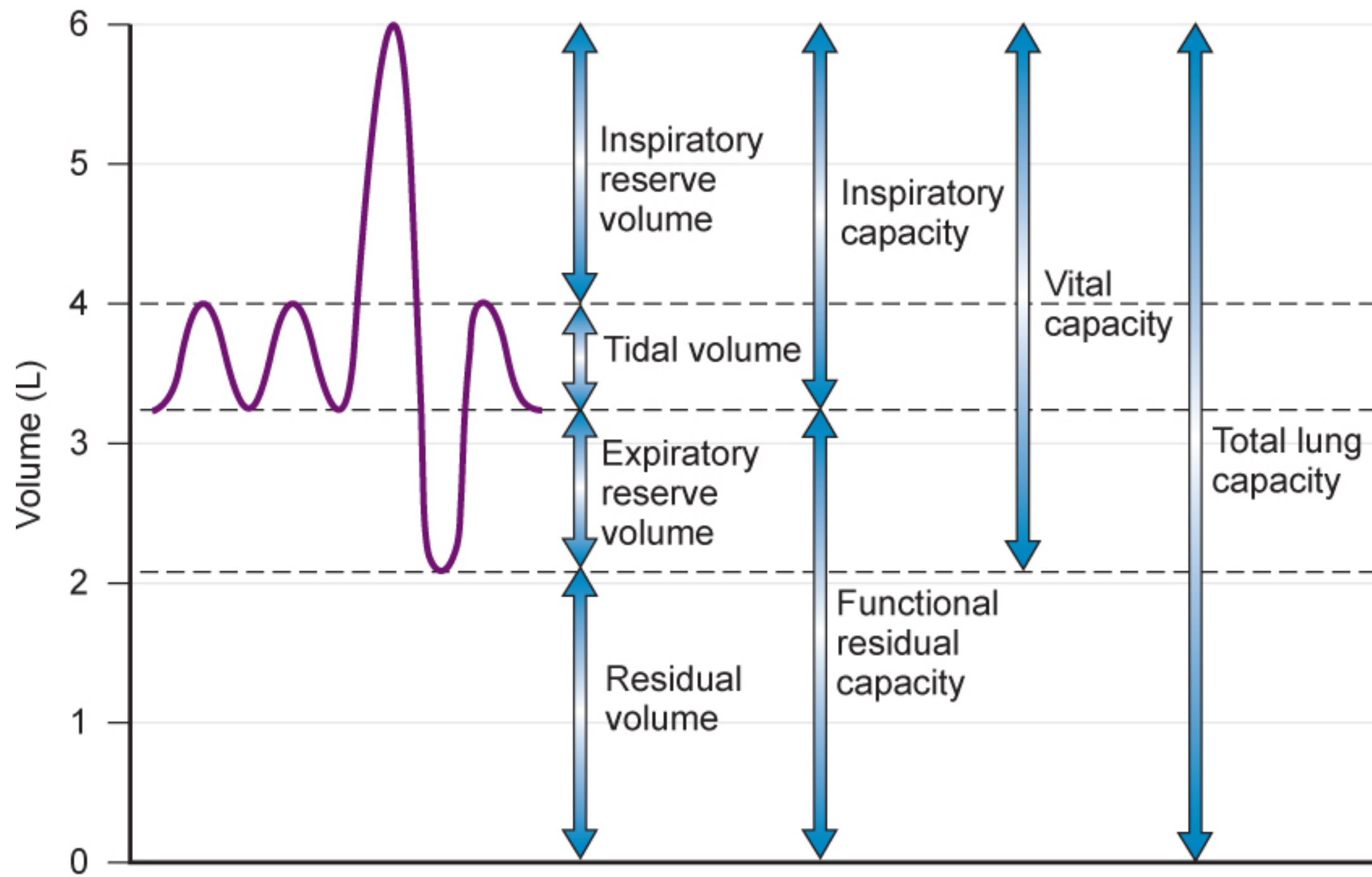




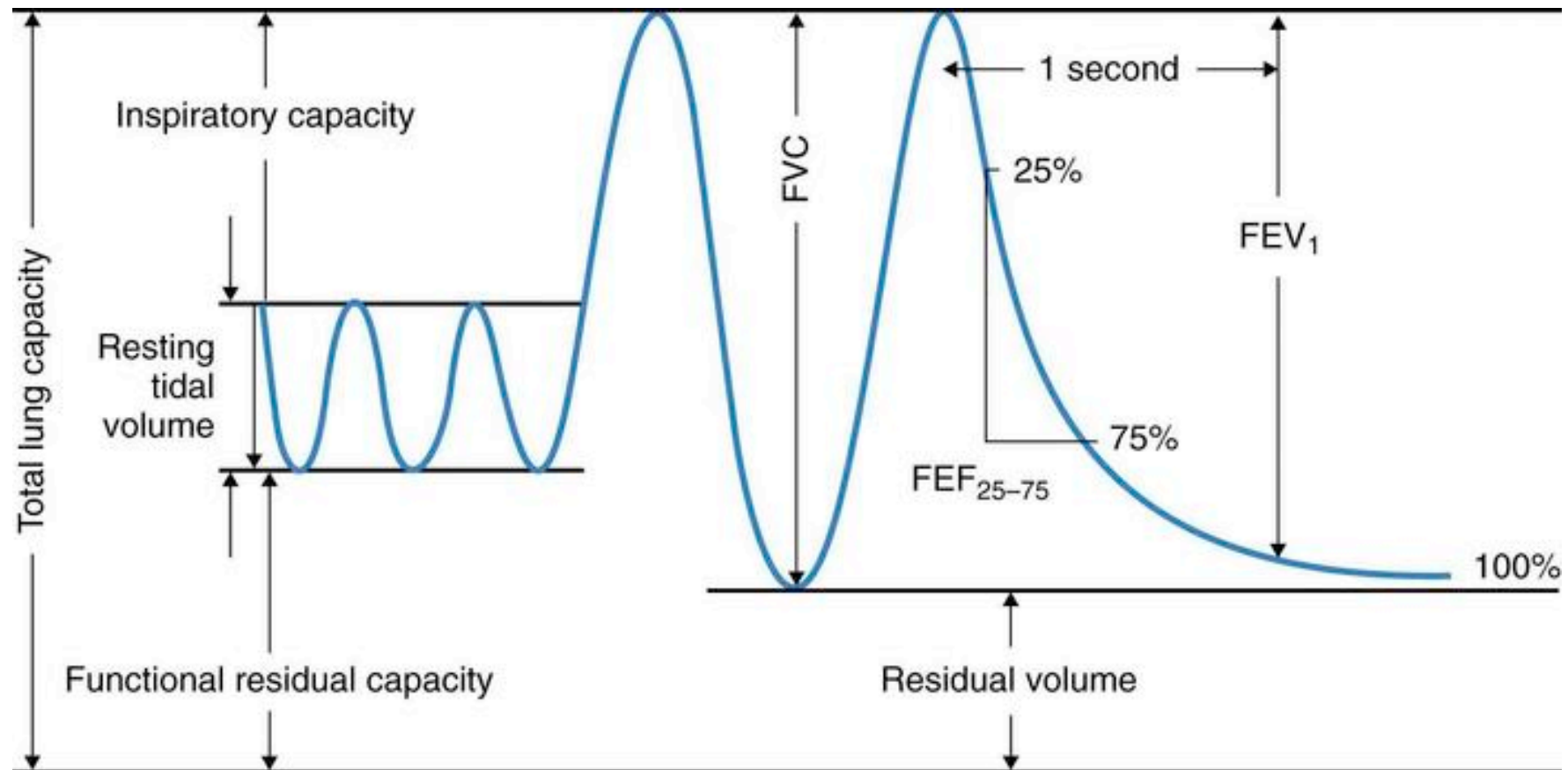
# Pulmonary disorders

Lung volume graph



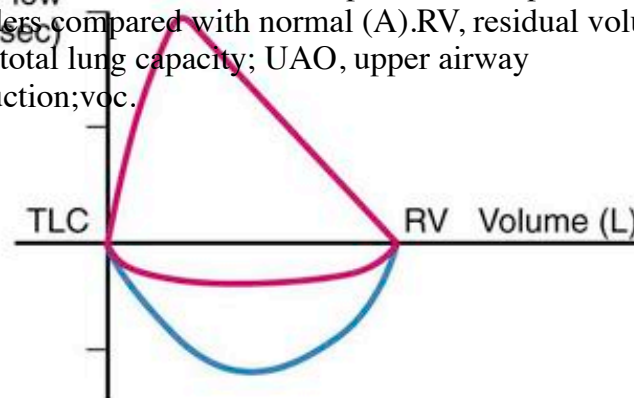


# Pulmonary Disorders

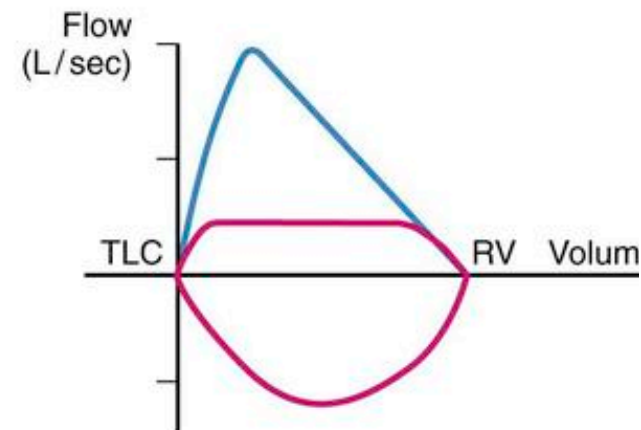


Appearance of flow-volume loops of various pulmonary disorders compared with normal (A). RV, residual volume; TLC, total lung capacity; UAO, upper airway obstruction; voc.

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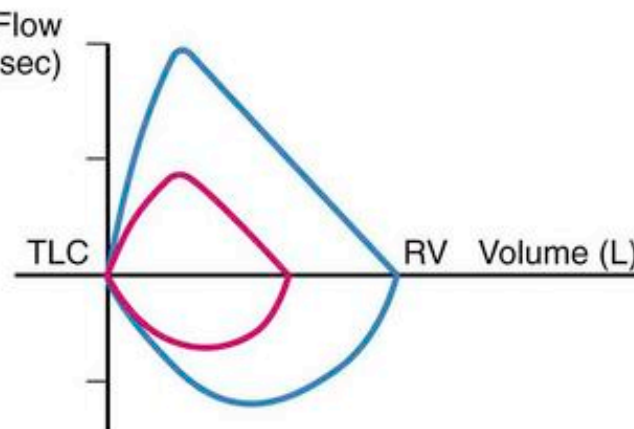


E. Variable extrathoracic UAO

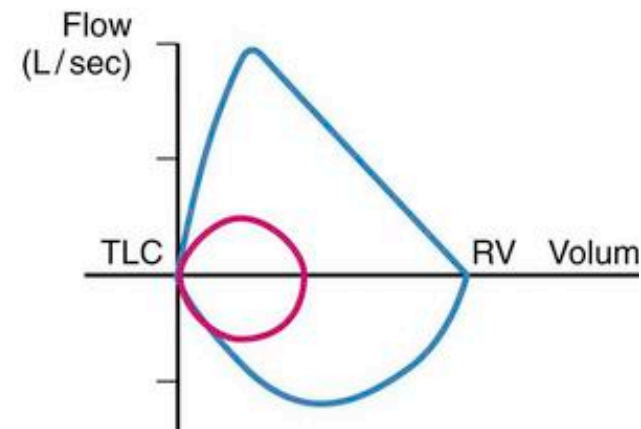


F. Variable intrathoracic UAO

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G. Restrictive parenchymal lung disease



H. Neuromuscular weakness

# Pulmonary Disorders

- Patients with active wheezing; changes in sputum including purulence, color, or amount; or those who report increased shortness of breath should have their procedure postponed and should be referred back to pulmonary physician
- Patients with chronic wheezing that does not respond to bronchodilators should have confirmatory documentation from their private physician indicating optimization of their disease.
- Patients who have required oral or parenteral corticosteroids for the treatment of reactive airway disease in the 6 months before the planned procedure may require additional doses for support around the time of the procedure.
- Prophylactic steroids given in the preoperative interval 48–72 hours before the procedure may help reduce airway reactivity and decrease the chance of intraoperative bronchospasm.<sup>20–22</sup>

# Pulmonary disorders

- Patients who require daily supplemental oxygen are not good candidates for ambulatory surgery.
- Management of a hypoxemic episode may require specialized respiratory services and monitoring in postoperative period

# Obstructive sleep apnea

- Obstructive sleep apnea (OSA) is the complete or partial collapse of the upper airway during sleep,
- It has been shown to be an independent risk factor for adverse outcome after surgery.
- About 80% and 90% of patients who suffer from OSA have not been formally diagnosed
- Risk score ( ASA) takes into consideration
  - the severity of the patient's diagnosed sleep apnea,
  - the invasiveness of the surgical procedure,
  - the anticipated perioperative opioid requirement

# Obstructive sleep apnea

- patients with suspected sleep apnea should undergo polysomnography,
- there is a checklist of signs and symptoms to assist in the identification of those at risk for OSA
- general recommendations for postoperative monitoring for the patient at risk for OSA
- OSA is not a risk factor for unplanned admission, reintubation, or serious cardiovascular or cerebrovascular adverse outcomes



# Obstructive sleep apnea

- guidelines for the perioperative care of the ambulatory surgical patient who is at risk for OSA.
  - appropriate patient selection
  - comorbid conditions that may have resulted from the repeated episodes of hypoxemia and hypercarbia experienced by patients with moderate to severe OSA.
  - one of the most commonly employed tools is the STOP-BANG (snore, tired, observed apnea, arterial pressure, body mass index, age, neck circumference, and sex) questionnaire

# Obstructive Sleep Apnea

- Patients with a diagnosis of OSA for whom continuous positive airway pressure (CPAP) therapy has been prescribed should be encouraged to use their CPAP in the perioperative period.
- If, because of the nature of the procedure, CPAP cannot be used postoperatively in the patient with established use, the procedure should be moved to the inpatient venue.
- There is evidence that abrupt cessation of CPAP in patients with a history of regular use can result in return of pretreatment symptoms, including uncontrolled hypertension as well as new-onset congestive heart failure.

# Systemic disease

Renal disease: 'severe'

- Creatinine  $> 150 \mu\text{mol.l}^{-1}$  (1,7mg/dl)

# End-stage renal disease

- Comorbidities
  - Hypertension,
  - diabetes mellitus,
  - immune-mediated disorders
  - Anemia
  - accelerated CAD
- patients with ESRD are commonly prescribed multiple medications
- Some are treated with dialysis
- these patients to have poor peripheral intravenous access sites, and scarring from prior dialysis access can make central venous access difficult.

# End-stage renal disease

- Preoperative collaboration with the surgeon is required to ensure that the site of the arteriovenous fistula or graft is not violated, and close communication with the nephrologist facilitates appropriate timing of perioperative dialysis.
- Hypotension, seizure, cardiac arrhythmia, and sudden cardiac death have all been reported during dialysis.
- most surgeons prefer to avoid performing surgery in the patient who is due for or has missed a dialysis session,
- immediately after dialysis -. Peridialysis hypoxemia and hypoventilation, nausea, headache, and itching are relatively common
- Optimal is to schedule dialysis 12–24 hours before the planned surgery

# End-stage renal disease

- It is mandatory to obtain postdialysis electrolyte values,
- the most frequently seen derangements occur with regard to serum potassium.
  - reflect hyperkalemia secondary to inadequate elimination of potassium
  - or hypokalemia as a result of excess removal of potassium during dialysis
- these patients tolerate substantial variations in potassium levels relatively well

# End-stage renal disease

- Electrocardiographic manifestations of critically high levels of potassium levels constitute a clinical emergency and include widening of the QRS complex, increased QT intervals, and inverted, flattened, or peaked T waves.
- Atrial and ventricular arrhythmias can be seen in patients with hypokalemia

# Postoperative Nausea and Vomiting: Risk factors

- Female gender is the strongest patient specific predictor of PONV,
- followed by history of PONV or motion sickness,
- non-smoking status,
- and younger age.
- Anesthesia related factors include the use of volatile anesthetics,
- duration of anesthesia,
- perioperative opioid use,
- and use of nitrous oxide.
- Certain types of surgery may be associated with increasing the frequency of PONV. These include
  - abdominal procedures,
    - gynecological surgery,
    - and cholecystectomies.
  -



# obesity

- The increasing prevalence of obesity has become a major public health problem.
- This population is at risk for cardiovascular disease, diabetes, OSA, and hypoventilation syndrome
- With careful patient selection, specialized equipment, and appropriate staff training, these patients can be cared for safely and successfully in an outpatient venue.

# obesity

- there are multiple categories of obesity based on body mass index (BMI) and described by the World Health Organization.
- a patient with a BMI greater or equal to  $30 \text{ kg/m}^2$  is classified as obese,
- obesity has not been associated with adverse perioperative outcomes in the ambulatory surgical population.
- BMI cannot distinguish whether the patient has excess adipose tissue or muscle
- Stage I corresponds to a BMI of  $30.0\text{--}34.9 \text{ kg/m}^2$ ,
- Stage II is  $35\text{--}39.9 \text{ kg/m}^2$ ,
- Stage III is greater than  $40 \text{ kg/m}^2$ .
- Additional nomenclature includes
  - super morbid obesity ( $>50 \text{ kg/m}^2$ )
  - and ultra obesity ( $>70 \text{ kg/m}^2$ )

# obesity

- Other important measurements used to determine risk in this population are neck and waist circumferences.
- measurement of waist circumference carries great importance in predicting predisposition to metabolic syndrome and cardiovascular disease.
- Individuals with a waist circumference of greater than 35 inches (89cm) for a female and 40 inches (102cm) for a male are at more than 5 times the risk for multiple cardiometabolic conditions than individuals with normal waist circumference, even after adjusting for BMI.

# obesity

- The obese patient has reduced functional capacity (FRC) and may show signs of restrictive lung disease on pulmonary function tests.
- Patients with visceral adipose deposition have an increased load on their diaphragm, as the abdominal contents encroach on the chest during breathing.
- It may be difficult to determine their true functional capacity, as their exercise tolerance may be limited by joint pain and testing options may be limited by the patient's size.
- there is no evidence that preoperative pulmonary function testing will improve outcome in obese population,
- patients with obesity hypoventilation syndrome may have pulmonary hypertension.
- elevation of  $p\text{CO}_2$  suggest hypoventilation in the obese patient.

# obesity

- ensure the presence of specialized equipment that may be required in the care of the morbidly obese patient.
- upper weight limits of stretchers, wheelchairs, and operating room tables must be taken in consideration
- suspicion of difficulty with mask ventilation and tracheal intubation
- specialized regional anesthesia equipment may be required.
- extra personnel should be available to help with turning and transport of the patient.

# Diabetes

- The primary aim of the preoperative assessment of the patient with diabetes who is scheduled for ambulatory surgery is to evaluate the status of comorbidities associated with diabetes and to ensure appropriate perioperative blood glucose levels.
- Patients who have a poor understanding of their therapeutic diabetes regimens, who have uncontrolled blood sugars, or who are unable to monitor their own blood glucose levels are not appropriate candidates for surgery in an ambulatory setting.
- Measurement of the patient's hemoglobin A1c levels can provide clues to their average glycemic control in the 3–4 months before their evaluation.

# Diabetes

During the preoperative visit, the patient should be queried with regard to

- glycemic-related medications,
- timing and dosing,
- episodes of hyper- or hypoglycemia,
- and hospital admissions for issues stemming from glycemic control.

# Diabetes

- Although there is little evidence to support an acceptable upper limit of blood glucose in which it is safe to proceed with surgery, those patients with manifestations of hyperglycemia including dehydration, acidosis, or hyperosmolar states should have elective surgery postponed regardless of venue.
- Many facilities have developed their own guidelines for acceptable preoperative blood glucose levels. These guidelines may be based on ease and availability of intraoperative point of care testing not only for blood glucose but also for blood gas analysis and serum electrolytes, which are subject to alterations based on glycemic status.



# Diabetes

- Instructions for preoperative oral hypoglycemic and insulin administration for the day before surgery, as well on the day of surgery, should be tailored to the individual patient.
- The timing of the discontinuation of metformin before a surgical procedure is controversial.
- Current guidelines recommend the last dose of metformin be administered 8 hours before the planned procedure, secondary to concerns about risk of lactic acidosis.
- However, there is no evidence to support this practice before surgery.
- The Society for Ambulatory Anesthesia, in their 2010 Consensus Statement on Perioperative Blood Glucose Management in Diabetic Patients Undergoing Ambulatory Surgery, recommends holding oral and noninsulin injectable hypoglycemics on the day of surgery.

# Diabetes

Although there are several societies that have issued recommendations for perioperative insulin therapy, most concur that long-acting insulins should be continued at full dose the night before surgery and that the morning dose be decreased to 50%–75% of the usual dose.

Similarly, insulin pumps should require no change in dose the day before surgery and may be continued at a basal rate during the procedure.

Intermediate-acting insulins expected to peak at 4–10 hours may require a reduced evening dose in addition to a reduced morning dose to avoid hypoglycemia, and short-acting insulin should be held on the day of the procedure.

Mixed insulins can be problematic, as they may have a relatively rapid onset with a long duration of action that can be unpredictable in the setting of surgical stress.

# Diabetes

- Response to insulin varies by individual patient, and frequently, the patient or family member responsible for their care is superior at managing preoperative insulin doses if they are given a target to achieve.
- Ideally, patients with diabetes should be scheduled as the first case of the day to avoid fluctuating blood sugars while fasting, and they should be instructed to identify themselves as diabetic on presentation to the facility, in case they experience hypoglycemia while awaiting preoperative preparation.

# Preoperative checklist

- History and physical examination
- Name of procedure on surgical consent
- Signed surgical consent
- Laboratory results
- Allergies have been identified
- Vital signs assessed
- Jewellery removed
- Patient is wearing a hospital gown and hair cover
- Patient has urinated
- The prescribed preoperative medication has been given

# The preoperative evaluation of surgical patient

- provides the opportunity to identify and optimize potential perioperative risk factors,
- answer patient questions about their planned procedure, and provide them with instruction to facilitate the optimum outcome.
- In addition, with information obtained during the visit, the anesthesia provider can better collaborate with the surgeon to develop a sound perioperative plan of care.