



Perioperative Core Orientation Manual NorthShore-LIJ

Important Information for getting started.
PLEASE READ ALL!

Table of Contents

Topic	Location
Welcome Letter	pages 3-4
Overview of orientation	pages 5-6
Professional Expectations	page 7
Course Description and Syllabus	page 8
Perioperative Core Orientation schedule	pages 9
Instructions for Self Learning Modules on Healthport	page 10
Self-Enrolling on iLearn for Periop Courses	Page 11-13
Directions to IFN	pages 14-16
Medical Terminology for Surgical Procedures Packet	pages 17- 32
Medication Safety Packet	pages 33-47
Behavioral Criteria for Perioperative Care of the Patient	pages 48-52
Instrument Identification Pictures	pages 53-63

Welcome Perioperative Professionals:

As a new staff member to Perioperative Services, you are about to enter the exciting, fast-paced and challenging path to your career. We provide an environment where motivated staff can develop competency and provide continuous quality patient care throughout the service.

The Perioperative Services of the North Shore Health System's mission is to be a prominent provider of quality and comprehensive services, using a patient-focused, collaborative, and multi-disciplinary approach. We strive to provide a range of services to a diverse population with varied physical, cultural and psychosocial needs. At all times staff are respectful of patients, protective of their rights, while preserving patient dignity. Our purpose is to achieve a level of patient wellness equal or greater than that which the patient experienced prior to their procedure.

Employees are our most valuable asset and therefore, we want you to know that the management and education team will always be available for guidance, direction and assistance on both clinical/personal matters.

Sincerely,

System Perioperative Educators

Congratulations!

Attached you will find your schedule for next week of your orientation of the Perioperative Services Orientation. The subsequent component of your orientation will be arranged by your facility's educator/preceptor and will be designed based upon your level of experience, baseline assessments, and competency during the initial orientation period.

The Perioperative Services Orientation program starts on Monday at 0800.

Please:

- **Wear scrubs- designated color from your site**
- **Be punctual.** Arriving on time is an indication of your professional commitment and it is expected that you will arrive on time each day.
- **Silence your cell phone** in the mornings before orientation begins.
- **Bring:**
 - **Pen**
 - **Earphones/Earbuds, and**
 - ******A LAPTOP COMPUTER OR IPAD device (if you have one).** During the course of your orientation, you are required to complete a series of online modules. These modules can be completed by logging into: Perioperativeeducation.weebly.com on the internet.
 - Please be advised, there are a limited number of individual computer terminals. In order for you to complete the required online content, we strongly recommend you bring your personal laptop/iPad (or comparable tablet device), with the power cord everyday to the orientation program. This will aid in the facilitation and completion of the e-Learning modules you'll need to review on those days.
 - **You may buy or bring lunch**

Dress in professional attire (as per Human Resources information) for all orientation/ education classes where scrubs are not required.

If you are unable to report for Perioperative Core Orientation, please call the Institute for Nursing (IFN)



718 470 8066 or Human Resources



516 734-7000.

On behalf of the entire health system – welcome aboard!

From,
Perioperative Educators
North Shore Long Island Jewish Health System

If there is concern about emergency class cancellation (ie: snowstorm) visit the Institute for Nursing page on Healthport regularly and check for messages on the Emergency Message Board.

Overview of your Perioperative Orientation experience

Introduction

The Perioperative Core orientation process at North Shore – Long Island Jewish Health System (NSLIJHS) is designed to broaden the knowledge base of newly hired practitioners and develop those skills necessary to ensure safety and quality of the surgical patient. The program is structured around a standardized framework of blended learning strategies and a unit based precepted orientation. The program is based upon the principles of adult learning theory and active learning methodologies. The orientation process is patterned around the orientee and the orientation pathway and is aligned with the Mission, Vision and Philosophy of the NSLIJHS.

Purpose of the orientation pathway

The orientation pathway is the roadmap for the orientation process and its team members. It facilitates the orientation process by serving as the minimum fundamental standard by which all practitioners employed throughout NSLIJHS will be oriented. The orientation pathway tracks competence in addition to learning needs and is designed to assist the orientee in achieving knowledge, skills and attitudes necessary to complete the orientation process. The pathway incorporates a team approach, which includes the Orientee, Preceptor, Manager or Supervisor, and Educator.

PRINCIPLES OF ORIENTATION

1. Individualized:

The NSLIJHS orientation process ensures that ALL practitioners who successfully complete orientation have been given a high quality orientation which is multi-faceted and addresses predetermined and newly identified learning needs of the orientee. Standard competencies for patient care will be assigned and validated throughout the orientation process. Additional learning needs that are identified on an individualized basis by the orientee, Preceptor, Manager or Supervisor, and Educator will be documented and a plan of action will be created to address each learning need. Progress of the orientee will be documented weekly on the orientation pathway.

2. Teamwork:

Through a collective teamwork process, all members of the orientation team will input and steer the orientation experience. It is expected, however that you, the orientee, will drive your orientation experience by communicating your learning needs and planning and seeking opportunities to address your learning needs. Weekly team meetings will occur to discuss goals and objectives for the previous and upcoming week.

3. Goals, Objectives and Competencies: The orientation process is competency driven. Goals should be mutually set. Behavioral criteria for each competency are readily accessible using Healthport, NSLIJHS policies, the AORN Standards and Recommendations 2011 or other competency manual on your unit, and/or the unit educator.

4. Accountability: You are responsible for completing all orientation assignments. It is expected that online and other components to which you are assigned will be completed as assigned and that you will present any questions you may have to your preceptor, manager/supervisor, or educator.

Procedure:

- The orientation pathway is reviewed and documented in on at least a weekly basis.
- At least weekly the Orientee, Preceptor, Manager or Supervisor and Educator review the orientation pathway in order to develop an educational plan for the upcoming week. Learning needs are reviewed, new needs are identified and clinical activities are focused on meeting the learning needs.
- At least weekly, the performance behaviors of the Orientee are reviewed and documented using the measures included in the pathway.
- Variances are documented under the “Team Meeting Report” for each level. The Orientee must be signed off as meeting a negative variance and all action/plan objectives implemented and met for successful completion of orientation.
- Upon completion of orientation, the orientation evaluation will be completed by the both the Manager or Supervisor and the Educator (if appropriate) and reviewed with the Orientee.

Responsibilities of the Orientee:

During orientation, you, the Orientee, have the opportunity to participate in new experiences and learn new skills while refining existing ones. **As the learner, you must be pro-active. Identify areas where you feel you need more help and communicate regularly with your preceptor, manager or supervisor, and educator.** Recognize your preferred learning style and share all of this information with those involved in your orientation. **IT'S YOUR ORIENTATION!**

When you receive your orientation pathway:

- Review the entire packet and familiarize yourself with the orientation pathway, the goals, objectives and competencies, and familiarize yourself with performance standards here at NSLIJHS.
- Identify your own personal learning needs and strategies to achieve daily goals. Communicate these needs and strategies to your Preceptor daily and your Manager or Supervisor and Educator at least weekly.

Responsibilities of the Preceptor, Manager or Supervisor, Educator:

- Review and set competency goals and performance behaviors at least daily.
- Seek out and plan experiences for your Orientee to demonstrate the behaviors listed in the pathway.
- At the end of each week, schedule a team meeting to review the pathway for the present and upcoming week.
- Document orientee progress and review the learning goals on the pathway.
- Sign off each competency as 'met' when the orientee has demonstrated the critical elements of that competency
- Document variances in the "Team Meeting Report" and implement and ultimately sign off on all action plan objectives. This is a requirement for completing orientation.
- Upon completion of orientation, retain the pathway in the Orientee's personnel file

Listed below is a set of professional expectations. These expectations are an integral part of your professional commitment and performance. It is expected that you will review and adhere to these expectations throughout your career with the NSLIJHS.

Thank you.
 Institute for Nursing
 North Shore Long Island Jewish Health System

PROFESSIONAL EXPECTATIONS

I have reviewed and understand the professional expectations of NSLIJHS.

Print name _____ Signature _____ Date _____

<i>Professionalism/ Engagement/ Execution</i>	<ul style="list-style-type: none"> • Shows up on time consistently, ready to work and focused • Usually demonstrates proper care of equipment • Demonstrates professionalism and honesty
<i>Integrity/Service Excellence/ Caring/ Patient First</i>	<ul style="list-style-type: none"> • Acts as a role model for others • Promotes honesty and integrity with patient and health system information • Demonstrates that the art of care is caring, service and compassion
<i>Engagement /Adaptability</i>	<ul style="list-style-type: none"> • Focused and energized on the work • Shows passion for the job
<i>Participation/Teamwork Accountability/Ownership</i>	<ul style="list-style-type: none"> • Shows respect and compassion to others on a consistent basis, regardless of background and appearance • Supports and takes personal interest in coaching and mentoring others • Assesses job scenarios to determine strengths and opportunities for improvement for self and others • Inspires others to collaborate together as a team and adds to group cohesiveness • Takes responsibility for problem resolution
<i>Performance Excellence/ Technical/Analytical Skill</i>	<ul style="list-style-type: none"> • Pursues excellence with passion and promotes quality • Urgency- Acts quickly to meet patient needs, deadlines and priorities

North Shore LIJ Health System

Course Description and Syllabus

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Title: Perioperative Orientation Program

Course Description: Candidate will be oriented to the standards of peri-operative patient care at the NSLIJHS Perioperative Services. The multiple roles of the peri-operative professional will be examined as well as the phases of the peri-operative nursing process. Candidates will define their current competencies and future development needs to practice and master the peri-operative professional role.

Learning Outcomes: Full participation in the course will enable each candidate to:

- Define the **key foundational methods** used in peri-operative nursing
- Identify the **hazards in the operating room and management of hazards**
- Understand **patient assessment and communication** for the surgical patient
- Identify the **core competencies** required for peri-operative nurse.
- Acquire **hands on experience** in the actual OR setting through simulation and workshops
- Discuss **patient safety** concerns and initiatives in the perioperative setting.
- Apply **infection control practices**

Course Expectations:

- Learning the material in this course involves hearing the lecture, reviewing materials, actively participating in workshops and simulation and completing required assignments.
- **We will not accept late assignments** as we will go over all answers in class on the day an assignment is due.
- You must complete all assignments in person during class or online. If you must miss a class, please contact your educator in advance to make alternative arrangements.
- **There are no make-up exams.** If you must miss an exam, please contact your educator as far in advance as possible to discuss alternate arrangements. Any special arrangements for exams or submitting assignments will be made entirely at the educator's discretion.

Suggested References:

AORN (2014). Perioperative Standards & Recommended Practices. AORN, Inc.

Berry & Kohns. (2004). Operating Room Technique. St. Louis: Mosby.

Fairchild. (1996). Perioperative Nursing: Principles and Practice. Philadelphia: Lippincott Williams & Wilkins.

Reichert & Young. (1997). Sterilization Technology for the Healthcare Facility. Gaithersburg, Maryland: Aspen Publishers

Rothrock, E. (2003). Alexander's Care of the Patient in Surgery. St. Louis: Mosby.

Spry, C, (1997). Essentials of Perioperative Nursing. Gaithersburg, Maryland: Aspen Publishers

Course Outline and Assignments

Date	Monday
Site	420 Lakeville Road Periop Room 242
Time	8:00 AM-4:00 PM
e-Modules	
Topics	<ul style="list-style-type: none"> ➤ Welcome orientees ➤ SCIP ➤ Quality ➤ Universal protocol ➤ Consents ➤ Patient Assessment
Assignments Due	<ol style="list-style-type: none"> 1. Print/Review Welcome Packet online which includes the medication and instrument handout. 2. Complete selected modules online with posttests due Friday.(last day of Orientation) Perioperativeeducation.weebly.com 3. Complete selected modules on iLearn which is found on Healthport due by Friday

Date	Tuesday
Site	Institute for Nursing 420 Lakeville Road Periop Room 242
Time	8:00 AM- 4:00 PM
Topics	<ul style="list-style-type: none"> ➤ Pre-surgical Requirments ➤ Care of the pedi Patient ➤ ESU Safety ➤ Sutures ➤ Wound Classification ➤ Medication and Specimen Safety
Assignments Due	<ol style="list-style-type: none"> 1. Complete selected modules online with posttests due Friday.(last day of Orientation) Perioperativeeducation.weebly.com 2. Complete selected modules on iLearn which is found on Healthport due by Friday

Date	Wednesday
Site	Institute for Nursing
Time	8:00 AM-4:00 PM
Topics	<ul style="list-style-type: none"> ➤ Aseptic Technique ➤ Prepping ➤ Surgical Counts ➤ Sterilization
Assignments Due	<ol style="list-style-type: none"> 1. Complete selected modules online with posttests due Friday.(last day of Orientation) Perioperativeeducation.weebly.com 2. Complete selected modules on iLearn (refer to directions to register for classes) which is found on Healthport due by Friday

Date	Thursday
Site	Institute for Nursing
Time	8:00 AM-4:00 PM
Topics	<ul style="list-style-type: none"> ➤ Forensics ➤ Surgical Implant Safety ➤ Laser Safety ➤ Stapling Devices
Assignments Due	All SLM's are due to be completed today .

Self- Learning Modules

Directions:

Please log on to: Perioperativeeducation.weebly.com

Click onto Self Learning modules tab and you will see the required slm's that will need to be completed by the last day Friday (AM) of orientation. Link provided will take you directly to the webpage.

Perioperativeeducation.weebly.com

Here is where you can review the courses prior to Core class and you can also print out your answer sheet for the self learning modules. (See course syllabus calendar). See example below.

Perioperative Core Orientation

Home
Meet the Educators
BAQ
Manual & Calendar
Self-Learning Modules
more...



Instructions for Self-Learning Modules

Please complete all the self-learning modules (SLM) by the last day of orientation. You are required to take a post assessment after you have read and reviewed the contents of the SLM. The post assessment will be done and scored electronically. Click on the button to take each module post test. If you have any questions, please email your educator.



hazards_in_the_surgical_area.2012.pdf
[Download File](#)

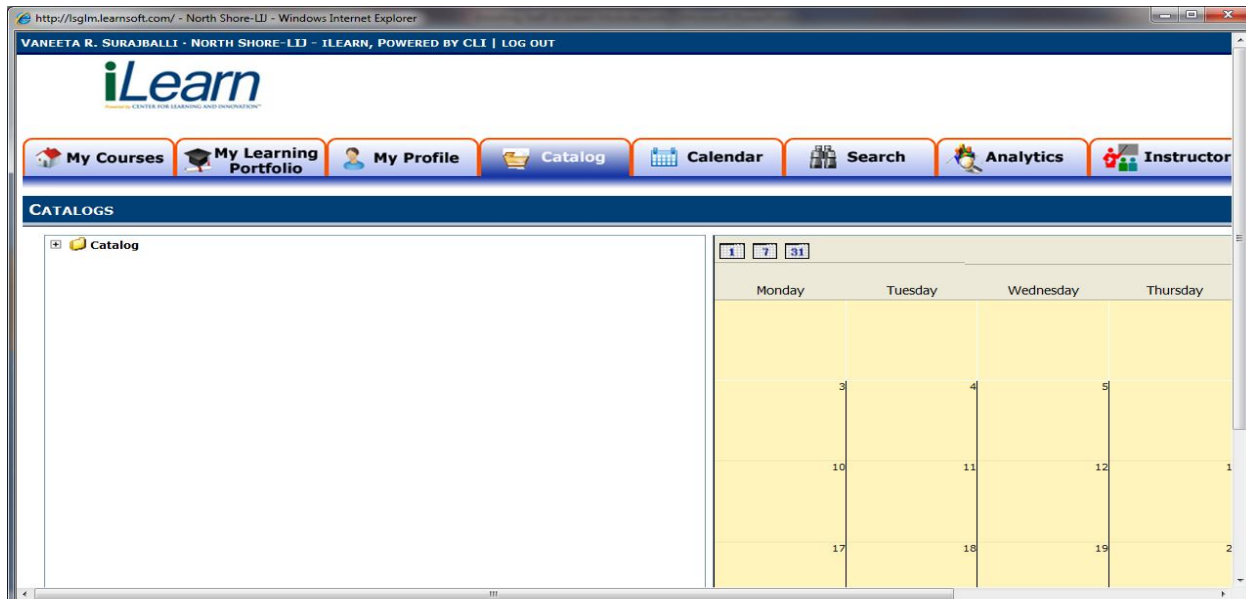


patient_education_learning_module.pdf
[Download File](#)

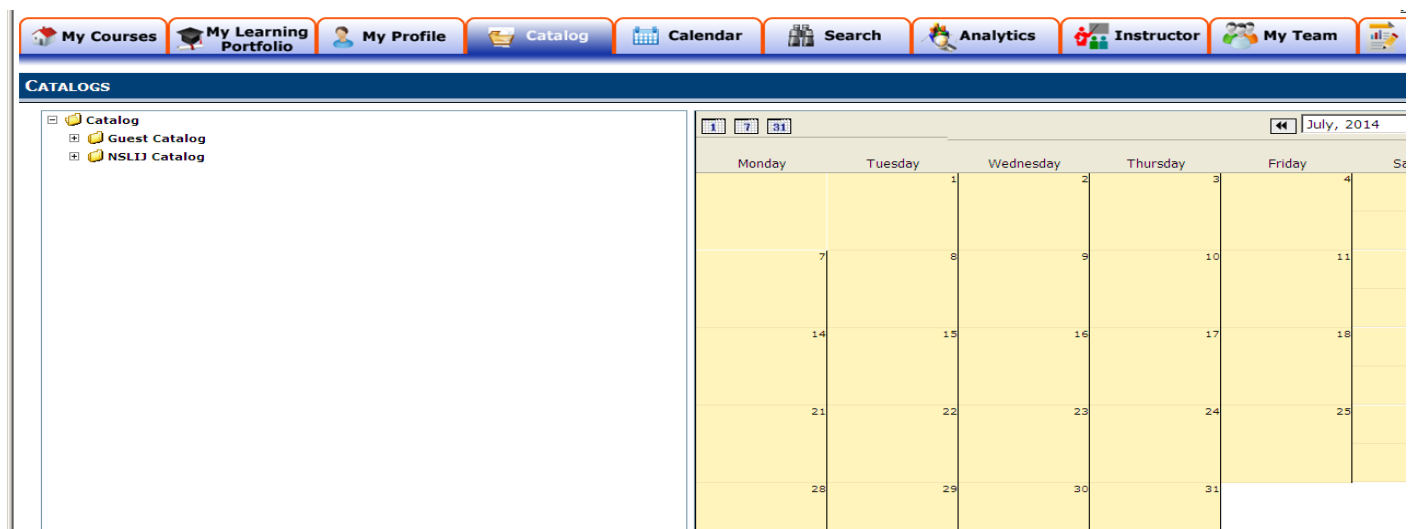
Instructions for completing modules on iLearn Self-Enrolling into iLearn Periop Core Courses

You are required to complete modules on iLearn. Go onto Healthport via RAP and log onto Healthport. Please refer to instructions below.

Click on the Catalog Tab



Click NSLIJHS catalogue and choose your hospital site



Search for the course. Once you have found it, click on it.

The screenshot shows the LMS interface with a navigation bar at the top containing icons for My Courses, My Learning Portfolio, My Profile, Catalog, Calendar, Search, Analytics, Instructor, My Team, and My Reports. Below the navigation bar is a blue header labeled 'CATALOGS'. The main content area is split into two panes. The left pane contains a list of courses, including 'TotalCare Connect Hill-Rom Bed Module', 'Transitional Care of the Newborn', 'VersaCare A.I.R. Hill-Rom Bed Module', 'VersaCare Non-A.I.R. Hill-Rom Bed Module', 'Vital Signs', 'Yale Insulin Infusion Protocol Updated Guidelines (YIIP)', 'Accu Chek Initial Competency Curriculum', 'Care Solutions (RN) - Nurse Care Manager', 'Lenox Hill Hospital General Nursing Mandatories 2013', 'Lenox Hill Hospital Nursing Mandatories 2013-NICU Nurses only', 'OR Nurse Modules-Periop', 'PACU RN Modules-Periop', 'Stroke Competency Series', 'Surgical PA Modules-Periop', and 'Surgical Technologist Modules-Periop'. Below these are hospital locations: Long Island Home, Long Island Jewish Medical Center, Medical Group- Ambulatory Services, and North Shore University Hospital. The right pane shows a calendar for July 2014 with days of the week as columns and dates as rows. An arrow points from the 'OR Nurse Modules-Periop' course in the left pane to the calendar area.

Click on “Select All” and Click “Enroll”

The screenshot shows the LMS interface with the same navigation bar as the previous image. Below the navigation bar is a blue header labeled 'LOGS'. The main content area is split into two panes. The left pane is labeled 'Catalog' and shows the course selection path. The right pane displays the course details for 'Certification : OR Nurse Modules-Periop'. At the top right of this pane are buttons for 'Select All', 'ENROLL', and 'ENROLL ATTENDEES'. Below these are several course components, each with a 'View: Online' link. The components are: 'Periop-Peripheral Nerve Blocks: Techniques (Required)', 'Periop-Peripheral Nerve Blocks: Nursing Considerations (Required)', 'Periop-Peripheral Nerve Blocks: An Overview of PNB (Required)', 'Periop-AORN-Sharps Safety: Essential Concepts and Controls (Required)', 'Periop-AORN-Fire Safety (Required)', 'Periop-AORN-Pathophysiology and risks of Pneumatic Tourniquet Use (Required)', 'Periop-Unintended Hypothermia: The Importance of Maintaining Normothermia (Required)', 'Periop-Cardiopulmonary Arrest (Required)', and 'Periop-AORN-Malignant Hyperthermia Keeping Your Cool (Required)'. The Windows taskbar at the bottom shows the system tray with the time 11:40.

You should then see a confirmation from iLearn that the employee has been enrolled.

The screenshot shows the iLearn web application interface. At the top, the user is identified as VANEETA R. SURAJBALLI - NORTH SHORE-LIJ - ILEARN, POWERED BY CLI | LOG OUT. The iLearn logo is prominently displayed. Below the logo is a navigation bar with icons and labels for My Courses, My Learning Portfolio, My Profile, Catalog, Calendar, Search, Analytics, and Instructor. The main content area is titled CATALOGS and displays a confirmation message: "Surajballi Vaneeta R has been successfully enrolled., Course Name - NDNQI Pressure Ulcer Module". Below this message is a "Catalog" section with a plus icon. To the right, there is a table titled "AVAILABLE LEARNING OBJECT INSTANCES" with columns for ENROLL, NAME, START DATE, END DATE, and LOCAT. The table contains one row with the name "NDNQI Pressure Ulcer Module" and an "Add Attendees" link.

ENROLL	NAME	START DATE	END DATE	LOCAT
Add Attendees	NDNQI Pressure Ulcer Module			

PARKING DIRECTIONS: 420 LAKEVILLE ROAD



Perioperative Core Orientation Classes are held at 420 Lakeville Road in training rooms in Suite 242 (2nd floor) 718-470-7178

Parking is available – behind the building. Alternate Parking is available across the street at I-Park.

Please do not park in the front area of the 420 Building or in the 410 Building Parking Lot.



**NOTE : YOUR GPS MAY DIRECT YOU TO AN ALTERNATE DESTINATION
SO FOLLOW THE DRIVING INSTRUCTIONS BELOW**

Directions to Patient Safety Institute (PSI)

**(Center for Learning and Innovation) 1979 Marcus Avenue – Suite 101, Lake Success, 516-396-6150
and**

Institute for Nursing (IFN)

420 Lakeville Road, New Hyde Park NY 718-470-8066

FROM THE WEST VIA L.I.E.:

(for Grand Central Parkway follow the “From the South via the Cross Island Parkway” directions below)

Take the LIE (495) to exit number 33- toward LAKEVILLE RD/COMMUNITY DR., Merge onto S SERVICE RD., go 0.10 miles: Turn RIGHT onto LAKEVILLE RD., go 0.74 miles:

For PSI: Turn LEFT onto MARCUS AVE. go 0.16 miles: **Turn RIGHT into FOUNTAINS AT LAKE SUCCESS** complex

For IFN: Go straight on Lakeville Rd over Marcus Avenue. IFN is at 400 Lakeville Rd (please note parking message below)

FROM THE EAST VIA THE L.I.E.:

(for Northern State Parkway follow the “From the South via the Meadowbrook Parkway” directions below)

Take the LIE (495) to exit number 34 – NEW HYDE PARK RD., stay straight to go onto N SERVICE RD. go 0.48 miles and Turn LEFT onto NEW HYDE PARK RD. Continue for 0.90 miles and turn RIGHT onto MARCUS AVE.,

For PSI: proceed 0.31 miles (second traffic light) Turn LEFT into **FOUNTAINS AT LAKE SUCCESS** complex

For IFN: Turn left at Lakeville Rd. IFN is at 400 Lakeville Rd (please note parking message below).

FROM THE SOUTH VIA CROSS ISLAND PARKWAY/ Northern State Parkway:

Take the CROSS ISLAND PKWY N toward WHITESTONE BR. Merge onto GRAND CENTRAL PKWY E via exit number 29E toward EASTERN L I. Go 1.68 miles, and GRAND CENTRAL PKWY E becomes NORTHERN PKWY E. continue 0.63 miles and take exit number 25- toward LAKEVILLE RD/NEW HYDE PARK/GREAT NECK.

For PSI: At the light turn LEFT onto MARCUS AVE. Continue 0.40 miles. Turn RIGHT into the **FOUNTAINS AT LAKE SUCCESS**.

For IFN: At the light turn RIGHT onto MARCUS AVE. Turn left onto Lakeville Rd. IFN is at 400 Lakeville Rd (please note parking message below).

FROM THE SOUTH VIA MEADOWBROOK PARKWAY

Take the MEADOWBROOK PKWY N. to the NORTHERN PARKWAY WEST exit (merge) on the LEFT toward NEW YORK. Merge onto NORTHERN PKWY W. and continue for 5.41 miles. Take the NEW HYDE PARK RD SOUTH exit- exit number 26S- toward NEW HYDE PARK. Turn SLIGHT RIGHT (merge) onto NEW HYDE PARK RD. Continue for 0.67 miles and turn RIGHT onto MARCUS AVE.

For PSI: proceed 0.31 miles (second traffic light) Turn LEFT into the **FOUNTAINS AT LAKE SUCCESS** complex:

For IFN: Turn left at Lakeville Rd. IFN is at 400 Lakeville Rd (please note parking message below).

FROM NORTHERN BLVD.:

Take NORTHERN BLVD. To COMMUNITY DR. Turn SOUTH onto COMMUNITY DR. Continue South toward the L.I.E., and turn RIGHT onto the NORTH SERVICE RD. Continue for 0.29 miles, and turn LEFT at the first traffic light onto LAKEVILLE RD.

For PSI: Continue for 0.81 miles and turn LEFT onto MARCUS AVE. Continue for .55 miles. Turn RIGHT into the **FOUNTAINS AT LAKE SUCCESS** complex

For IFN: Go straight on Lakeville Rd over Marcus Avenue. IFN is at 400 Lakeville Rd (please note parking message below)

BY LONG ISLAND RAILROAD:

The closest station is New Hyde Park (About 10 minutes by taxi).

BY BUS:

The N25 bus, which stops at LIJ and North Shore University Hospital, brings you to Union Turnpike, just around the corner from our facilities. The N26 bus which stops at North Shore University Hospital will also bring you to Marcus Avenue.

PSI: 1979 is the only black mirrored building on the far left, South, East Corner. PSI is located on the 1st floor level floor in suite 101.

*****Parking when visiting the IFN***:**

*****DO NOT park on the grounds of the 400,410, 420 Lakeville Road complex.*****

Since parking permits are required, cars parked on the grounds of the 400,410, 420 Lakeville Road complex will be stickered and removed at owners expense.

Park across the street at the Center for Ambulatory Medicine parking entrance 2A/2B There is ample parking there. Then walk across Lakeville Road to the 420 building.

BY Subway and Bus:

"E" or "F" train to Union Turnpike (Kew Gardens) station. Use last car of the train and leave the station via the 78th Ave exit. Take the City Line Q46-(LIJ Hospital/Lake Success) bus to the last stop at the LIJ Medical Center, (40 mins).

The **North Shore Towers Express Bus** to and from Manhattan operates 7 days a week and stops at Union Turnpike and 260th and 265th St a few blocks from The Zucker Hillside Hospital and also stops at the Medical Center bus stop on Lakeville Road. For Schedule information and Manhattan stops, call Queens Surface Corp. at (718) 445-3100.

Metropolitan Suburban Bus Authority (Queens and Nassau)

Route N26 Jamaica to Manhasset via Hillside Ave, Lakeville Road, New Hyde Park Road, Community Drive:

Eastbound - Buses depart Jamaica (165th St/Jamaica Bus Terminal) at 7:07am terminating at Great Neck LIRR Station and at 7:44am and 7:57am (terminating at Community Drive, Manhasset). At other times, take Route N22/22A Jamaica - Roosevelt Field - Hicksville and transfer to Route N25 Lynbrook - Great Neck at New Hyde Park Road and Hillside Ave, New Hyde Park

Westbound - Buses depart Community Drive, Manhasset, at 4:30pm and 4:40pm and terminate in Jamaica (165th St/Jamaica Bus Terminal). At other times, take Route N25 Great Neck - Lynbrook and transfer to Route N22/22A at Hillside Ave and New Hyde Park Road, New Hyde Park.

Route N25 Lynbrook - Great Neck via New Hyde Park Road:

For MSBA schedules please call (516) 766-6722.

Train

Port Washington Branch - to Great Neck Station; Metropolitan Suburban Bus Authority (MSBA) Route N25 to the Medical Center

Port Jefferson Branch Main Line to New Hyde Park Station; MSBA Route N25 to the Medical Center

Hempstead Branch - to Stewart Manor Station; MSBA Route N25 to the Medical Center

For LIRR information call (718) 217-5477.

For MSBA schedules please call (516) 766-6722.

MEDICAL TERMINOLOGY FOR SURGICAL PROCEDURES

INTRODUCTION TO MEDICAL TERMINOLOGY OBJECTIVES

- Identify the roles of the four types of word parts in forming medical terms.
- Analyze unfamiliar medical terms using your knowledge of word parts.
- Define the commonly used prefixes, word roots, combining forms, and suffixes.
- Pronounce medical terms correctly using the “sounds-like” system.

Four Types of Word Part

- Word roots
- Combining forms
- Suffixes
- Prefixes

Word roots

- Basic meaning of the term
- Usually, but not always, indicate the involved body part
- Act as the foundation of most medical terms.
- May also indicate color shown, in their combining forms
- A word root cannot stand alone. A suffix must be added to complete the term
- The rules for the use of creating a combining form by adding a vowel apply when a suffix beginning with a consonant is added to a word root
- When a prefix is necessary, it is always placed at the beginning of the word.

Word Root/Combining Body Part

Combining Forms

Combining forms are word roots with a vowel at the end so that a suffix beginning with a consonant can be added.

Combining Vowels

A combining vowel may be needed between the word root and suffix to make the medical term easier to pronounce.

The letter *O* is the most commonly used combining vowel. When a word root is shown with a back slash and a combining vowel, such as *cardi/o*, this format is referred to as a combining form (*cardi/o* means heart)

Rules for Combining Vowels

1. A combining vowel is *used* when the suffix begins with a consonant. (Example: *neur/o* (nerve) is joined with the suffix-*plasty* (surgical repair), the combining vowel *o* is used because-*plasty* begins with a consonant.

Neuroplasty (NEW-roh-plas-tee) is the surgical repair of a nerve (*neur/o* means nerve and *-plasty* means surgical repair).

2. A combining vowel is *not used* when the suffix begins with a vowel (a, e, i, o, u). (Example: neur/o (nerve) is joined with the suffix –itis (inflammation), no combining vowel is used because –itis begins with a vowel).

Neuritis (new-RYE-tis) is inflammation of a nerve or nerves (neur means nerve and –itis means inflammation).

Rules For Using Combining Vowels

1. A combining vowel is always used when two or more root words are joined. (Example: gastr/o (stomach) is joined with enter/o (small intestine), the combining vowel is used).

Gastr/o; however when the suffix –itis (inflammation) is added, the combining vowel is not used with enter/o because –itis begins with a vowel.

Gastroenteritis (gas-troh-en-ter-EYE-tis) is an inflammation of the stomach and small intestine (gastr/o means stomach, enter means small intestine, and –itis means inflammation).

Cyan/o means blue

-Cyanosis (sigh-ah-NOH-sis) is a blue discoloration of the skin caused by lack of adequate oxygen (cyan means blue and –osis means condition).

Erythr/o means red

-Erythrocytes (eh-RITH-roh-sights) are mature red blood cells (erythr/o means red and cytes means cells).

Leuk/o means white

-Leukocytes (LOO-koh-sights) are white blood cells (leuk/o means white and –cytes means cells).

Melan/o means black

-Melanosis (mel-ah-NOH-sis) is any condition of unusual deposits of black pigment in different parts of the body (melan means black and –osis means condition).

Poli/o means gray

-Poliomyelitis (poh-lee-oh-my-eh-LYE-tis) is a viral infection of the gray matter of the spinal cord that may result in paralysis (poli/o means gray, myel means spinal cord, and –itis means inflammation).

Suffixes

A suffix is added to the end of a word root or its combining form to complete the term. Suffixes usually, but not always, indicate the procedure, condition, disorder, or disease

For Example:

Tonsill/o means tonsils.

A suffix is added to complete the term and to tell what is happening to the tonsils.

Tonsillitis (ton-sih-LYE-tis) is an inflammation of the tonsils (tonsill means tonsils and –itis means inflammation).

A tonsillectomy (ton-sih-LECK-toh-mee) is the surgical removal of the tonsils. (Tonsill means tonsils and –ectomy means surgical removal).

Suffixes Meaning “Pertaining To”

Some suffixes complete the term by changing the word root into an adjective (a word that describes a noun).

Many of these suffixes are defined as “pertaining to”.

Example:

Cardiac (KAR-dee-ack) is an adjective that means pertaining to the heart. (cardi means heart and –ac means pertaining to).

Suffixes Meaning “Pertaining To”

-ac
-al
-ar
-ary
-eal
-ical
-ic
-ine
-ior
-ory
-ous
-tic

Some suffixes complete the term by changing the word root into a noun. (A word that is the name of a person, place or thing.)

Other suffixes in this group are defined as noun endings.

Example:

Cranium (KRAY-nee-um) is the portion of the skull that encloses the brain (crani means skull and –um is a noun ending).

Suffixes as Noun Endings

-a
-e
-um
-us
-y

Suffixes Meaning “Abnormal Condition”

Some suffixes have a general meaning of “abnormal condition or disease”

Example:

-osis means an abnormal condition or disease.

Gastrosis (gas-TROU-sis) means any disease of the stomach (gastr means stomach and –osis means abnormal condition)

-ago
-esis
-ia
-iasis
-ion
-ism
-osis

Suffixes Related to Pathology

Pathology (pah-THOL=oh-jee) means the study of disease, and the suffixes related to pathology describe specific disease conditions. (path means disease and –ology means study of).

-algia means pain and suffering

Gastralgia (gas-TRAL-jee-ah) means pain in the stomach (gastr means stomach and –algia means pain).

-dynia also means pain.

Gastrodynia (gas-troh-DIN-ee-ah) also means pain in the stomach (gastr/o means stomach and –dynia means pain).

-itis means inflammation.

Gastritis (gas-TRY-tis) is an inflammation of the stomach (gastr means stomach and –itis means inflammation).

-malacia means abnormal softening.

Arteriomalacia (ar-tee-ree-oh-mah-LAY-shee-ah) is the abnormal softening of the walls of an artery or arteries.

(arteri/o means artery and –malacia means abnormal softening). Notice that –malacia is the opposite of –sclerosis.

–megaly means enlargement.

Heptomegaly (hep-ah-toh-MEG-ah-lee) is the abnormal enlargement of the liver.
(hepat/o means liver and –megaly means enlargement).

–necrosis means tissue death.

Arterionecrosis (ar-tee-ree-oh-neh-KROH-sis) is the tissues death of an artery or arteries.
(arteri/o means artery and –necrosis means tissue death).

–sclerosis means abnormal hardening.

Arteriosclerosis (ar-tee-ree-oh-skleh-ROH-sis) is the abnormal hardening of the walls of an artery or arteries.
(arteri/o means artery and –sclerosis means abnormal hardening).

–stenosis means abnormal narrowing.

Arteriostenosis (ar-tee-ree-oh-steh-NOH-sis) is the abnormal narrowing of an artery or arteries.
(arteri/o means artery and –stenosis means abnormal narrowing)

Identify a procedure that is performed on the body part identified by the word root.

–centesis is a surgical puncture to remove fluid for diagnostic purposes or to remove excess fluid.

Abdominocentesis (ab-dom-ih-noh-sen-TEE-sis) is the surgical puncture of the abdominal cavity to remove fluid.
(abdomin/o means abdomen and –centesis means a surgical puncture to remove fluid.)

–graphy means the process of producing a picture or record.

Angiography (an-jee-OG-rah-fee) is the radiographic (x-ray) study of the blood vessels after the injection of a contrast medium.
(angi/o means blood vessel and –graphy means the process of recording).

–gram means a picture or record.

An angiogram (AN-jee-oh-gram) is the film produced by angiography
(angi/o means blood vessel and –gram means a picture or record).

–plasty means surgical repair.

Myoplasty (MY-oh-plas-tee) is the surgical repair of a muscle (myo means muscle and –plasty means surgical repair).

–scopy means visual examination.

Endoscopy (en-DOS-koh-pee) is the visual examination of the interior of a body cavity or organ by means of an endoscope.

(endo means within and –scopy means visual examination).

The Double R Suffixes

Suffixes beginning with two Rs, which are often referred to as the double “RRs”, are particularly confusing. They are grouped together here to help you understand the word parts and to remember the differences.

–rrhage and **–rrhagia** means bleeding, bursting forth, or abnormal or excessive flow.

A hemorrhage (HEM-or-idj) is the loss of a large amount of blood in a short time.

(hem/o means blood and –rrhage means bursting forth of blood).

–rrhaphy means surgical suturing to close a wound and includes the use of sutures, staples, and surgical glue.

Myorrhaphy (my-OR-ah-fee) is the surgical suturing of a muscle wound.

(my/o means muscle and –rrhaphy means surgical suturing).

–rrhea means flow or discharge and refers to the flow of most body fluids.

Diarrhea (dye-ah-REE-ah) is the flow of frequent loose or watery stools.

(dia- means through and –rrhea means flow or discharge).

–rrhexis means rupture.

Myorrhhexis (my-oh-RECK-sis) is the rupture of a muscle

(my/o means muscle and –rrhexis means rupture).

Prefixes

Prefixes usually, but not always, indicate location, time, number, or status. A Prefix always comes at the beginning of a word.

A prefix is added to the beginning of a word to influence the meaning of that term.

- **Natal** (NAY-tal) means pertaining to birth.

(nat means birth, and –al means pertaining to).

Example:

Prenatal (pre-NAY-tal) means the time and events before birth (pre-means before, nat means birth, and –al means pertaining to).

- Perinatal (perh-ih-NAY-tal) refers to the time and events surrounding birth

(peri-means surrounding, nat means birth and –al means pertaining to).

This is the time just before, during, and just after birth.

- Postnatal (pohst-NAY-tal) refers to the time and events after birth (post- means after, nat means birthm and –al means pertaining to)

Contrasting and Confusing Prefixes

Some prefixes are confusing because they are similar in spelling but opposite in meaning

Ab- means away from.

Abnormal means not normal or away from normal.

Ad- means toward or in the direction of.

Addiction means drawn toward or a strong dependence on a drug or substance.

Dys- means bad, difficult, painful.

Dysfunctional means an organ or body part that is not working properly.

Eu- means good, normal, well, or easy.

Euthriod (you-THIGH-riod) means a normally functioning thyroid gland.

Hyper- means axcessive or increased.

Hypertension (high-per-TEN-shun) is higher than normal blood pressure.

Hypo- means deficient or decreased.

Hypotension (high-po-TEN-shun) is lower than normal blood pressure.

Inter- means between or amoung.

Intersitial (in-ter-STISH-al) means between, but not within, the parts of a tissue.

Intra-means within or inside

Intramuscular (in-trah-MUS-kyou-lar) means within the muscle.

Sub- means under, less, or below

Subcostal (sub-KOS-tal) means below a rib or ribs.

Super-, supra- mean above or excessive.

Supracostal (sue-prah-KOS-tal) means above or outside the ribs.

Pronunciation Hints Look/Sound-Alike Terms and Word Parts

One confusing part of learning medical terminology is dealing with words and word parts that look and sound much alike.

Ateri/o, ather/o, and arthr/o

- Arteri/o means artery.
Endarterial (end-ar-TEE-ree-al) means pertaining to the interior or lining of an artery. (end-means within, arteri means artery, and –al means pertaining to)
- Ather/o means plaque or fatty substance.
An athroma (ath-er-OH-mah) is a fatty deposit within the wall of an artery. (ather means fatty substance and –oma means tumor).
- Arthr/o means joint.
Arthralgia (ar-THRAL-jee-ah) means pain in a joint or joints (arthr means joint and –algia means pain).

Ectomy, ostomy, and otomy

- –ectomy means surgical removal
An appendectomy (ap-en-DECK-toh-mee) is the surgical removal of the appendix. (append means appendix and –ectomy means surgical removal).
- –ostomy means to surgically create an artificial opening.
A colonostomy (koh-LAHS-toh-mee) is the surgical creation of an opening between the colon and the body surface (col means colon and –ostomy means artificial opening)
- –otomy means cutting into or a surgical incision.
A colostomy (koh-LOT-oh-mee) is a surgical incision into the colon (col means colon and –otomy means surgical incision).

Look/Sound-Alike Terms And Word Parts

Fissure and Fistula

A Fissure (FISH-ur) is a groove or crack-like sore of the skin. The term also describes normal folds in the contours of the brain.

A Fistula (FIS-tyou-lah) is an abnormal passage usually between two internal organs, or leading from an organ to the surface of the body.

Ileum and Ilium

The Ileum (ILL-ee-um) is part of the small intestine. (Remember, ileum is spelled with an e as in intestine)

The Ilium (ILL-ee-um) is part of the hip bone. (Remember, ilium is spelled with an I as in hip).

Infection and Inflammation

Infection (in-FECK-shun) is the invasion of the body by a pathogenic (disease producing) organism. The infection may remain localized or may be systemic (affecting the entire body).

Inflammation (in-flah-MAY-shun) is a localized response to an injury or destruction of tissues. The cardinal signs (indications) of inflammation are (1) redness (erythema), (2) heat (hyperthermia), (3) swelling (edema), and (4) pain. These are caused by extra blood flowing into the area as part of the healing process. The suffix –itis means inflammation. However, it also is often used to indicate infection.

Look/Sound-Alike Terms And Word Parts

Laceration and Lesion

A laceration (lass-er-AY-shun) is a torn, ragged wound.

A lesion (LEE-zhun) is a pathologic change of the tissues due to disease or injury.

Mucous and Mucus

Mucous (MYOU-kus) is an adjective that describes the specialized mucous membranes that line the body cavities.

Mucus (MYOU-kus) is a noun and is the name of the fluid secreted by the mucous membranes.

Myc/o, myel/o, and my/o

Myc/o means fungus

Mycosis (my-KOH-sis) means any disease caused by a fungus
(myc means fungus and –osis means abnormal condition)

Myel/o means bone marrow or spinal cord

Myelopathy (my-eh-LOP-ah-thee) is any pathologic change or disease in the spinal cord
Myel/o means spinal cord, or bone marrow, and –pathy means disease).

My/o means muscle.

Myopathy (my-OP-ah-thee) is any pathologic change or disease of muscle tissue
(my/o means muscle and –pathy means disease).

-ologist and –ology

-ologist means specialist.

A gerontologist (jer-on-TOL-oh-jist) is a specialist in diagnosing and treating diseases, disorders, and problems associated with aging
(geront means old age and –ologists means specialist)

-ology means the study of.

Neonatology (nee-oh-nay-TOL-oh-jee) is the study of disorders of the newborn (neo- means new, nat means birth, and –ology means study of).

Palpation and Palpitation

Palpation (pal-PAY-shun) is an examination technique in which the examiner's hands are used to feel the texture, size, consistency, and location of certain body parts.

Palpitation (pal-pih-YAY-shun) is a pounding or racing heart.

Prostate and Prostrate

Prostate (PROS-tayt) refers to a male gland that lies under the urinary bladder and surrounds the urethra.

Prostrate (PROS-trayt) means to collapse and be lying flat or to be overcome with exhaustion.

Pyel/o means renal pelvis (which is part of the kidney)

Pyelitis (pye-eh-LYE-tis) is an inflammation of the renal pelvis. (pyel means renal pelvis and –itis means inflammation).

Pylo means pus.

Pyoderma (pye-oh-DER-mah) is any acute, inflammatory, pus-forming bacterial skin infection such as impetigo.

(py/o means pus and –derma means skin)

Pyr/o means fever or fire.

Pyrosis (pye-ROH-sis) also known as heartburn, is discomfort due to the regurgitation of stomach acid upward into the esophagus

(pyr means fever or fire and –osis means abnormal condition).

Supination and Suppuration

Supination (soo-pih-NAY-shun) is the act of rotating the arm so that palm of the hand is forward or upward.

Suppuration (sup-you-RAY-shun) is the formation or discharge of pus.

Triage or Trauma

Triage (tree-AHZH) is the medical screening of patients to determine their relative priority of need and the proper place of treatment.

Example: Emergency personnel arriving on an accident scene must identify which of the injured require care first and determine where they can be treated most effectively.

Trauma (Traw-mah) means wound or injury

These are the types of injuries that might occur in an accident, shooting, natural disaster, or fire.

Viral and Virile

Viral (VYE-ral) means pertaining to a virus
(vir means virus or poison and -al means pertaining to)

Virile (VIR-ill) means possessing masculine traits.

Operating Room Terminology

Prefixes: usually indicates site of disease process:

Hyper	<i>Above</i>	AB	<i>Away from</i>
Hypo	<i>Below</i>	AD	<i>Toward</i>
Pre	<i>Before</i>	APO	<i>From</i>
Retro	<i>Behind</i>	Bi	<i>Two</i>
Post	<i>After</i>	En	<i>In</i>
Inter	<i>Between</i>	Epi	<i>Upon</i>
Intra	<i>Within</i>	Infra	<i>Beneath</i>
Anti	<i>Against</i>	Hemi	<i>Half</i>
Ante	<i>Before</i>	Poly	<i>Many</i>
A	<i>Without</i>	Uni	<i>one</i>

Suffixes: Indicates pathology, type of operation or phenomena occurring

Orrhaphy	Repair of
Oscopy	Examination of an organ through a telescope/scope
Ostomy	Creation of an artificial opening or a new opening through the wall of an organ
Pexy	To fix or suture in place
Otomy	Cutting into an organ or tissue, making an opening into tissue or organ
Plasty	Restoration of a lost part or piece of tissue
Ectomy	Surgical excision of
Lysis	Freeing of
Centesis	Puncture to aspirate a cavity
Desis	Fusions

Gram	Tracing: graph
Esthesia	feeling

Word Roots

Adeno	<i>Gland</i>	Cholescysto	<i>Gallbladder</i>
Hepato	<i>Liver</i>	Gastro	<i>Stomach</i>
Chole	<i>Gall</i>	Entero	<i>Intestines</i>
Cyso	<i>Urinary bladder</i>	Col	<i>Colon</i>
Arthro	<i>Joint</i>	Nephro	<i>Kidney</i>
Hystero	<i>Uterus</i>	Colpo	<i>Vagina</i>
Salpingo	<i>Fallopian tube</i>	Thoraco	<i>Chest</i>
Blepharo	<i>Eyelids</i>	Cranio	<i>Brain</i>
Teno	<i>Tendon</i>	Rhino	<i>Nose</i>
Cardio	<i>Heart</i>	Dent	<i>Tooth</i>
Pneumo	<i>Lung</i>	Procto	<i>Anus</i>
Dermat	<i>Skin</i>	Neuro	<i>nerve</i>
Jejun	<i>2nd part of intestine</i>	Myo	<i>Muscle</i>
Lamin	<i>Posterior vertebral arch</i>	Oophor	<i>Ovary</i>
Mast	<i>Breast</i>	Ophthalm	<i>Eye</i>
Trachel	<i>Neck of uterus</i>	Orchio	<i>Testicle</i>
Vas	<i>Vessel or duct</i>	Os	<i>Bone</i>
Pyelo	<i>Pelvis of kidney</i>	Spermato	<i>Sperm</i>
Ureter	<i>Kidney tube</i>	Ot	<i>Ear</i>
Pharyng	<i>Throat</i>	Phleb	<i>Vein</i>
Prostate	<i>Prostatic gland</i>	Lith	<i>stone</i>

Operations

1. Appendectomy	Surgical excision of the appendix
2. Coccygectomy	Surgical excision of the Coccyx
3. Condylectomy	Surgical excision of a condyle (round prominence at the articular surface of the bone)
4. Cystectomy	Surgical excision of a saclike tissue
5. Fistulectomy	Surgical excision of a fistula (abnormal communication between two cavities or a hollow organ and the abdominal wall)
6. Ganglionectomy	Surgical excision of a ganglion which may be a collection of nerve cells or may manifest the form of a cystic tumor of a tendon sheath)
7. Gingivectomy	Surgical excision of the gums of the mouth

8. Hydrocelectomy	Surgical excision of a hydrocele (accumulation of fluid in a saclike cavity especially the tunica vaginalis testis)
9. Hysterectomy	Surgical excision of the uterus
10. Iridectomy	Surgical excision of the iris of the eye or a portion thereof
11. Laryngectomy	Surgical excision of the larynx (voicebox)
12. Myomectomy	Surgical excision of the tumors with muscular tissue components, most commonly used to refer to excision of myomas of the uterus
13. Oophorectomy	Surgical excision of the ovary
14. Pneumonectomy	Surgical excision of the lung
15. Stapedectomy	Surgical excision of the stapes, one of the (3) three tiny bones in the middle ear
16. Sympathectomy	Excision of the portion of the sympathetic nervous pathway
17. Synovectomy	Surgical excision of the membrane lining the joint capsule
18. Vasectomy	Surgical excision of the vas deferens (excretory duct of the testicle)
19. Vulvectomy	Surgical excision of the vulve (external female genitalia)
20. Arthrotomy	Making a surgical opening into a joint
21. Cholecystotomy	Making a surgical opening into the gallbladder
22. Colpotomy	Making a surgical opening into the vagina
23. Commissurotomy	Surgical division of a fibrous band
24. Craniotomy	Making a surgical opening in the cranium (skull)
25. Laparotomy	Making a surgical opening in the abdominal wall (usually for exploration of the abdominal contents)
26. Meatotomy	Making a surgical incision into the tympanic membrane
27. Myringotomy	Making a surgical incision into the tympanic membrane
28. Oseotomy	Making a surgical opening into the bone
29. Thoractomy	Making a surgical opening into the chest
30. Vagotomy	Division or partial transection of the vagus nerve
31. Cholecholestomy	Surgical formation of an opening into the common bile duct
32. Colostomy	Creating a new opening in the wall of the colon
33. Dacryocystorhinostomy	Formation of a permanent opening between the lumen of the tear sac and nasal cavity
34. Gastrojejunostomy	Creating a new opening between the stomach and the

	jejunum
35. Ileostomy	Surgical opening made into the ileum
36. Nephrostomy	Making an artificial opening in the kidney
37. Suprapubic cystostomy	Making an artificial opening in the bladder above the pubic area
38. Anoplasty	Plastic repair of the anus
39. Blepharoplasty	Resortation of the eyelid
40. Coloplasty	Restoration of the vagina
41. Otoplasty	Plastic surgery of the external projection of the ear
42. Salpingoplasty	Restoration of the Fallopian tube
43. Rhinoplasty	Plastic repair or reconstruction of the nose
44. Thoracoplasty	Resortation or surgical repair of the chest
45. Tympanoplasty	Plastic repair of the tympanic membrane and structure of the middle ear
46. Z-plasty	Relaxing incision use for correcting contractures made in the shape of a Z
47. Colporrhaphy	Repair of the vagina-narrowing the vagina
48. Herniorrhaphy	Repair of the hernia
49. Perineorrhaphy	Repair of the perineum
50. Tenorrhaphy	Repair of a tendon
51. Cystopexy	The fixation of the bladder in proper position
52. Hysteropexy	The fixation of the uterus in proper position
53. Nephropexy	The fixation of the kidney in proper position
54. Orchiopexy	The fixation of the testicle in proper position
55. Bronchoscopy	Examination of the bronchus by viewing
56. Cystoscopy	Examination of the bladder by viewing
57. Esophagoscopy	Examination of the esophagus by viewing
58. Gastroscopy	Examination of the stomach by viewing
59. Laryngoscopy	Examination of the larynx by viewing
60. Proctoscopy	Examination of the rectum by viewing
61. Arthrodesis	Fusion of a joint
62. Paracentesis	Surgical puncture of a cavity, usually abdominal
63. Thoracentesis	Surgical puncture of the chest cavity
64. Tenolysis	Surgical freeing of a tendon
65. Cholelithiasis	Presence of stones in the gallbladder
66. Nephrolithiasis	Presence of stones in the kidney
67. Arteriogram	Examination of the artery by x-ray after injection of a dye
68. Aortogram	Examination of the abdominal aorta by x-ray after injection of a dye
69. Cholangiogram	Examination of the gallbladder by x-ray after injection

	of a dye
70. Ventriculogram	Examination of the ventricles of the brain by x-ray after injection of a dye

Other Procedures

1. Anastomosis	Formation of a passage between any two normally distant spaces or organs
2. Aspirate	Withdrawal of fluid, purulent matter
3. Biopsy	Removal of a small piece of tissue for pathologist examination
4. Caldwell-luc	Window operation; opening made into the canine fossa for removal of contents from maxillary sinus
5. Catherization	Insertion of a narrow tube into a cavity for drainage, etc
6. Debride	Freshen and dcleanse a wound by removal of all friable, necrotic and nonviable tissue
7. Decompress	To relieve pressure
8. Dermabrade	To abrade the skin by means of sandpaper or electric apparatus
9. Dessicate	To dry up usually with an electric cautery
10. Disarticulate	Amputate or separate at a joint
11. Electrocoagulate	Passage of high frequency current through tissue producing coagulation of tissue cells and also destruction of tissue
12. Enucleation	Removal of an organ, or other body, in such a way that it comes out as a whole
13. Evisceration	Removal of the contents of an organ or viscera of the body
14. Exenteration	Removal of organs and tissue from the body-radical
15. Fulgurate	Utilization of sparks from a current for destruction of tissue
16. I & D	Incision and drainage
17. Manchester	Operation for correcting a prolapsed uterus by amputation of the cervix and fixation of the cardinal ligaments
18. Marshall-Marchetti	Plication (stitching folds) of the urethra for correction of urinary stress incontinence
19. Marsupialization	Incision into a cystic lesion with evacuation of its contents and approximation of the wall of the cyst to those of the external incision to permit drainage and closure by granulation of the wound
20. Abdominal perineal resection	Abdominoperineal resection of the rectum for

	carcinoma
21. Pedicle graft	Preparation of skin for grafting by forming a tubular structure which may be moved to another site on the body which requires the graft
22. Ramstedt	(pyloromyotomy) incision of the muscles of the pylorus performed for congenital pyloric stenosis
23. Spinal fusion	Surgical immobilization of the spine through formation of a bony union
24. Submucous resection	Resection of the nasal septum
25. Wertheim	Radical hysterectomy (removal of the uterus, adjacent tissues and wide portion of the vagina) performed for uterine malignancy
26. Whipple	One stage pancreaticoduodenectomy

Medication Safety in the Operating Room

Medication Safety in the Operating Room

Learning Objectives

1. The learner will be able to verbalize an understanding of commonly used medications in the perioperative setting.
2. The learner will be able to list the six rights of medication administration.
3. The learner will be able to describe the proper procedure for placing medications on the sterile field.

Drugs and Solutions

Importance to Your Practice

Role of the Perioperative Nurse

- Verify patient identification
- Obtain patient history related to medications
- Verify the correct drug or solution, dosage, route, and time of administration
- Know potential drug adverse reactions and other considerations
- Prepare the drug or solution
- Document the medication, dosage, route, and time of administration on the intraoperative record.

Categories of Drugs and Solutions

- Antibiotics
- Anticoagulants
- Hemostatic agents
- Cardiac agents
- Anti-Inflammatory agents (steroids)
- Ophthalmic agents
- Otic agents
- Posterior pituitary hormone agents
- Irrigating solutions for transurethral and gynecological procedures
- Diagnostic imaging agents
- Dyes (Methylene Blue, Lugol's solution, Indigo Carmine)
- Local Anesthesia
- Conscious sedation

Antibiotics

- Penicillins (Ampicillin)
- Cephalosporins (Cefazolin Sodium [Ancef])
- Aminoglycosides (Neomycin Sulfate, Gentamycin Sulfate [Garamycin])
- Sulfonamides (Gantrisin)
- Others (Bacitracin, Chloramphenicol [Chlormycetin], Vancomycin [Vancocin], Tetracycline)

Dosages for Antibiotics

- Dosages will depend on the antibiotic and the individual patient's needs.

Routes for Administration for Antibiotics

- As administered by the perioperative nurse, the typical route of administration is saline irrigation solution.

Adverse Reactions to Antibiotics

To penicillin:

- Hypersensitivity reactions
- Nausea
- Vomiting
- Colitis
- Tissue damage (when applied topically or by irrigation)

Anticoagulants

Action: To prevent or prolong the coagulation of blood.

- Heparin, Lovenox, Plavix

Dosages for Anticoagulants

- Dosages will be determined, in part, by the (1) patient's condition, and (2) operative procedure.

Consult manufacturer's recommendations and surgeon preference card for specific dosage information.

Route of Administration for Anticoagulants

- Heparinized saline irrigation solution.

Adverse Reactions to Anticoagulants

- Chills
- Rash
- Urticaria (hives)
- Pruritus (itching)
- Fever
- Respiratory allergic symptoms
- Anaphylactic/anaphylactoid reactions

Hemostatic Agents

Action

- Reduce capillary bleeding
- Assist in blood clotting

Hemostatic Agents

- Absorbable gelatin sponge (Gelfoam)
- Microfibrillar collagen (Avitene)
- Oxidized cellulose (Surgical, Oxycel)
- Topical thrombin

Dosages for Hemostatic Agents

- Patient's condition
- Operative procedure

-You need to consult manufacturer's recommendations and surgeon preference card for specific dosage information.

Routes of Administration for Hemostatic Agents

- Placed directly on the bleeding site (topical thrombin, Gelfoam, Avitene, Surgical, Oxycel)
- Topical thrombin may be used in spray form.

Adverse Reactions to Hemostatic Agents

- Topical thrombin-intravascular thrombosis
- Absorbable gelatin foam-increase risk of wound infection
- Oxidized cellulose and absorbable gelatin foam may cause pressure in confined spaces

Other Considerations

- Avoid use on pulsating arterial bleeding and in contaminated wounds.
- Avoid use of Microfibrillar collagen with autologous blood salvage units.

Cardiac Agents

Actions

- Reduce mammary artery spasm
- Test patency and integrity of a graft
- Sustain radial artery dilatation

Examples of Cardiac Agents

- Papaverine Hydrochloride (used to reduce mammary artery spasm)
- Plasma-Lyte A pH 7.4 (used to test patency and integrity of a graft)

- Radial artery solution-a Verapamil, Nitroglycerin, Sodium Bicarbonate, Heparin mixture (used to sustain radial artery dilatation)

Dosages for Cardiac Agents

- Dosages are determined, in part, by the patient's condition and the operative procedure. Papaverine and radial artery solution are diluted in normal saline. Consult manufacturer's recommendations and surgeon preferences card for specific dosage information

Routes of Administration for Cardiac Agents

- Topical (papaverine)
- Irrigation (Plasma-Lyte A pH 7.4)
- Immersion (radial artery solution)

Adverse Reactions to Cardiac Agents

- Reactions are rare.

Other Considerations

- Precipitation will occur if Ringer's Lactate is mixed with Papaverine.

Anti-Inflammatory Agents (Steroids)

Action: To reduce inflammation and possible postoperative edema at operative sites.

Anti-Inflammatory Agents

- Dexamethasone (Decadron, Hexadrol)
- Hydrocortisone Sodium Succinate (Solu-Cortef)
- Methylprednisolone Sodium Succinate (Solu-Medrol)
- Methylprednisolone Acetate (Depo-Medrol)
- Triamcinolone Acetonide (Artistocort, Kenalog)

Dosages for Anti-Inflammatory Agents

- Patient's Conditions
- Operative procedure

Routes of Administration for Anti-Inflammatory Agents

- Parenterally
- Directly to the operative site

Adverse Reactions to Anti-Inflammatory Agents

- Dosage or duration dependent

Other Considerations

- Avoid if patient has known hypersensitivity to any component
- Avoid if patient has a systemic fungal infection
- Thoroughly dissolve particles

Ophthalmic Agents

Action

- To anesthetize
- To promote diffusion and absorption of anesthetic agent
- To reduce intraocular removal
- To facilitate lens removal
- To maintain a deep anterior chamber
- To prevent or control infection
- To reduce inflammation and possibly of infection

Examples of Ophthalmic Agents

- Topical amesthetic agents
 - Proparacaine Hydrochloride (Ophthaine)
 - Tetracaine Hydrochloride (Pontocaine)
- Miotic agents (used to constrict the pupil and to reduce intraocular pressure)
 - Acetylcholine Chloride (Miochol)
 - Pilocarpine
 - Physostigmine (Eserine)
- Viscoelastic agent (used to maintain separation of tissues)
 - Sodium Hyaluronate (Healon)

Examples of Ophthalmic Agents

- Anti-infective-steroid combination agents (used to reduce infection and/or inflammation)
 - Dexamethasone 0.1%
 - Neomycin Sulfate
 - Polymyxin B Sulfate
- Glucocorticoid agents (used to reduce inflammation)
 - Methylprednisolone Acetate suspension (Depo-Medrol)
 - Betamethasone Sodium Phosphate
 - Betathasone Acetate suspension (Celestone Soluspan)
- Enzymatic agent (used to promote diffusion and absorption of anesthetic agent)
 - Hyaluronidase (Wydase)

Dosages for Ophthalmic Agents

- Patient's condition
- Operative procedure

Routes of Administration for Ophthalmic Agent

- Topical
- Instillation

Adverse Reactions to Ophthalmic Agent

- Irritation
- Conjunctivitis
- Swelling
- Redness

Otic Agents

Action

- To anesthetize
- To stop or slow bleeding
- To irrigate

Examples of Otic Agents

- Xylocaine with Epinephrine
- Epinephrine
- Gelfoam
- Ringer's Lactate or Saline

Dosages of Otic Agents

- Patient's condition
- Operative procedure

Route of Administration for Otic Agents

- Topical
- Instillation

Adverse Reactions to Otic Agents

- Ear irritation
- Itching

Other Considerations

- Agents should be at body temperature before application or instillation

Posterior Pituitary Hormonal Agents

Action:

- Stimulate uterine muscle

Example

- Vasopressin

Dosages for Posterior Pituitary Hormonal Agents

- Patient's condition
- Operative procedure

Route of Administration for Posterior Pituitary Hormonal Agents

- Regional injection

Adverse Reactions

- Uterine tetany
- Tremor
- Sweating
- Vertigo
- Abdominal cramps
- Nausea

Irrigating Solutions for Transurethral and Gynecological Procedures

Action

- Transurethral (TUR) procedures
 - Flush a cavity
 - Ensure the patency of an irrigating system
- Gynecological procedures- to irrigate, visualize and/or distend the uterine cavity

Examples of TUR Irrigating Solutions

- Glycine 1.5%
- Other nonelectrolyte solutions

Example of Gynecological Irrigation Solutions

- Hyskon

Dosages of Irrigating Solutions

- Transurethral irrigation
 - Volumes adequate to flush the cavity
 - To ensure irrigation system patency
- Gynecological irrigation
 - Volumes adequate to irrigate, visualize and/or distend the uterine cavity

Route of Administration for Irrigating Solutions

- Irrigation system into the bladder or the uterus

Adverse Reactions to Irrigating Solutions

- Chills
- Vertigo
- Backache
- Nausea

Other Considerations

- Do not administer if solution is cloudy
- Do not administer to patients with anuria
- Warm solution (not to exceed 150 degrees F./66 degrees C)

Diagnostic Imaging Agents (Radiopaque Media)

Action

- Permit visualization of internal structures

Examples of Diagnostic Imaging Agents

- Renografin (used for cholangiography, hysterosalpingography)
- Cystografin (used for cystourethrography)
- Hypaque

Dosages for Diagnostic Imaging Agents

- Patient's condition
- Operative procedure
- Contrast media may be diluted with normal saline
- Consult manufacturer's recommendations and surgeon preference card for specific dosage information.

Route of Administration for Diagnostic Imaging Agents

- Instilled directly into an organ or duct with a catheter or tube. The surgeon administers the contrast media

Allergic Reactions

- Reactions to diagnostic imaging agents are rare. If the patient has a history of possible hypersensitivity to other medical imaging procedures, report this finding.

Adverse Reactions

- In patients with multiple myeloma or paraproteinemia, may cause renal failure
- In patients with sickle cell disease, may promote cell sickening.

Other Considerations

- Do not use parenteral products if cloudy or discolored.

Dyes

Action

- To stain or mark a specific area or structure

Examples of Dyes

- Methylene blue
- Indigo carmine

Administration of Dyes

- Determined by the operative procedure

Routes of Administration for Dyes

- Dyes added to solution
- Marking pens may be used to mark the skin

Adverse Reactions to Dyes

- None reported

Local Anesthesia

Perioperative Nurse Qualifications

- Safely use
- Interpret data obtained from intraoperative monitoring

Preoperative Assessment

- Usual preoperative assessment and planning

Action

- To block neuromuscular conduction

Examples

- Aminoesters (2-chlorprocaine, procaine, tetracaine)
- Aminoamides (lidocaine, prilocaine, mepivacaine, bupivacaine, etidocaine)

Allergic Reactions

- Erythema
- Urticaria
- Edema
- Bronchoconstriction
- Hypotension

Systemic toxicity

- Numbness of tongue
- Lightheadedness
- Visual disturbances
- Twitching
- Seizures
- Coma
- Respiratory arrest

Nursing Interventions

- Ensure patent airway
- Administer oxygen
- Provide supportive care and definitive care if needed

Intraoperative Nursing Interventions

- Continuously monitor patient's:
 - Blood pressure
 - Heart rate and rhythm
 - Respiratory rate
 - Oxygen saturation
 - Skin color and condition
 - Level and type of response

Other Considerations

- Provide a calm and supportive setting for the awake patient

- Prepare emergency equipment and medications for interventions
- Understand that the “local” situation may shift to “conscious sedation” status as the procedure and the patient’s responses evolve

Delivering Medications onto the sterile field

Perioperative Registered Nurse (circulating role)

1. Check surgeon’s preference card to obtain type, dose and concentration medication(s). Verify this information with the surgeon prior to drawing up the medication. Obtain necessary vials of medication(s) and check expiration dates.
2. Prior to drawing up appropriate medication in a syringe, the circulating nurse shows vial(s) of all medications, to the scrub person, i.e. name and expiration date and gives the scrub nurse the following materials:
 - 25g 5/8 needle
 - 22g 1 ½ needle
 - Sterile marking pen
 - Steri-strip
3. After confirming medication(s) with scrub person, the circulating nurse draws medication up using an 18g 1 ½ needle and delivers it via syringe to the sterile field
 - The scrub person using a sterile marking pen and steri-strips writes down the amount/concentration of medication she has received (e.g. 30cc Lidocaine and 30cc Sterile Water and 0.3 Epinephrine 1:1000). Medicine cup and syringe should also be labeled.
 - As the syringe is handed to the surgeon, the scrub nurse informs the surgeon as to the contents of the syringe (e.g. the syringe contains a mixture of 30cc Lidocaine/30cc NS and 0.3cc Epinephrine)
4. The circulating nurse shows the vials to the surgeon/anesthesia according to hospital policy. The vials are not discarded until the end of the procedure.
5. The circulating nurse documents the following on the OR nurse’s progress note:
 - Name of drug(s)
 - Amount/concentration
 - Total amount used by surgeon

Perioperative RN Personnel Medication List

You are responsible for knowing the usage of the medication in the OR as well as the generic name of the **drugs. RN’s only: MUST know all emergency meds, the dosage and how to prepare it as a drip.

* Ancef	Hyskon	Papavarine
Avitene	Isoflurane	* pitressin
* Anectine	Isuprel	Pitocin
Aminophylline	Indigo carmine	Penicillin
Atropine	Ketamine	Protamine sulfate
Ampicillin	* Kantrex	Neostigmine
Cocaine	Lugols Solution	Sodium Biocarbonate
* Dantrium	* Mannitol	* Solu-medrol
* Dopamine	Methylene Blue	Thrombin
* Dobutrex	* Monsels	Toradol
* Decadron	Morphine	* Tridil
Dilantin	Nesacaine	* Versed
Epinephrine	Neomycin Sulfate	Vibramycin
* Fentanyl	Nipride	Wydase
Flouroscein	Neosproin ointment	* Xylocaine
Gentamycin	* Neosynephrine	Surgicel
Glucagon	Polymixin	* Zemuron
Heparin	Pronestyl	
Hypaque	Oxycel	

Perioperative Medication Key

NAME	GENERIC NAME	DESCRIPTION
Ancef	Cefazolin	Cephalosporin antibiotic
Anectine	Succinylcholine Chloride	Neuromuscular blocker-adjunct to anesthesia to induce skeletal muscle relaxation. Facilities intubation
Aminophylline	Theophylline	Bronchodilator-relaxes smooth muscle of bronchial airway. Treatment of bronchospasms
Antropine		Anticholinergic- decreases secretions and blocks cardiac vagal reflexes
Ampicillin		Penicillin antibiotic
Bacitracin		Anti-infective
Cocaine		Local anesthetic, especially for oral cavity and nasal procedures
Dantrium	Dantolene sodium	Treatment of Malignant Hyperthermia
Diprivan	Propofol	Short acting anesthetic given IV for induction and maintenance of general anesthesia. Also used for sedation
Dopamine	Dopamine	Adrenergic-improves perfusion to vital organs.

	Hydrochloride	Increase cardiac output
Dobutrex	Dobutamine Hydrochloride	Adrenergic-increases cardiac output, adjunct in cardiac surgery.
Decadron	Dexamethasone	Corticosteroid-decreases inflammation
Dilantin	Phenytoin	Anticonvulsant, treatment for seizures
Epinephrine	Adrenaline	Bronchodilator-treatment of anaphylaxis. Increase of heart rate, blood pressure, etc. Used in an arrest.
Fentanyl		Narcotic analgesic-adjunct to general anesthetic
Flourescein		Bright yellow dye if viewed under cobalt blue illumination
Garamycin	Gentamycin SO₄	Aminoglycoside for GI/GU surgery prophylaxis
Glucagons		Treatment of hypoglycemia, increases blood glucose. Also increases smooth muscle relaxation in bowel surgery
Heparin		Anticoagulant
Hypaque		Dye used to visualize under x-ray ex: cholangiograms
Hyskon		Visual media for hysteroscopy
Isoflurance		Inhalation anesthetic
Isuprel	Isoproterenol	Treatment for bradycardia
Indigo Carmine		Blue dye used in urologic surgery cases
Ketamine		General anesthetic
Kantrex	Kanamycin	Aminoglycoside-pre-op bowel sterilization, intraperitoneal irrigation
Lasix	Furosemide	Loop diuretic
Lugol's Solution	Strong Iodine Solution	Cell dye for colon biopsy and GYN surgery, prep for thyroid surgery
Mannitol	Osmitrol	Osmotic diuretic also irrigation solution for TURP
Marcaine	Bupivacaine (Sensorcaine)	Local anesthetic
Methylene Blue		Dye
Monsels	Ferric Sub sulfate	Topical cautery for GYN-cone biopsy
Morphine		Narcotic analgesic-fast acting
Nesacaine	Chloroprocaine	Local anesthetic
Neomycin SO ₄		Aminoglycoside-suppression of intestinal bacteria
Nipride	Nitroprusside sodium	Antihypertensive-to produce controlled immediate hypotension during anesthesia
Neosporin	Combination: Neomycin and Polymixin and Bacitracin	Antibiotic ointment
Neosynephrine	Phenylephrine	Adrenergic, vasoconstriction for maintenance of

		blood pressure during decreased blood pressure, spinal and inhalation anesthesia.
Oxycel		Hemostatic agent
Polymyxin	Polymixin B Sulfate1	Anti-infective, irrigations
Pronestyl	Procainamide HCL	Antiarrhythmic for afib, vtach, PVC's, atrial tach
Papavarine		Vasodilator-cerebral and peripheral ischemia treatment
Pitressin	Vasopressin (ADH)	Pituitary hormone-anti diuretic effect also controls bleeding abd. Surgery and esophageal varices.
Pitocin	Oxytocin	Oxytocin-for labor induction and decrease of postpartum bleeding, incomplete or inevitable abortion
Penicillin		Antimicrobial
Protamine Sulfate		Antidote to treat heparin overdose- Heparin antagonist
Neostigmine		Cholinergic- antidote for skeletal muscle relaxants
Sodium bicarbonate		Antacid (Alkalinizers) treatment of cardiac arrest and metabolic alkalosis
Solucortef	Hydrocortisone	Cortisosteroid- to decrease inflammation
Solumedrol	Methylprednisolone	Corticosteroid
Surgical		Oxidized cellulose- absorbable hemostatic
Thrombin		Hemostatic-control of hemorrhage
Toradol	Ketoralac	Non-narcotic analgesic, injectable NSAID
Tridil	Nitroglycerin	Antiarrhythmic, vasodilator. Decreases blood pressure
Vibramycin	Doxyxycline	Tetracycline antibiotic
Wydase	Hyaluronidase	Enzyme-increases absorption and dispersion of injected drugs and urography
Xylocaine	Lidocaine	Antiarrhythmic treatment of V tech
Versed	Midazolam	Sedative, pre-operatively
Zemuron	Rocuronium	Neuromuscular blocking intubation

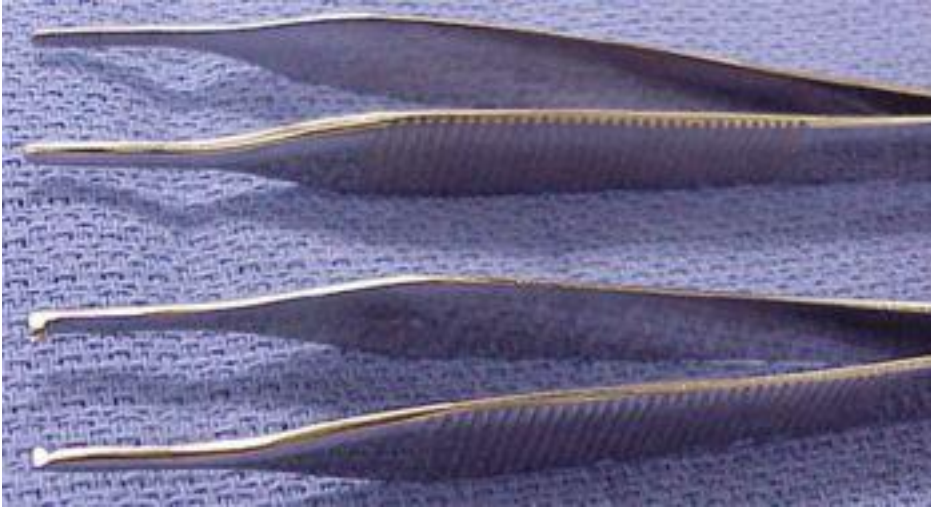
Critical Element	<u>Behavioral criteria you are expected to perform:</u>
1. Introduces self (I)	Tells the patient full name and title.
2. Performs hand hygiene (T)	Washes hands with soap and water or alcohol hand gel for 15 seconds.
3. Identifies patient (T)	While looking at the patient's identification bracelet, asks the patient to state his/her full name and date of birth. If carrying out an intervention, compares with OR schedule.
4. Explains procedures to the patient (I, T)	<ul style="list-style-type: none"> • Explains overall the nature of a preoperative assessment. Explains what is going to be done and lets the patient know if there is a need to ask any questions or speak to the surgeon.
5. Checks the chart for completeness	<ul style="list-style-type: none"> • Nurse must check labs and results if ordered or hospital policy • CBC if ordered • PT/PTT, INR if on ASA or anticoagulants • Electrolytes • Pregnancy test, if applicable • Chest X ray- result • EKG-result • Checks consent (correct side written on consent), signed by patient and MD • Admitting note • H&P • Progress note • Order sheet <ul style="list-style-type: none"> • Availability of Blood
6. Begins the Universal Protocol process Preoperatively	<ul style="list-style-type: none"> • Preoperatively • Asks the patient to state the procedure and the side that will be done <ul style="list-style-type: none"> • Checks OR schedule to assure correct name, DOB, Procedure, MR#, and side/site. • Checks the marking site which is done by the surgeon • Intervenes for any discrepancies found. Resolution of discrepancies by checking the: <ul style="list-style-type: none"> • Chart • Consent • Confirming side/site with Surgeon • Anesthesiologist • Involving the patient • Radiological Images
7. Universal Protocol Intraoperatively	<ul style="list-style-type: none"> • Intraoperatively <ul style="list-style-type: none"> • Checks consent for accurate documentation of surgery. • Assures MD has marked the surgical site • Assures proper documentation on site verification form with only approved abbreviations. • When taken into OR, patient name and surgery are repeated to scrub tech • Prior to incision, a PAUSE is taken to confirm patient name, procedure and laterality, DOB; all equipment needed present prior to surgery. • Performs accurate documentation of final PAUSE in OR on site verification form, including printed name, signature of RN and date. • Places copy of site verification form with paperwork in chart or for Quality monitoring

8. Assesses preoperatively	<ul style="list-style-type: none"> • Asks patient when was the last time they had anything to eat or drink? • Asks if they have any allergies to medications • Asks if they are allergic to latex • Asks if they are wearing any dentures or have any loose teeth, glasses, contact lenses or hearing aids • Asks if patient has any jewelry, tattoos or piercings anywhere on the body • Asks if patient has any breathing problems, like asthma, emphysema or COPD • Do they take any meds for BP • Do they take any meds for their heart? • Do they take any medications over the counter or herbal meds? • Do they have diabetes? <ul style="list-style-type: none"> • Have you had any previous surgeries or any trouble with anesthesia?
9. Infection Control	<ul style="list-style-type: none"> • Maintains clean and safe environment for patient • Demonstrates knowledge of environmental controls-temp, humidity of room • Adheres to dress code and wears appropriate PPE in OR • Wash hands after every patient • Maintains aseptic technique at all times • Initiates corrective action when breaks in technique have occurred.
10. Anesthesia Care	<ul style="list-style-type: none"> • Provides support to anesthesiologist during induction & emergence phase • Maintains with patient during Induction phase & emergence phase to assist and provide protection and psychological comfort. • Demonstrates correct application of cricoid pressure • Maintains patient warm prior, during and after induction and extubation • Assists anesthesiologist with Regional anesthesia • Provides safety for patient during regional/local/general anesthesia
11. Thermodynamics	<ul style="list-style-type: none"> • Places warm blanket in patient prior to induction • Does not expose patient unnecessarily until before surgery • Pours warm irrigation fluids on sterile field • Utilizes bear hugger appropriately • Warms OR prior to pediatric patient • Warms OR table prior to pediatric patient
12. Age Specific Criteria	<ul style="list-style-type: none"> • Verbalizes understanding of differences in pediatric anatomy, physiology and developmental needs specific to age specific patients • Is able to identify possible signs of child abuse • Thermal regulation of OR prior to introduction of pediatric patient to OR • Can verbalize Parent Assisted Induction of patient • During scrub, sets up instruments according to size of patient.
13. Implants	<ul style="list-style-type: none"> • Checks expiration date on all implants utilizes sooner date to expire. • Documents implants accurately • Reconstitutes implants appropriately • Documents on Tissue Log Book accurately all pertinent information for tracking purposes. • Receives consent and MD. Order prior to obtaining implant.

14. Electrocautery Safety	<ul style="list-style-type: none"> • Turns on ESU machine on prior to case to check for proper functioning • Checks for biomet sticker • Places ESU pen in cartridge container when scrubbed • Documents accurately on periop record ESU information • Places electrocautery pad on patient appropriately • Shaves patient if necessary prior to application of bovine pad. • Demonstrates proper application of bovine cord to machine and set numbers as directed by surgeon • Removes ESU pad and inspects skin condition of bovine site postoperatively • Documents accurately on perioperative record of skin condition of ESU pad site • Documents any deviations from the norm on skin condition when bovine removed. • Aware of incident reporting when any deviation from the norm is noted. • Demonstrates appropriate dispersal pad for age specific patients. <30 lbs use pediatric dispersive pad. •
15. Latex Allergy Safety	<ul style="list-style-type: none"> • Demonstrates patients regarding latex allergies through assessment • Establishes latex restricted environment (Multidisciplinary approach) • Posts Latex Allergy sign over OR door and retrieves latex cart • Determines proper protocol for patients that are latex allergic once the surgical pack has been opened. • Prepares pack prior to latex allergic patient enters OR • Monitors all latex free items on sterile field. •
16. Maintaining Sterile Field	<ul style="list-style-type: none"> • Opens sterile packages according to procedure • Demonstrates proper gloving • Opens small items onto sterile field without contamination • Creates and maintains field and observes principles of aseptic technique. • Safely pours fluids and medications on to sterile field. • Controls own movement within sterile field • Recognizes and corrects breaks in sterile technique by self and others • Limits traffic in room • Keeps door closed at all times during procedure • Can transport sterile items from one room to another. • Pours solutions correctly
17. Gowning and Gloving	<ul style="list-style-type: none"> • Selects clean , dry area on which to open package • Inspects package for integrity • Opens package in sterile manner without contamination. • Dries hands with towel appropriately and discards • Lifts gown out of wrapper and steps away from nonsterile objects • Slips arms into sleeve using a forward motion, until sleeve- cuff is over hands • Utilizes closed glove technique in proper manner • Demonstrates proper changing of contaminated gloves • Hand circulator wrap- around tie to front of gown, grabs sterile part of tie and secure it. • Circulator ties back of sterile person appropriately. • Removes PPE in proper fashion. • OPEN GLOVING- Demonstrates proper application of open gloving technique.
18. Instrumentation	<ul style="list-style-type: none"> • Identifies instruments accurately • Sets up back table in standardized manner dependent on case • Inspects instrument trays or sterile items for integrity • Retrieves all instrumentation needed for surgical case prior to the case. • Passes instruments correctly. • Removes instrumentation to dirty utility at end of case in accordance with hospital policy.

19. Surgical PREP	<ul style="list-style-type: none"> • Is aware if patient has any allergies • Collects all needed equipment prior to prep • Aseptically opens prep and prepares • Demonstrates open glove technique accurately • Places absorbent towels in appropriate manner • Cleans area of incision-laparoscopic cases does umbilicus first • Utilizes proper sequence of prepping. Clean to dirty • Blots area properly and removes blotter properly • Paints area of incision in proper fashion- clean to dirty • Removes absorbent towels properly
20. Surgical Counts	<ul style="list-style-type: none"> • Performs counts (sponges, sharps & instruments) audibly and visually • Documents counts accurately on count sheet • Performs counts prior to incision, at closing and final count • Utilizes count bags appropriately • Counts out and documents appropriately when items are counted out. • When relieved for break, surgical counts done. • Performs count in accurate sequence (surgical field, sterile field, bucket, and count bags. • Appropriately follows policy if incorrect count is done • Prepares incident report accurately and prepares for intraoperative X- ray, for incorrect counts.
21. Specimen Handling	<ul style="list-style-type: none"> • Labels specimens appropriately • Processes specimens according to type of pathology test. (Frozen, Permanent, C&S, biopsies) • Demonstrates proper use of specimen information into invision or paper documentation. • Documents appropriately on specimen requisition form. • Checks label for correct name of patient • Verbally announces specimen and clarifies if needed. • Labels specimens on sterile field when multiple specimens are needed. • Disposition of specimens done correctly • Documentation of specimens placed in logbook
22. Patient Teaching	<ul style="list-style-type: none"> • Demonstrates knowledge using appropriate teaching strategies to educate patient/family • Assess patient /SO need for education and readiness to learn • Able to assess cultural needs and their effects on learning and teaching • Documents education and patient Teaching performed and level of understanding • Determines patients ability to understand comprehension, language barriers and uses resources necessary to communicate/educate patient. • Utilizes the teach back method

23. Positioning	<ul style="list-style-type: none"> • Places Safety Strap on patient when transferred to OR table • Verbalizes various positions utilized for various cases • Assesses ability or confinements of patient for positioning • Utilizes appropriate positioning devise needed. • Demonstrates proper utilization of positioning devise. • Demonstrates skill and knowledge in safe positioning of the patient. <ul style="list-style-type: none"> ○ Supine ○ Prone ○ Lithotomy ○ Jack Knife ○ Lateral ○ Sitting ○ Trendelenberg • Demonstrates skill and knowledge in nerve impairment, skin integrity by padding patient correctly • Maintains patient privacy
24. Hand Off Reporting- Continuity of Care RN to RN	<ul style="list-style-type: none"> • Utilizes Hand off Communication through SBAR Protocol • (Name, Age, Diagnosis, Surgical Procedure) • States Current Stage of Procedure • States Allergies or any significant medical history • Instrumentations off/on field • Surgical Counts as per policy • Any communication with family for changes in clinical status/condition. • Any additional issues or concerns
25. Medication Administration	<ul style="list-style-type: none"> • Aware of patient allergies • Demonstrates knowledge of six patient rights of medication (right dose, right route, right time, right patient, right medication, right expiration date) • Audibly and visually shows medication and expiration date to scrub person prior to administration on sterile field. • Demonstrates knowledge of medication administration for age specific groups. • Documents medications on sterile field on operative record accurately. • Is able to demonstrate or verbalize appropriate nursing action in the event of the onset of side effects, adverse drug reaction. • Announces to surgeon the medication (scrub only) prior to administration of medication to patient. • Verbalizes knowledge of saving all vials of medication till after the case is complete. • Label all medications including saline irrigations & water on the sterile field. • Is able to verbalize sequence of events if an adverse reaction is noted on patient.(Adverse Drug Reaction Form & Occurrence)



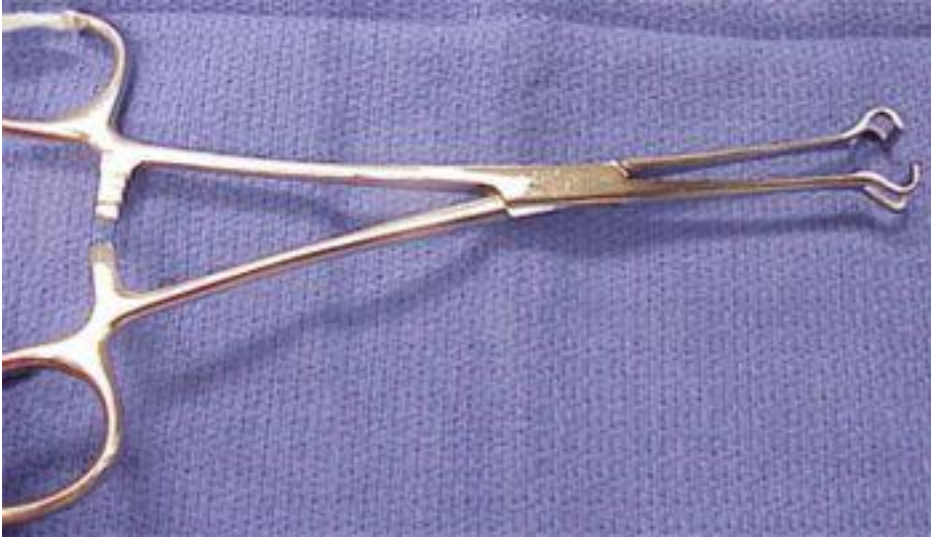
Adson Forceps



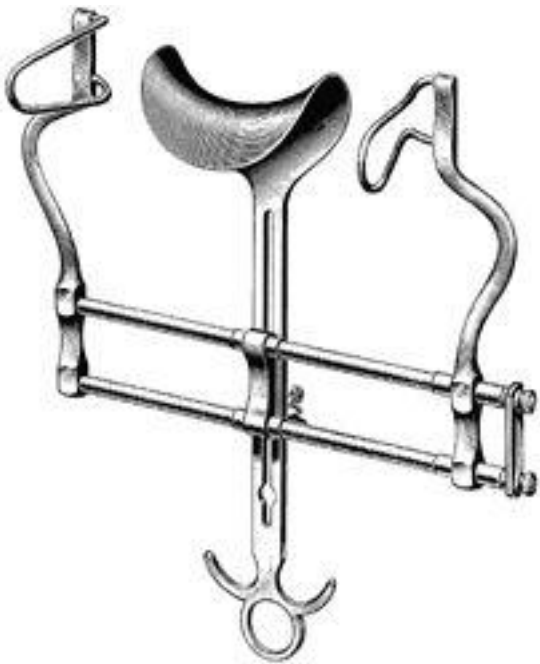
Allis clamp



Army Navy Retractor



Babcock



Balfour Retractor



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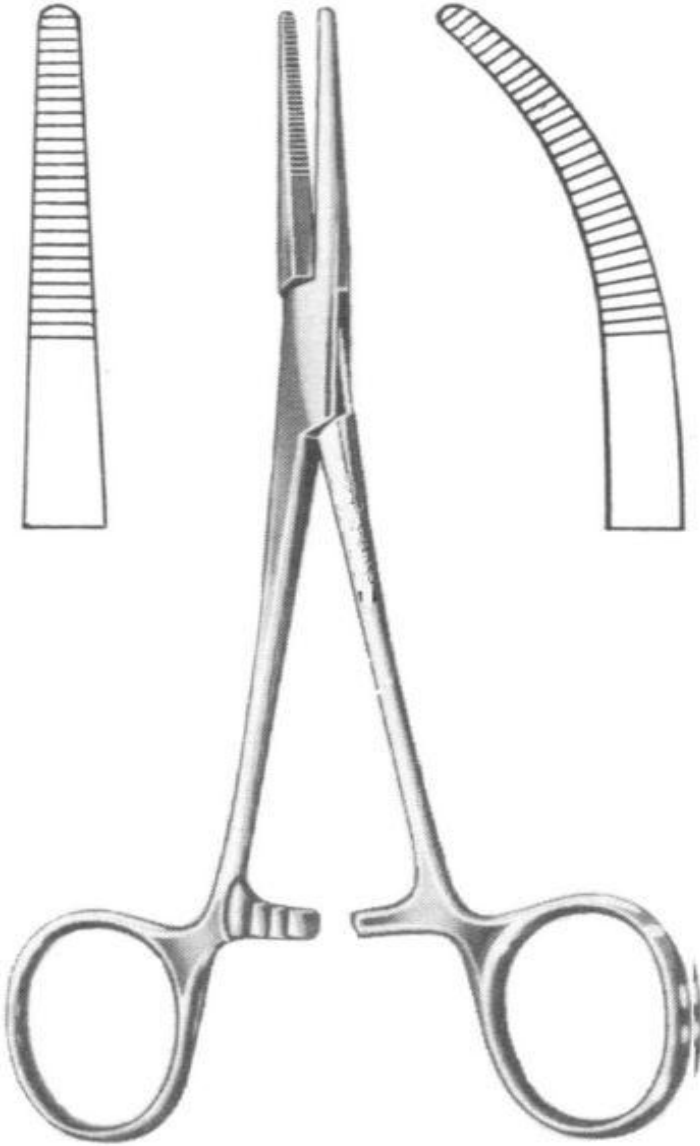
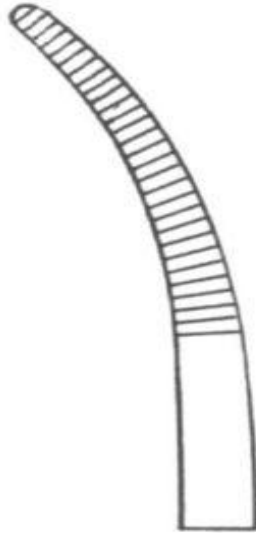
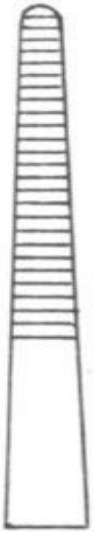
Debakey Forcep



Harrington Retractor (sweetheart)



Hemostat



Kelly Clamp



Kockers Clamps



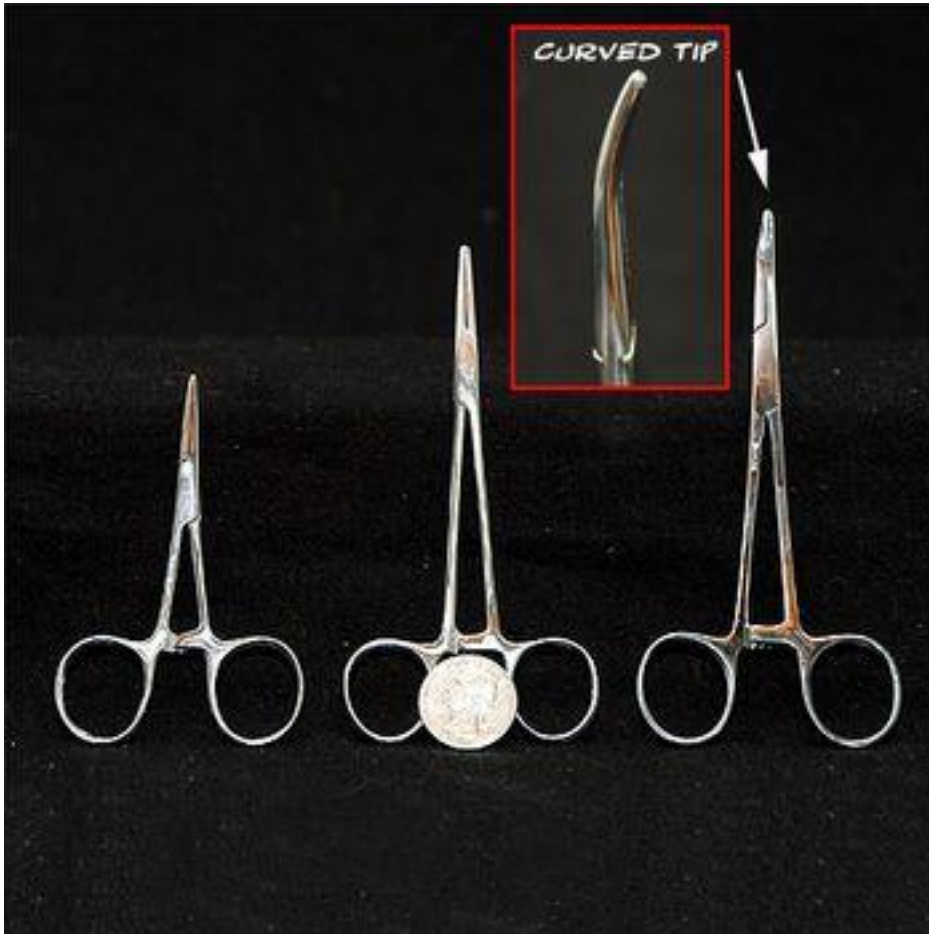
Malleable Retractors



Mayo Scissor



Metzenbaum Scissor (metz)



Mosquito



Needle Holders



Plain and Tooth forcep



Pooler Suction



Rake Retractors



Richardson Retractors



Russian Forcep



Scalpel Holder



Straight Hemostat



Suture Scissor



Towel Clamp



Weitlaner Retractor



Yankauer Suction