

Surgical Tech Study Guide



SURGICAL TECH

Essentials needed to perform with organized precision and skill in the operating room



INTRODUCTION

- Surgical technologist (a.k.a. "scrub" or "scrub tech")
 - An allied health professional and sterile surgical team member who has completed a CAAHEP-accredited (or equivalent) program; required:
 - Basic knowledge of medical terminology, anatomy, physiology, microbiology, and pharmacology to apply while in the operating room (OR)
 - Vast knowledge of sterile technique, surgical instruments, and surgical supplies to apply while protecting the sterile supplies from contamination within the sterile workspace
- Certified surgical technologist (CST)
 - Surgical technologist who has completed a CAAHEP-accredited program (or the equivalent) and has passed the NBSTSA certification exam
 - Once a CST has obtained NBSTSA certification, the CST must either:
 - Obtain and report at least 30 continuing education units (CEU) every two years through AST-approved sources and submit the official renewal form and fee to NBSTSA
 - Renew certification by retaking and passing NBSTSA's CST exam

Note: Some states and employers require certification for employment. Visit www.ast.org for an overview of state laws related to the education/certification of surgical technologists.

OPERATING ROOM (OR) TEAM



- Surgeon's assistant:** Collaborates with the surgeon during the surgical procedure to provide visualization, hemostasis, wound closure, and patient care
- Anesthesia provider:** Sedates the patient, maintains the airway, and monitors vital signs and blood less to maintain homeostasis
- Circulator:** Ensures all perioperative protocols are completed, such as prepping and positioning the patient, charting patient information while in the OR, distributing nonsterile items, and obtaining/opening sterile supplies for the sterile team with the sterile technique during a surgical procedure
- Ancillary staff (pathology, radiology, etc.):** Processes, tests, and analyzes specimens and reports results; provides real-time diagnostic support during the surgical procedure

Goal: Assist in optimal patient care

Motto: "Aeger primo" (patient first)

Sterile Members

- Surgical technologist: See Surgical Tech Duties, right
- Surgeon: Performs the procedure, maintains homeostasis, and directs the OR team

Nonsterile Members

- Organization
- Critical thinking
- Stress management
- Teamwork
- Patient care

Preoperative Duties

- Prepare the OR with case-specific sterile and nonsterile surgical supplies
- Complete surgical scrub and don a sterile surgical gown and sterile gloves
- Organize sterile supplies using sterile technique, including labeling medications and other sterile solutions
- Complete mandatory counts of supplies within the sterile workspace for each surgical case including, but not limited to, sponges, sharps, and instruments
- Assist in draping patient with sterile technique
- Complete WHO-required "sign in" and "time out" with the OR team

Intraoperative Duties

- Maintain sterile technique within sterile field with all other sterile and nonsterile team members
- Recognize and correct breaks in sterility when/if they occur
- Follow along with the sequence of the case and anticipate the needs of the surgeon and surgical assistant

Postoperative Duties

- Complete postoperative supply counts (sponges, sharps, instruments, accessories, etc.)
- Complete WHO "sign out" with the OR team
- Assist with dressing the wound
- Maintain sterility of supplies until patient leaves the OR
- After patient leaves the OR, break down the case into respective supply receptacles (sharps container, biohazard container, garbage, linen, etc.)
- Take used surgical case supplies to designated area within the OR department for disposal, cleaning, or sterilization
- Assist in cleaning the OR for the next surgical case

Surgical Tech Duties

- Time management

CST-ASSOCIATED ORGANIZATIONS

- National Board of Surgical Technology and Surgical Assisting (NBSTSA, www.nbstsa.org): Develops the certification exam and verifies, renews, and revokes credentials of surgical technologists and surgical assistants
- Commission on Accreditation of Allied Health Education Programs (CAAHEP, www.caahep.org): Largest programmatic accreditor of the health science professions
- Association of Surgical Technologists (AST, www.ast.org): Upholds the standards of practice for patient care and the profession
- The CST must renew AST membership annually.
- The Joint Commission (TJC, www.jointcommission.org): Independent nonprofit organization that sets standards and accredits/certifies health-care facilities that meet or exceed safe and effective care of the highest quality and value
- Occupational Safety and Health Administration (OSHA, www.osha.gov): Ensures safe and healthy working conditions for employees and patients by setting and enforcing standards through training, outreach, education, and assistance
- World Health Organization (WHO, www.who.int): Global health organization that establishes, monitors, and enforces international norms and standards of health and disease

MEDICAL TERMINOLOGY USED IN THE OR

- Sterile: Free of all living microorganisms
- Sterile technique: Specific practices and procedures performed to protect a designated area or supplies used to prevent the contamination and spread of pathogens and maintain sterility
 - Strike-through contamination: Contamination of a sterile surface or object that occurs when fluid passes through a microbial barrier or nonsterile surface
- Surgical site infection (SSI): Infection acquired in a surgical wound from the healing process or contamination
- Contaminated: To infect by contact or association with pathogenic materials
- Decontaminate: To rid of contamination
- Nonsterile: Not free from living microorganisms; not sterile
- Perioperative: The entire operative sequence for a specific operative case and patient care procedures
 - Preoperative (pre-op): Beginning of the operative sequence of supplies entering the OR until the first incision is made or orifice entered
 - Intraoperative (intra-op): Actual surgical procedure from the first incision/orifice entered until the last stitch is complete or orifice exited
 - Postoperative (post-op): Conclusion of the surgical procedure from the dressing of the wound until the patient leaves the OR
- Surgical conscience: Putting the patient first by doing what is moral and just at all times; the surgical technologist must:
 - Accept and maintain patient confidentiality
 - Ensure the safety of everyone in the OR
 - Be practical with medical supplies, cost, and time
 - Maintain sterile practices and hold team members accountable
 - Prevent any and all contaminations
 - Be attentive to the patient's scheduled time in the OR during perioperative services
 - Conduct productive and professional communication



Surgical tech study guide is a crucial resource for anyone pursuing a career in surgical technology. As the field continues to evolve, staying informed and prepared is essential for success in the operating room. This article will outline the key areas of study, essential skills, preparation tips, and resources necessary for anyone looking to become a surgical technologist.

Understanding the Role of a Surgical Technologist

A surgical technologist, also known as a scrub tech or operating room technician, plays an integral role in the surgical team. Their primary responsibility is to assist surgeons during

operations by preparing the operating room, ensuring all necessary instruments are sterile and ready for use, and providing support throughout the surgical procedure.

Key Responsibilities

The duties of a surgical technologist can vary based on the surgical setting (hospitals, clinics, or outpatient care centers) but typically include:

1. Preparing and sterilizing surgical instruments and equipment.
2. Setting up the operating room for procedures.
3. Assisting in the transfer of patients to the operating table.
4. Passing instruments to the surgeon during operations.
5. Monitoring the sterile field to prevent contamination.
6. Cleaning and restocking the operating room after procedures.

Core Subjects in Surgical Tech Education

A surgical tech education program typically encompasses a variety of subjects that equip students with the knowledge and skills necessary for success in the operating room. Key subjects include:

Anatomy and Physiology

Understanding the human body is crucial for surgical technologists. Knowledge of anatomy and physiology helps them comprehend surgical procedures, anticipate the needs of the surgical team, and understand the implications of different medical conditions.

Surgical Procedures

A surgical tech must be familiar with various surgical procedures, including:

- General surgery
- Orthopedic surgery

- Cardiothoracic surgery
- Neurosurgery
- Pediatric surgery

This knowledge includes understanding the steps of procedures, the instruments used, and potential complications.

Sterilization Techniques

Sterilization is vital in preventing infections during surgery. Surgical technologists must understand various sterilization methods, such as:

- Steam sterilization (autoclaving)
- Gas sterilization (ethylene oxide)
- Radiation sterilization
- Chemical sterilization

Proper sterilization techniques ensure that all instruments and equipment are free of pathogens.

Medical Terminology

Familiarity with medical terminology is essential for effective communication within the surgical team. Surgical technologists must understand the language used to describe anatomy, procedures, and instruments.

Patient Safety and Care

A surgical technologist must prioritize patient safety. This involves understanding preoperative care, as well as the protocols in place to protect patients during surgery, including:

- Infection control
- Monitoring vital signs

- Positioning patients safely on the operating table

Essential Skills for Surgical Technologists

To excel in their role, surgical technologists must possess a unique blend of technical, interpersonal, and organizational skills:

Technical Skills

These skills include proficiency in operating room protocols, instrument handling, and sterilization techniques. Surgical technologists must be adept at managing and operating various surgical instruments and devices.

Attention to Detail

In the operating room, attention to detail can be a matter of life and death. Surgical techs must accurately follow protocols, maintain a sterile environment, and ensure that all necessary instruments are available and functioning.

Communication Skills

Effective communication is critical in a high-stakes environment like the operating room. Surgical technologists must communicate clearly and assertively with surgeons, nurses, and other team members to ensure that everyone is on the same page.

Critical Thinking and Problem-Solving Skills

Surgical technologists often need to think quickly and adapt to changing situations. They must be able to anticipate the needs of the surgical team and respond effectively to unforeseen complications.

Preparing for the Surgical Tech Certification Exam

Certification is an important step in becoming a surgical technologist. The National Board of Surgical Technology and Surgical Assisting (NBSTSA) administers the Certified Surgical Technologist (CST) exam. Preparation involves several strategies:

Study Materials

Invest in comprehensive study materials, including:

- Textbooks on surgical technology.
- Online courses and webinars.
- Flashcards for medical terminology and anatomy.

Practice Exams

Taking practice exams is a great way to familiarize yourself with the format and types of questions on the CST exam. This will help build confidence and highlight areas that may need additional study.

Study Groups

Joining a study group can be beneficial. Collaborating with peers allows you to exchange knowledge, quiz each other, and provide support as you prepare for the exam.

Hands-On Experience

Gaining practical experience is invaluable. Internships or clinical rotations provide firsthand exposure to the surgical environment, allowing you to apply your knowledge and develop your skills in a real-world setting.

Resources for Surgical Tech Students

When it comes to studying for a career as a surgical technologist, utilizing various resources can enhance your learning experience:

Books

A selection of recommended books includes:

- "Surgical Technology for the Surgical Technologist" by Michael F. Egan

- "Introduction to Surgical Technology" by Maryann P. Hogan
- "Surgical Technology: Principles and Practice" by Joanna Kotcher Fuller

Online Resources

The internet offers a wealth of resources:

- Websites of professional organizations such as the Association of Surgical Technologists (AST).
- YouTube channels dedicated to surgical procedures and techniques.
- Online forums and discussion groups for surgical tech students.

Continuing Education

After becoming certified, surgical technologists should pursue continuing education opportunities to stay updated on the latest advancements in the field. This can include attending workshops, conferences, and online courses.

Conclusion

A **surgical tech study guide** serves as an essential tool for aspiring surgical technologists. By focusing on the key subjects, developing essential skills, and utilizing various resources, students can prepare themselves for a successful career in surgical technology. With dedication and commitment, surgical technologists can play a vital role in improving patient outcomes and contributing to the healthcare field.

Frequently Asked Questions

What topics should I focus on when studying for the surgical tech certification exam?

Focus on anatomy and physiology, surgical procedures, sterile techniques, instruments, and patient care.

Are there any recommended textbooks for surgical tech study?

Yes, 'Surgical Technology for the Surgical Technologist' by Nancy S. A. A. L. and 'The Surgical Technologist Exam Review' by L. M. B. are highly recommended.

How can I effectively prepare for the surgical technology practical exam?

Practice hands-on skills in a lab setting, review procedural checklists, and study surgical instruments and their uses.

What is the role of a surgical technologist in the operating room?

A surgical technologist prepares the operating room, assists surgeons during procedures, and maintains a sterile environment.

What types of surgical procedures should I be familiar with for the exam?

Familiarize yourself with various procedures such as appendectomies, cholecystectomies, and orthopedic surgeries.

How important is knowledge of surgical instruments for a surgical tech?

It's crucial, as you need to recognize and handle various instruments correctly to assist the surgical team effectively.

What are some effective study techniques for mastering surgical tech content?

Utilize flashcards, participate in study groups, practice with simulation labs, and take practice exams.

Is it beneficial to join a surgical technology association while studying?

Yes, joining an association can provide networking opportunities, resources, and access to continuing education.

What is the typical timeline for completing a surgical tech program?

Most surgical tech programs take around 9 to 24 months to complete, depending on whether you choose a certificate, diploma, or degree program.

Are there online resources available for surgical tech exam preparation?

Yes, there are numerous online resources including practice tests, video tutorials, and study guides available on platforms like Quizlet and Khan Academy.

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