CHAPTER 2

The Patient in Surgery

CHAPTER OUTLINE

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LEARNING OBJECTIVES

After studying this chapter the reader will be able to:
• Define patient-centered and outcome-oriented care
• List the domains of Maslow’s hierarchy of human needs
• Describe the role of the technologist in each of the domains of Maslow’s hierarchy of needs
• Discuss concepts of patient care that apply to the surgical technologist
• Describe some common patient fears and their origins
• Discuss why patients feel a loss of security as a result of illness and surgery
• Understand and apply the concept of body image to disfigurement
• Discuss and practice therapeutic communication

TERMINOLOGY

Body image: The way individuals perceive themselves physically in the eyes of others.
Critical thinking: The process of analyzing information about the patient, comparing it with similar previous experience, and responding to the unique needs of that patient.
Cultural competence: The ability to communicate with people of other cultures and belief systems. Institutions are required to provide access to resources for achieving and promoting cultural competence.
Elimination: The physiological process of removing cellular and chemical waste products from the body.
Maslow’s hierarchy of human needs: A model of human achievement and self-actualization developed by psychologist Abraham Maslow.
Mobility: The ability of an organism to move. As a protective mechanism, mobility allows an organism to move away from harmful stimuli.

Nutrition: Usually refers to the intake of food. On a cellular and tissue level, it may include the availability of nutrients, fluid, and electrolytes.
Outcome-oriented care: Care based on the predicted result of particular tasks and duties.
Patient-centered care: Therapeutic care, communication, and intervention provided according to the unique needs of the patient.
Physiological: A term that refers to the biochemical, mechanical, and physical processes of life.
Reflection: Communication with the patient that helps the individual connect current emotions with events in the environment.
Regression: An abnormal return to a former or earlier state, particularly infantile patterns of thought or behavior. In patients, this can result from feelings of helplessness and dependency.
Relational: A term that refers to a person’s interactions with other individuals.
**Respiration:** Oxygen exchange at the cellular and molecular levels and the process of ventilation.

**Self-actualization:** An individual’s ability to express and achieve personal goals.

**Therapeutic communication:** A purposeful method of communication in which the caregiver responds to explicit or implicit needs of the patient.

**Thermoregulation:** The body’s ability to regulate the core (inner) temperature.

**Ventilation:** The physical mechanisms of lung expansion, accessory muscle action, and air intake during the process of respiration.

**INTRODUCTION**

This chapter presents an overview of the patient’s needs and experiences in the perioperative environment. The discussion focuses on the basic physiological, social, and psychological needs of patients and the role of the surgical technologist (ST) in meeting those needs. The technologist’s role is focused on safety, advocacy, and psychosocial support. This holistic approach to patient care requires a **patient-centered and outcome-oriented** way of thinking and acting.

In **patient-centered care**, the surgical team bases its assessments, planning, and interventions on the unique needs of the individual patient. These unique needs are revealed through information from others, astute observation, and good communication. **Outcome-oriented care** involves predicting the results of particular tasks and duties and choosing the correct course of action.

**MASLOW’S HIERARCHY OF NEEDS**

In the 1970s, psychologist Abraham Maslow developed a theory about human needs. His model, known as **Maslow’s hierarchy of human needs**, is depicted as a triangular hierarchy in which the most important needs are at the base levels (Figure 2-1). The most basic of human needs are **physiological**; that is, they involve the biochemical, mechanical, and physical processes of life (Table 2-1). According to Maslow’s model, if the most basic requirements for life are not met, the needs at the higher levels cannot be fulfilled. Maslow’s model provides a guide for patient care and a method of prioritizing the patient’s needs.

**PHYSIOLOGICAL DOMAINS**

**Respiration**

Respiration is not just breathing, which involves the mechanical functions of the lungs, diaphragm, and accessory muscles. It also is the process of oxygen exchange at the cellular and molecular level and many other complex physiological processes.

The surgical technologist is concerned with respiration in many ways. For example, in positioning the surgical patient, full **ventilation**, which is the physical expansion of the lungs and thoracic cavity, is a major goal. Without adequate ventilation, air exchange cannot occur. The surgical technologist helps protect the patient’s airway when safety measures are

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**Table 2-1 Basic Physiological Needs of the Patient**

<table>
<thead>
<tr>
<th>Type of Need</th>
<th>How Needs Are Met in the Perioperative Environment</th>
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</thead>
<tbody>
<tr>
<td>Nutrition, water</td>
<td>Administration of intravenous replacement fluids and nutritive or electrolyte fluids</td>
</tr>
<tr>
<td>Shelter</td>
<td>Control of temperature through cloth blankets, air heating, or cooling blankets</td>
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<tr>
<td>Air and oxygen</td>
<td>Maintenance of an open airway and provision of the proper mix of oxygen with anesthetic or room air</td>
</tr>
<tr>
<td>Rest and sleep</td>
<td>Attention to signs of oxygen deficit and protection from environmental stress such as noise, light, or cold</td>
</tr>
<tr>
<td>Elimination</td>
<td>Catheterization or opportunity to void as needed and medical attention to conditions that prevent elimination</td>
</tr>
<tr>
<td>Movement</td>
<td>Freedom from restraint and freedom to move when patient is unable to move on his or her own and protecting the patient from harm</td>
</tr>
<tr>
<td>Freedom from pain</td>
<td>Observation of the patient for signs of pain and administration of pain medication</td>
</tr>
<tr>
<td></td>
<td>Exercise of care when moving the patient</td>
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</tbody>
</table>
enforced during laser surgery of the upper respiratory tract. The surgical technologist has suction available at all times during airway surgery to prevent aspiration (inhalation) of blood or solutions into the bronchi and lungs.

**Nutrition**
At the physiological level, nutrition means supplying fluid, electrolytes, and organic substances to cells to maintain electrical activity and transport of materials into and out of the cells. It also refers to the breakdown of food into molecular components for tissue repair and growth. Fluid in the cells and vascular system is also maintained in equilibrium, and this is balanced with output, or excretion.

The surgical technologist contributes to information about fluid balance by tracking and reporting the amounts used for fluid irrigation during a procedure.

**Temperature Control (Thermoregulation)**
The body functions at an optimal level when the core temperature is maintained within a narrow range. Complex biological functions maintain the body within this range as long as the thermoregulation mechanisms are intact. As the core temperature drifts to the limits of this range, physiological function is greatly impaired. When the limits are exceeded, death occurs.

The surgical technologist contributes to temperature regulation in many ways. The surgical technologist maintains irrigation fluids at the correct temperature. Thermal (body warming) devices used during surgery are the responsibility of the registered nurse (RN) circulator and the surgical technologist who assists. The surgical technologist ensures that patients are covered with warm blankets while awaiting surgery or during transportation. This is not just a comfort measure; it also is important for maintaining the core temperature.

**Mobility**
Mobility is the body’s way of avoiding painful or dangerous environments and stimuli. In surgery, the anesthetized patient loses this ability. The caregivers must be constantly alert for environmental dangers from which the patient normally would move away. This is a great responsibility, one that requires knowledge, vigilance, and care. In many circumstances, caregivers know instinctively that the patient is in danger. For example many obvious precautions are taken to prevent patient burns caused by fire or electrical malfunction.

However, many hundreds of dangers require critical thinking and knowledge. These are subtle dangers. Examples include nerve damage from a table accessory hidden by drapes or an unseen electrical burn caused by damaged insulation on a surgical instrument. The patient cannot move away from the pain and injury caused by these accidents. The surgical technologist is responsible for knowing the dangers and preventing them. For example, the surgical technologist maintains instruments to prevent patient injury. Surgical technologists are knowledgeable about electrosurgery and its many hazards. They help position the patient in such a way that no pressure points are created that can cause irreparable nerve and vascular damage.

**Rest**
In physiological terms, rest is the slowing down of metabolic functions. This is necessary for repair and growth and for maintaining alert mental functions that signal a person to respond when the body is in danger. Sleep is the body’s natural response to fatigue. However, functions also slow down in illness and pain. If the body cannot slow down naturally, we experience physiological, emotional, or metabolic stress, which can lead to a cycle of illness and more stress on the body.

Major surgery can cause extreme physiological and psychological stress. Not only are patients deprived of normal activities, but they also experience pain, fatigue, and sometimes life-threatening metabolic changes. Hospital-acquired infection (HAI) increases these stressors to an even greater level. Death from HAI often is a result of the combination of the stress of surgery or the preexisting illness and the destructive effects of the infection itself.

The ST has a role in preventing metabolic stress. By following strict aseptic technique and sound surgical conscience, surgical technologists prevent postoperative infection. They provide comfort and reassurance to the patient, whose fear and anxiety about the process of surgery adds to the physical stress of the procedure.

**Elimination**
Elimination is the physiological process of removing cellular and chemical waste products from the body. During the processes of metabolism, both toxic and nontoxic by-products are produced, such as urea, carbon dioxide, and dead cells. The elimination process takes place at the cellular and tissue level. Waste products are finally shunted from the body in feces and urine. Without these systems, metabolic waste would soon create systemic toxicity and death, as is seen in kidney failure.

During surgery, the body continues to produce normal metabolites (the by-products of metabolism). The physiological process is maintained by adequate fluid balance and gentle handling of tissues. Kidney function is an important indicator of metabolism. Urinary catheterization and urine collection provide a method of monitoring kidney function during surgery.

**PROTECTION**

**Safety and Security**
Safety and security are both physical and psychological concepts. In the physical realm, people need to be safe from any threat to physical well-being. Threatening psychological events can contribute to physical stress and the ability to make decisions, have relationships with others, and care for one’s self. In surgery; safety and security precautions for the patient are well defined. Although many patients are confident about the outcome of surgery and even feel relieved to be resolving a medical problem, most feel fear about their safety and security.
The surgical technologist contributes to the patient’s physical safety and security by being knowledgeable about and observing for environmental dangers. These dangers are related to devices and equipment, procedures (e.g., positioning and transporting the patient), infection control, and many other activities. The surgical technologist responds to the patient’s need to feel safe and secure through verbal and nonverbal communication.

**RELATIONAL AND PERSONAL DOMAINS**

**Love and Belonging**

Love and belonging are powerful needs. They determine our sense of well-being through others’ acceptance and nurturing. Love and belonging affirm our humanity and provide emotional fulfillment.

**Self-Actualization**

Self-actualization is the individual’s ability to express and achieve personal goals. Personal goals are whatever that person defines as a goal or an achievement. Personal goals are unique and valued by each individual. The frustration and grief many patients feel is related to their inability to achieve goals because of their illness. Surgical patients are vulnerable to this risk because of the added psychological burden of altered body image or loss of function. This can be related to the surgery itself or to the illness that requires the surgery. Perioperative caregivers can help their patients through this difficult situation by understanding the meaning of individual loss.

**PSYCHOLOGICAL NEEDS OF THE PATIENT**

Surgical technologists in different health care settings have varying levels of social and professional contact with patients. In some settings, the surgical technologist may have only brief encounters with patients, whereas in others, contact is extensive. Regardless of how brief or extended the professional relationship is, the surgical technologist can understand and support a patient’s psychological needs.

Patients may have many concerns and fears about surgery but may never have discussed them with perioperative personnel. If asked, they may admit that they are afraid, but they do not volunteer this information. The surgical technologist can support the patient by showing care and by acknowledging the patient’s feelings rather than trying to minimize them.

An early treatise on patient care, written by Paul E. Johnson, describes the state of the seriously ill hospital patient with clarity and compassion:

> The hospital patient suffers from mental anguish more acute than his physical pain. His emotional condition is one of anxiety and insecurity as he dangles in a chasm of distress between a past he would gladly return to and a future he is reluctant to face. He has lost the values he once had of health, freedom, and power to do and be sufficient to the strenuous joys of active achievement. He can look back but with vain regret. Looking ahead he sees only poignant uncertainty. Am I to live or die? If I live, will I be disabled and have to live in restricted patterns of uncertain health, with halting steps and hesitant, watchful caution? Can I ever be free again? . . . Am I on borrowed time from now on, costing more than I can earn, depriving my family of their necessities, turning over my work to stronger men, trying to look more cheerful than I feel, with a brave pose of gaiety that covers a hollow gulf of threatening insecurity?

As caregivers, we cannot presume to meet all the psychosocial needs of the patient, especially in the brief time that we interact with them. Human needs, both inner and demonstrated, are complex. However, we can be aware of those needs and be aware of our own feelings and attitudes about the complex psychosocial aspects of care. Knowledge of our own attitudes helps clarify and prepare our response to the patient. As professionals, we must never allow our own beliefs to interfere with care or cause judgment of another. The role of the caregiver is to support and heal.

**FEAR**

Many patients approach their surgery with anxiety and fear. Even though a patient may understand the process of the surgery and the goals, the emotional reactions to surgery can overwhelm this understanding.

Reassurance and open acknowledgement of the patient’s fears are good methods of communicating empathy. Patients develop trust in caregivers who demonstrate their care through their actions. The patient feels greater security when team members explain, honestly and professionally, what is occurring and why. For example, the patient safety strap is secured as soon as the patient is transferred to the operating table. Rather than saying jokingly, “I’m putting this strap on so you don’t get away” or “This strap is to keep you from falling off the table” (the latter introduces a new source of anxiety, because that event may never have occurred to the patient), the surgical technologist can use a more reassuring statement, such as, “The operating bed is very narrow. I’m putting this strap over your legs to remind you to stay centered on the bed.” This statement explains that a safety issue exists and is being addressed.

Patients share many of the same fears:

- **Anesthesia.** Many patients fear that they will not awaken from the anesthetic or that they will be able to feel all the sensations of the procedure but will be unable to move or respond (called anesthesia awareness).
- **Death.** Fear of death during or after surgery is common among patients. This fear often is greater in a patient who is about to receive a general anesthetic. The concept of being held unconscious and in another’s control increases feelings of impending death.
- **Pain.** Fear of pain is a normal protective mechanism. However, surgical patients sometimes have extreme fear of postoperative pain. They might not have sufficient information about their postoperative care, or they may have experienced severe pain in the past.
- **Disfigurement.** Patients undergoing radical or reconstructive surgery have realistic fears about disfigurement. Body image is a very important psychological consideration for patients. People identify themselves with their body image,
which often influences their ability to relate to others. Disfigurement is attached to social stigma and rejection, which are powerful triggers for fear and anxiety.

- **Helplessness.** When patients enter the health care system, they often feel a loss of personal rights and control. For the surgical patient, these feelings are intensified. The anticipation of general anesthesia often triggers feelings of helplessness. The patient may also anticipate immobilization as a result of pain or loss of function.

- **Fear that private information will be shared with others.** Many patients are afraid that information about their health may not be held in confidence. They fear that the information may result in loss of employment or that it will injure their relationships with others. The ethical responsibility to hold all patient information in strict confidence cannot be overemphasized. The use of computer-based communication and patient charting presents particular risks. A review of computer security guidelines is provided in Box 2-1.

**LOSS OF SECURITY**

Many patients are very anxious about how their surgery will affect their self-reliance. This fear often is focused on employment and financial security. Patients undergoing surgery that limits their mobility, whether temporarily or permanently, may have profound concerns about their livelihood and ability to support their families. The cost of surgery may require substantial sacrifice in lifestyle or savings intended for future income, or both. This may cause fears of becoming dependent on family members for survival and accompanying anxiety over the need to be self-reliant and independent.

**ROLE AND SELF-IMAGE**

Illness and surgery can affect an individual’s role in the family and the community. Loss of function and mobility as a result of surgery can alter the patient’s roles or the person’s perception of them. Patients may view their roles of responsibility as severely threatened or changed by their inability to carry out certain physical or mental functions as a result of surgery. Sexual and relational roles are often altered by surgery, and this can feel threatening or debilitating to the patient.

Self-image is closely associated with body image. **Body image** is the way we perceive ourselves physically in the eyes of others. When we are comfortable with our body image, we feel good about ourselves. When a person’s body image is altered suddenly or is perceived to be altered, feelings of embarrassment, rejection, and isolation can arise. Many societies discriminate against those whose appearance is different from the “norm.” Acceptance in society is a basic need of all people. Fear of losing acceptance can be overwhelming. Patients who need counseling to adjust to sudden changes in their appearance can be guided to support groups or trained specialists.

**THERAPEUTIC COMMUNICATION**

Today’s health care system often requires that as many surgeries as possible be completed in each 24-hour period. The surgical patient lives in the center of a storm of activity, in a very busy environment that is frightening and authoritative. The patient has no control over what is happening and is handed from one person to the next, often with no knowledge about the roles of the people involved in the medical environment.

The types of communication in which surgical technologists are likely to engage focus on the surgical environment, the patient’s physical (comfort) needs, and perhaps the way the patient is feeling. The surgical technologist can greatly affect the patient’s well-being by showing focused, purposeful, and caring communication. **Appropriate therapeutic communication** requires a nonjudgmental and supportive attitude. Box 2-2 presents important guidelines for therapeutic communication.

**CHARACTERISTICS OF THERAPEUTIC COMMUNICATION**

Therapeutic communication has four primary characteristics:

- **It is goal directed.** It has a specific purpose. The purpose is to comfort the patient, gain information about the patient’s needs, and respond in a way that meets or acknowledges those needs.

- **It is unique to each patient.** Every patient is a unique individual with particular hopes, fears, and concerns. Therapeutic relationships honor this uniqueness with spe-
LEADS AND RESPONSES

THERAPEUTIC RESPONSES

Therapeutic responses include cue giving, clarification, restatement, paraphrasing, reflection, and touch. When these responses are used, communication becomes centered on the patient’s needs.

Leads and cues are actions and words that encourage the patient to communicate. The goal is to prevent the patient from becoming self-conscious or afraid to express feelings and sensations. Leads and cues include nodding in affirmation and making comments such as “Really?” and “I see.”

Example—Restatement

PATIENT: “I should have had this surgery a long time ago, but I just couldn’t face it.”

RESPONSE: “Really?” (A short verbal cue indicates that the listener cares and invites the patient to continue to share her feelings.)

PATIENT: “I was so afraid.”

RESPONSE: “It must have been very difficult for you.” (Acknowledges the patient’s fear.)

Restatement is not simply parroting the patient, but rather restating the patient’s comment in a way that takes in the underlying meaning.

Example—Paraphrasing

PATIENT: “This is the fifth back surgery in 8 years for me. I just hope this surgeon knows what he is doing.”

RESPONSE: “You’ve been through a lot of surgery; you’re hopeful that this surgeon has the knowledge to help you?”

In this case, the patient expresses doubts about the expertise of the surgeon. The caregiver acknowledges the patient’s anxiety.

Paraphrasing is different from restatement in that the caregiver looks past the patient’s stated words and addresses the underlying message. In paraphrasing, the caregiver demonstrates empathy about the unstated need for comfort and security.

Example—Reflection

PATIENT (nervously): “Everyone here is so busy.”

RESPONSE: “I know there is a lot of activity. It must seem really fast, but everyone is taking care of their patients. Is there anything I can do to help you feel more comfortable while we’re waiting for the anesthesiologist?” ( Appropriately addresses the unstated meaning, which is, “I wonder if they will take good care of me; there is so much going on.”)

Reflection allows the patient to connect his or her emotions with information provided in the immediate environment or from a different event or situation.

Example—Therapeutic Response

PATIENT: “It’s always so cold in these places. With all the money these hospitals make, the least they could do is turn up the heat.”

RESPONSE: “It sounds as if you feel frustrated about being here. It’s a difficult time. The temperature is low for safety reasons. I’ll get you a warm blanket.”

A skilled caregiver understands that the patient is not only cold but also angry about being helpless in this situation and unable to meet his or her own environmental needs. The caregiver acknowledges the patient’s frustration and responds appropriately.

Specific verbal and physical responses are more therapeutic than stock answers. Therapeutic communication is learned behavior.

- **It requires active engagement.** It is not accidental or haphazard.
- **It requires excellent observation and listening skills.** These are reinforced through experience and guidance. Listening is both an art and a skill. It requires patience, focus, and presence. One can learn important information by observing the patient. One can meet needs by recognizing the signs of discomfort, fear, anxiety, or other intense emotions.

**Box 2-2**

**Guidelines for Therapeutic Communication**

- Listen to the patient attentively. Show your interest by making eye contact (unless this is culturally inappropriate; for example, in traditional Islamic cultures, women do not make direct eye contact with men).
- Do not allow yourself to be distracted while communicating with the patient. If your attention is split, you will convey a lack of concern. Remember that your thoughts are revealed by your body language, actions, and expressions.
- Explain what you are doing in plain, simple language. Look for cues that the patient understands. Do not assume that because the message was given, it was also received and comprehended.
- Continual questioning can make a person feel uncomfortable. Therapeutic communication allows the patient to express needs and concerns. For example, “How are you feeling?” and “Do you have any concerns about your procedure?”
- Do not talk about yourself. It is inappropriate for team members to share personal information with the patient or with coworkers in the presence of the patient.
- Joking and offensive language can have serious effects on the patient’s sense of security. Although it is not meant to offend the patient, it is not only disconcerting but also unprofessional. Would you want to hear the details of someone’s date while waiting to have abdominal surgery for cancer?
- Refer questions when you do not know the answers. Be honest about what you do not know. Patients often are unaware of the professional roles of their caretakers. If you are asked a medical question or one that requires assessment or other nursing skills, refer the question to licensed personnel. Ask the patient if he or she has discussed the issue with the physician. If your attention is split, you will convey a lack of concern. Remember that your thoughts are revealed by your body language, actions, and expressions.
- Leads and cues are actions and words that encourage the patient to communicate. The goal is to prevent the patient from becoming self-conscious or afraid to express feelings and sensations. Leads and cues include nodding in affirmation and making comments such as “Really?” and “I see.”

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A skilled caregiver understands that the patient is not only cold but also angry about being helpless in this situation and unable to meet his or her own environmental needs. The caregiver acknowledges the patient’s frustration and responds appropriately.
Nontherapeutic responses are casual and do not help the patient cope with anxiety or conflict.

Example—Nontherapeutic Response
Patient: "Are all those instruments for my surgery?"
Nontherapeutic response: “Yeah, we have to have everything ready in case we need it. You never know what the doctor might want.”
Patient: “Oh” (unstated and unresolved fear). “It must mean they think there will be complications. Maybe the surgery will be much more extensive than I thought. What if I have cancer and they didn’t tell me?”
Correct response: “Our instruments come in preassembled sets. We use only what we need from each set.” (This response conveys order, knowledge, and professionalism. It answers the question directly and addresses underlying fears.)
Patient: “I’m relieved to hear that!”

THERAPEUTIC TOUCH
Touch is an important part of therapeutic communication, but it must be used with caution and respect. Some patients do not want to be touched. There are many reasons a patient may not want to be touched, including cultural beliefs and previous experience. The caregiver may ask permission to touch a neutral area of the body, such as the hand, and watch for cues from the patient. If the patient is comforted by touch, the person’s body language and facial expression will show relaxation and relief. If touch is rejected, the patient may pull back or show signs of distrust or fear. Every patient has the right to reject or refuse touch. In this case, the caregiver must seek other methods of offering reassurance and comfort. When touch is acceptable, it can convey deep empathy and caring.

CULTURAL COMPETENCE
Cultural competence is the ability to communicate and interact with people of different cultures and beliefs. Health care providers were among the first professionals to recognize the need for cultural competence. Meeting a patient’s needs depends on good communication, trust, and respect for the other’s values.

Cultural competence adheres to guiding values and principles. These apply to the individual, family, community, and organizations. The most effective way to approach a patient whose cultural beliefs are different from one’s own is with knowledge of that culture. What may seem strange or “wrong” to one person often is cherished by a person of a different culture. Health care professionals have an ethical responsibility to honor and respect those beliefs, just as they would want their own beliefs to be honored in a different culture.

Language barriers often make health care more difficult and frustrating for both the patient and the caregiver. However, translators are available. When the patient cannot understand verbal or written communication, the results can be extremely frustrating or even harmful. Resources available at the institutional level may fall short at the bedside because of understaffing.

Acquiring the skills to communicate effectively among different cultures takes time. It is a process grounded in the rights of all people to receive equal care. Classes and conferences in culturally appropriate health care are available from health care educational institutions.

SPIRITUAL NEEDS OF THE PATIENT
Spirituality is not necessarily the same as religion, although they often are expressed as one entity. Spirituality is a sense or understanding of something more profound than humanity that is not perceived by the physical senses. It is an awareness or belief in an energy or power greater than humankind. This power may be referred to as creator, spirit, or God, or the patient may have no name for it. In the religious setting, spiritual life is integrated into rituals (practices that have special meaning) and ceremonies common to those who practice a particular faith. Patients have the right to express their religious faith in the health care setting. Ritual defines life-changing events and is important to physical and mental healing. For many it is the healing force.

Examining one’s own beliefs and broadening the definition of spirituality is the first step toward the development of spiritual care. These are challenging but rewarding goals that the surgical technologist must develop to be a holistic and patient-centered caregiver.

SPECIAL PATIENT POPULATIONS

PEDiatric PATIENTS
The pediatric patient presents particular challenges in both communication and the physiological response to surgery. Pediatric patient groups are defined according to approximate chronological age ranges. The age group reflects the developmental stage:

- Infant: Birth to 18 months
- Toddler: 19 months to 3 years
- Preschool: 4 to 6 years
- School age: 7 to 12 years
- Adolescent: 13 to 16 years

Physiological Considerations
In pediatric patients, the size of anatomical structures, the relative fragility of the body, and the ratio of surface area to volume presents particular risks for surgery. Loss of even a small amount of blood or fluid is severe in the pediatric patient. The large surface area compared to mass predisposes the patient to chilling or overheating during surgery. This can result in excess fluid loss or hypoglycemia, especially in infants.

Developmental Stages and Surgery
Children of different developmental stages have predictable fears, responses, and reactions to hospitalization and the
process of surgery. Knowledge of these stages can help the surgical technologist understand the behaviors exhibited by children in the operating room.

Infants need to be physically close to their caretakers. They should be held as much as possible until the procedure begins. Stress is high in infant patients. They have been separated from the familiar feel, smell, and sight of their primary caregiver, and feedings have been stopped before surgery. For these reasons, they are difficult to comfort and may cry continually.

Toddlers suffer frustration and loss of autonomy, as well as extreme anxiety, when separated from their primary caretaker. The operating room environment can be terrifying to a toddler, who expresses this by crying and screaming or through aggression and regression. Toddlers are especially difficult to restrain. They require patience and understanding from their caregivers. Stronger restraint (or more restrainers) usually causes more terror and increased resistance. Taking the time to instill calm is the humane way to provide medical intervention. When this is unsuccessful, rapid sedation may be required.

Preschoolers also suffer extreme fear in the operating room environment. These patients commonly view the hospital and surgical experience as a type of punishment or as deliberate abandonment. Prone to fantasy, they may imagine extreme mutilation as a result of surgery. Because they are unable to understand what the inside of the body actually looks like, they interpret descriptions of surgery literally. They are concrete thinkers and understand words such as cut, bleed, and stick in extreme, literal, and often exaggerated forms.

School-age children are more compliant and cooperative with health care personnel, but many tend to withdraw from their caregivers. They are curious about their bodies and often insist on "helping" with their own care. They are very sensitive about body exposure, which can be extremely stressful. For school-age children, receiving information is a way of coping with their fears. They welcome explanations and descriptions of how things work and how devices and equipment in the environment relate to their own bodies.

Adolescents are very sensitive about body image and changes in the body. They resent any intrusion on their privacy and bodily exposure. They also fear loss of control. At times stoic and curious, they are grateful for concrete information about the surgical environment and the procedure itself. Among their many concerns, potential loss of presence with their peers and fear of being "left out" because of illness or deformity are very important.

**ELDERLY PATIENTS**

The elderly patient faces significant risks in surgery. These are related to coexisting disease, emergency surgery, and risks associated with certain types of surgery (e.g., procedures involving major blood vessels and abdominal and thoracic conditions). Surgery that involves significant blood loss (e.g., hip replacement or repair) can also be high risk for the elderly patient.

The normal physiological alterations of aging (Table 2-2) often affect the decision on whether surgery should be performed, as well as the outcome. The cardiovascular system loses elasticity, and circulation is often decreased, particularly to vital organs such as the kidneys and heart. The lungs lose their ability to expand because of resistance. This can lead to infectious postoperative pneumonia, which is among the most common hospital-acquired infections. Decreased functioning of the digestive system can lead to poor nutritional status both before and after surgery.

**Table 2-2**

**Physical Changes that Occur with Age**

<table>
<thead>
<tr>
<th>Body System</th>
<th>Changes</th>
</tr>
</thead>
</table>
| Respiratory  | - Chest diameter decreases from front to back (anterior to posterior).  
|              | - Blood oxygen level decreases.  
|              | - Lungs become more rigid and less elastic.  
|              | - Recoil of alveoli diminishes.  |
| Gastrointestinal | - Peristalsis diminishes.  
|              | - Liver loses storage capacity.  
|              | - Motility of stomach muscles decreases.  
|              | - Gag reflex diminishes.  |
| Cardiovascular | - Capillary walls thicken.  
|              | - Systolic blood pressure increases.  
|              | - Cardiac output decreases.  |
| Musculoskeletal | - Muscle strength decreases.  
|              | - Range of motion decreases.  
|              | - Cartilage decreases.  
|              | - Bone mass decreases.  |
| Sensory perception | - Progressive hearing loss occurs.  
|              | - Sense of smell diminishes.  
|              | - Pain threshold increases.  
|              | - Night vision decreases.  
|              | - Sensitivity to glare increases.  
|              | - Sense of body position in space (proprioception) can decrease.  |
| Genitourinary | - Bladder capacity diminishes.  
|              | - Stress incontinence in women occurs.  
|              | - Kidney filtration rate decreases.  
|              | - Reproductive changes occur in women:  
|              |  - Vaginal secretions decrease.  
|              |  - Estrogen levels decrease.  
|              |  - Reproductive organs atrophy.  
|              |  - Breast tissue decreases.  
|              | - Reproductive changes occur in men:  
|              |  - Testosterone production decreases.  
|              |  - Testicular size decreases.  
|              |  - Sperm count decreases.  |
| Skin | - Skin loses turgor (elasticity).  
|      | - Sebaceous glands become less active.  
|      | - Skin becomes thin and delicate.  
|      | - Pigment changes occur.  |
| Endocrine | - Cortisol production decreases.  
|           | - Blood glucose level increases.  
|           | - Pancreas releases insulin at a slower rate.  |
Kidney function may be significantly decreased in elderly patients. This can lead to electrolyte and fluid imbalance. Elderly patients are at risk for skin, joint, muscle, and bone injury, especially during transfer and positioning. During the aging process, soft connective tissue loses tone, mass, and elasticity. This increases the risk of skeletal injury. The elderly patient’s skin often is dry and extremely fragile. Decreased body fat increases the patient’s risk for hypothermia.

These fragile conditions require increased vigilance and care in the perioperative environment. The surgical technologist must make sure that transportation, transferal, and positioning are performed slowly and deliberately. The patient’s core temperature must be maintained before, during, and after surgery, and blood loss and urinary output must be monitored accurately. Box 2-3 lists the risk factors for elderly patients.

Box 2-3
Risk Factors in Elderly Patients

Surgical Risks
- Emergency surgery
- Surgical site
- Duration of the procedure

Anesthetic Risks
- Age older than 75
- Preexisting conditions (e.g., hypertension; diabetes; kidney, liver, cardiac, or respiratory disease)

Disease Risks
- Respiratory Disease
  - Bronchitis
  - Pneumonia
- Cardiovascular Disease
  - Angina
  - Previous myocardial infarction
  - Congestive heart failure
- Digestive Disease
  - Poor nutritional status
  - Protein deficiency
  - Cirrhosis
  - Peptic ulcer
- Endocrine Disease
  - Adrenal insufficiency
  - Hypothyroidism

Other Factors
- Dehydration
- Anemia
- Malignancy
- Impaired mobility
- Lack of social support
- Emotional distress
- Poverty

Communicating with Elderly Patients

The following tips can be helpful when communicating with an elderly patient.

- **Do not use clichés.** Do not reach for the first available, easiest response. For example, if the patient says that she is a burden to others in her illness, do not respond with, “Oh, I’m sure you’re no bother.” Instead, support the patient in her feelings. For example, “It must be very difficult for you to have surgery right now.”

- **Do not refer to the patient by diminutives such as “sweetie,” or “honey.”** These names are offensive to many patients. They convey a lack of respect for the patient as an adult with a lifetime of accomplishments and knowledge. Always address the patient by his or her proper name and demonstrate to others in your environment that you acknowledge the fullness of the patient’s life.

- **Do not assume that the elderly patient is mentally impaired.** The normal aging process does not include dementia. Senile dementia is a disease state. Some elderly patients are slightly confused or disoriented in the hospital. Perioperative caregivers can help orient the patient by explaining procedures and identifying personnel in the environment. If there is evidence or knowledge of organic brain disease, it may be necessary to repeat questions and responses.

Patients with sensory impairments have an altered sense of their environment or cannot interpret the environment. They may have difficulty understanding directions that aid their care. For example, they may not understand simple directions such as moving onto the operating bed or keeping their hands down. When communicating with a patient who is impaired, the surgical technologist should follow these guidelines:

- Speak clearly and slowly
- Face the patient while speaking
- Speak in a normal voice
- Provide additional communication cues, such as gestures

Surgical technologists must remember that the patient probably is extremely anxious, and they should provide emotional support through touch or body language.

MALNOURISHED PATIENTS

A malnourished patient lacks the necessary nutritional reserves to support the process of healing. Trauma to the body, whether intentional (e.g., surgery) or unintentional, requires high metabolic activity during the healing process. Protein and carbohydrates are in particularly high demand by the body to rebuild tissue and meet the physiological demands of organ systems. The patient who enters surgery *undernourished* (without enough food intake to support health) or *malnourished* (lacking the right kinds of food to support body functions) is at high risk. Cancer, alcoholism, metabolic disease, and advanced age are a few conditions that often result in malnutrition or undernutrition.

**PATIENTS WITH DIABETES**

Diabetes mellitus is an endocrine disease that disrupts the metabolism of carbohydrates, fats, and proteins. When diabetes is not controlled, severe damage to vascular and neurological tissues results. The risks associated with surgery in diabetic patients are complex. They arise from impairments in the healing properties of the vascular system and in the efficient use of glucose for tissue metabolism. Because many diabetic patients have a compromised vascular system, their risk of infection at the surgical site is higher than for other groups. They also are subject to prolonged wound healing, hypertension, and peripheral edema.

**IMMUNOSUPPRESSED PATIENTS**

The patient whose immune system is compromised or suppressed faces the threats of postoperative infection and delayed healing. The body requires a healthy immune system to respond to the trauma of surgery and to defend against pathogens that may have invaded during surgery. Patients being treated with immunosuppressants or antineoplastic agents for cancer are immunosuppressed. Patients undergoing organ transplantation receive immunosuppressants to depress the body’s immune reaction to the new organ. Patients infected with the human immunodeficiency virus (HIV) and those who have developed acquired immunodeficiency syndrome (AIDS) or other conditions that affect the immune response are also at increased risk for nosocomial (hospital-acquired) infections.

**Trauma Patients**

The patient who is rushed into surgery because of physical trauma is at high risk for many reasons. With severe trauma, there may be no time to obtain a previous medical history or the patient may be physically unable to provide it. Pre-existing conditions may not be known, especially if the patient is unconscious. The patient may have eaten recently, which increases the risk of vomiting, aspiration, and subsequent pneumonia. There may be no witnesses to the trauma. Witnesses can supply important information about the nature of the trauma, which aids diagnosis. Injuries may be undetected, especially if the patient cannot answer questions. The trauma patient may arrive in surgery in a precarious physiological state, with extensive blood loss, severe shock, and fluid-electrolyte imbalance. Intoxication from alcohol or drugs can alter the physiological response to surgery and complicate the process and method of anesthesia.

**Patients with HIV or AIDS**

The patient with HIV or AIDS faces multiple barriers to a safe postoperative recovery. Because the patient does not have a healthy immune system, the potential for postoperative infection is high. The patient with AIDS has multiple co-morbid diseases, which deplete the body’s reserves for healing. Skin integrity often is compromised by open sores and lesions. Bacterial or viral infection may already be present. During surgery, infectious microorganisms can gain access to the sterile surfaces of the body and create serious systemic disease. One of the most common disorders associated with AIDS is infection with Pneumocystis carinii, a pathogenic microorganism that causes lung disease. Drug-resistant tuberculosis is also common in these patients.

With the advent of highly active antiretroviral therapy (HAART), HIV is becoming recognized as a manageable illness. However, many of the medications currently used to treat HIV may have detrimental effects on a person’s metabolism that may impair wound healing. Certain anti-HIV medications also may affect lipid levels in the blood, leading to an increased risk of heart disease and peripheral vascular disease.
6. Define cultural competence. Why is cultural competence important in health care?

7. What are the results of inadequate cultural competence?

8. What would you do to communicate with a patient who does not speak English? What if no interpreter is available?

9. Why is the patient with impairments particularly anxious in surgery?

10. What do you think are the postoperative risks for an impoverished patient? What needs does this patient have that might not be met?

**CASE STUDIES**

**Case 1**
You are transporting a patient with AIDS to the operating room on a stretcher. The patient is silent. She is cooperative, but her facial expression shows anxiety. What will you say to this patient while transporting her to the operating room? What psychosocial needs do you think this patient has? How can you meet these needs?

**Case 2**
You are preparing equipment for a cardiac procedure. The patient has been brought into surgery and is lying on the operating table. He says to you, “How long do you think this will take?” How will you respond? What possible concerns does this patient have? Is he expressing these concerns to you through his question?

**Case 3**
You are assisting the circulator with a 3-year-old patient about to have a tonsillectomy. The patient is screaming and kicking. He is crying and saying he wants his mommy. The circulator calls for more help to restrain the child. When you attempt to soothe him, he kicks you. What will you do? What is this patient experiencing? What can you provide for this patient?

**Case 4**
The patient is a 20-year-old brought to the operating room for an emergency cesarean section. She is crying. She says to you, “I hope I don’t lose the baby. When will my doctor be here?” What is your response?

**Case 5**
The patient is a 40-year-old woman from Southeast Asia. She does not speak English. You overhear a coworker mimicking her attempts to speak to staff members. The patient overhears this, too, and begins to cry silently. How will you respond to her? Will you respond to your coworker?

**BIBLIOGRAPHY**


