

## WHAT IS PATIENT AWARENESS UNDER GENERAL ANESTHESIA?

Awareness under general anesthesia is a rare condition that occurs when surgical patients can recall their surroundings or an event—sometimes even pain—related to their surgery while they were under general anesthesia.

When using other kinds of anesthesia, such as local, sedation or regional anesthesia, it is expected that patients will have some recollection of the procedure.

Studies are not conclusive on the frequency of awareness under general anesthesia, but even one case is important to anesthesia professionals (anesthesiologists and certified registered nurse anesthetists), who recognize that this can be a distressing or traumatic experience for the patient.

When awareness during general anesthesia does occur, it is usually just prior to the anesthetic completely taking effect or as the patient is emerging from anesthesia. In very few instances, it may occur during the surgery itself. Despite the rarity of awareness, members of the American Society of Anesthesiologists (ASA) and the American Association of Nurse Anesthetists (AANA) want you to know about this possibility. These organizations have been studying this issue and are in the process of evaluating the effectiveness of various technologies and techniques to decrease the likelihood of this occurring.

## WHY DOES IT HAPPEN?

In some high-risk surgeries such as trauma, cardiac surgery and emergency cesarean delivery, or in situations involving patients whose condition is unstable, using a deep anesthetic may not be in the best interest of the patient. In these and other critical or emergency situations, awareness may not be completely avoidable. While the safety of anesthesia has increased markedly over the last 20 years, people may react differently to the same level or type of anesthesia. Sometimes different medications can mask important signs that anesthesia professionals monitor to help determine the depth of anesthesia. In other rare instances, technical failure or human error may contribute to unexpected episodes of awareness. The ultimate goal is always to protect the life of the patient and to make the patient as comfortable as possible. That is why it is important to have highly trained anesthesia professionals involved in your surgery.

## HOW CAN IT BE AVOIDED?

Before surgery, patients should meet with their anesthesia professional to discuss anesthesia options. Should there be concerns regarding awareness, this is an ideal time to express them and to ask questions. Patients should share with their anesthesia professional any problems they may have experienced with previous anesthetics, and also discuss any prescription medications or over-the-counter medications they are taking.

As always, your anesthesia professional will guide you safely through your surgery by relying on his or her clinical experience, training and judgment combined with proven technology.

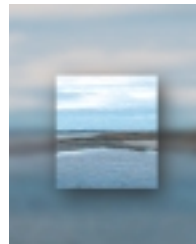
## THE 10 THINGS YOU SHOULD KNOW ABOUT PATIENT AWARENESS UNDER GENERAL ANESTHESIA

- 1** It is quite rare. When it does occur, it is often fleeting and not traumatic to the patient.
- 2** Patients experiencing awareness usually do not feel any pain. Some patients may experience a feeling of pressure.
- 3** Awareness can range from brief, hazy recollections to some specific awareness of your surroundings during surgery. Patients who dream during surgery, or who have some perception of their surroundings before or after surgery, may think they have experienced awareness. Such a sensation or memory does not necessarily represent actual awareness during surgery.
- 4** Experts in the field of anesthesiology are actively studying this condition and are seeking the most effective ways to prevent it.
- 5** Awareness can occur in high-risk surgeries such as trauma and cardiac surgery in which the patient's condition may not allow for a deep anesthetic to be given. In those instances, the anesthesia professional will weigh the potential for awareness against the need to guard the patient's life or safety. The same is true during a cesarean section, particularly if it is an emergency and a deep anesthetic is not best for the mother or child.
- 6** It has been shown that early counseling after an episode of awareness can help to lessen feelings of confusion, stress or trauma associated with the experience.
- 7** Researchers in anesthesiology have spearheaded developments in technology that have dramatically improved patient safety and comfort during surgery over the last 20 years.
- 8** A highly trained anesthesia professional should be involved in your surgery. No technology can replace this expertise.
- 9** New brain-wave monitoring devices currently being tested may prove to be helpful in reducing the risk of awareness, but they need to undergo the same rigorous scientific review process that has led to wide adoption of other medical technologies.
- 10** Patients should talk with their anesthesia professional before surgery to discuss all of their concerns, including the remote possibility of awareness. These professionals work to ensure the best possible care of patients in the operating room.

Patient awareness happens very infrequently. This remote possibility should not deter you from having needed surgery.

Your anesthesia professional can help you to feel comfortable and informed about your upcoming experience with anesthesia.

**WHAT DOES  
THE FUTURE  
HOLD?**



As patient advocates, anesthesia professionals are working hard to reduce the likelihood of awareness under general anesthesia. Depending upon the type of surgery, these

experts have an array of proven technologies that can be used to monitor various vital signs of the surgical patient.

Extensive research is under way to develop and study new technologies, such as brain-wave monitoring, that may lessen the risk of awareness. *At the present time, none of these new technologies has been perfected.*

Remember—no monitoring device can replace the judgment and skill of an anesthesia professional who has years of training and clinical experience. Working together, you and your anesthesia professional can make your anesthetic experience as safe and comfortable as possible.

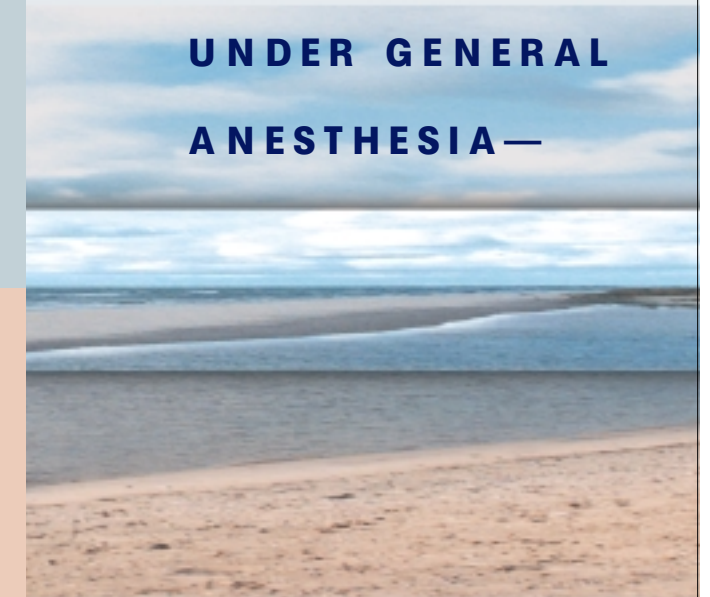


**WHAT SHOULD I DO  
IF I THINK I HAVE  
EXPERIENCED AWARENESS?**

ASA and AANA urge you to talk with your anesthesia professional, who can explain to you the events that took place in the operating room at any stage of your surgery and why you might have been aware at certain times. It is important to note that a variety of anesthetic agents is often used, some of which may create false memories or no memory at all of the various events surrounding surgery. If you have distinct recollections of your surgery and want to discuss them, your anesthesia professional can help you or refer you to a counselor or to other appropriate resources.



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**WHAT IS IT?**



**AMERICAN SOCIETY  
OF ANESTHESIOLOGISTS**



**AMERICAN ASSOCIATION  
OF NURSE ANESTHETISTS**

“Patient awareness under general anesthesia—what is it?” has been prepared by the American Society of Anesthesiologists and the American Association of Nurse Anesthetists.

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