

# Assessing Thyroid Health in Pregnancy: Estimation and Impact on Prenatal Care

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## Introduction

General anaesthesia is widely regarded as a cornerstone of modern surgery, enabling patients to undergo procedures without experiencing pain, distress, or awareness. This anesthetic technique has revolutionized surgery by allowing patients to be fully unconscious during operations, ensuring that they are spared from the traumatic experience of surgery. Despite its widespread use and effectiveness, general anaesthesia carries certain risks, one of the most unsettling being the phenomenon known as awareness during anaesthesia, or intraoperative awareness. This occurs when a patient becomes conscious during a procedure and can later recall parts of the experience. Estimates suggest that as many as 30,000 patients in the United States experience awareness during anaesthesia every year, highlighting the importance of understanding this issue in the realm of surgical care.

## Description

The history of anaesthesia dates back centuries, with the first successful use of ether as an anaesthetic agent recorded in 1846 by William Morton. This discovery revolutionized the field of surgery, providing a means to perform operations without patients experiencing the pain and distress of being awake. However, this achievement was quickly overshadowed by reports of patients experiencing pain during surgery while under ether anaesthesia, marking the first documented case of intraoperative awareness. Before the introduction of curare (a paralytic agent), awareness was more easily detected, as patients could physically react to painful stimuli. Despite the advancements made in anaesthesia techniques, the risk of awareness remains in modern medicine, particularly when anaesthesia depth is not maintained adequately throughout the procedure [1].

The psychological impact of awareness during general anaesthesia can be profound. Many patients who experience awareness report distressing memories that often resemble the symptoms of Post-Traumatic Stress Disorder (PTSD), a condition typically triggered by exposure to traumatic events. PTSD is characterized by three primary symptom complexes: re-experiencing the traumatic event (through flashbacks or nightmares), avoidance of reminders associated with the trauma, and physiological hyperarousal (including symptoms such as irritability, anxiety, and sleep disturbances). Patients who have undergone surgery while conscious often describe vividly reliving their experience, including memories of pain, suffocation, helplessness, and overhearing conversations between medical professionals [2].

The first formal mention of a psychological condition resulting from awareness during surgery occurred in the early 1960s, when Morena M and colleagues introduced the term "traumatic neurosis." In their observations, patients who had experienced intraoperative awareness displayed emotional numbness, a state of "frozen immobility," and an inability to engage with their

surroundings. Many of these patients reported vivid recollections of the surgical procedure, including feelings of paralysis and a fear of death, which were later found to correlate with symptoms of PTSD. Traumatic neurosis was thought to stem from patients being partially or intermittently conscious during surgery while also being unable to move, rendering them powerless to communicate or escape from their distress. Initially, it was believed that the psychological effects of awareness were temporary, but more recent research has shown that the consequences can persist long after the surgery [3].

In a study conducted nearly 20 years after Morena's initial research, Moerman and colleagues interviewed 26 patients who had experienced awareness during anaesthesia, finding that 70% of participants reported at least one negative psychological consequence. These included symptoms such as difficulty sleeping, nightmares, flashbacks, heightened anxiety, and a fear of anaesthesia. Many participants described sensations of suffocation, hearing voices, and feeling an overwhelming sense of helplessness during surgery. These symptoms often continued long after the procedure, with some patients expressing a fear of anaesthesia itself. The study also found that a large portion of these patients had difficulty conveying their experiences to the surgical team immediately after surgery, with only 18 out of the 26 patients reporting their awareness to hospital staff.

The prevalence of awareness with recall under general anaesthesia is estimated to occur in 0.5% to 2% of patients, a relatively small but significant portion of those undergoing surgery. While the experience itself can be deeply distressing, the long-term psychological effects can be even more debilitating. Many patients report ongoing issues with anxiety, depression, and PTSD, which can persist for months or even years after surgery. Interestingly, many patients who experience awareness during anaesthesia do not report it immediately, often disclosing their experiences only during subsequent interviews. This underlines the importance of thoroughly screening patients for potential awareness episodes after surgery in order to identify those who may be suffering from post-traumatic psychological symptoms [4].

Given the significant psychological impact of awareness during anaesthesia, it is crucial to take steps to minimize its occurrence. One strategy involves the use of amnesic medications, such as benzodiazepines, which inhibit the formation of new memories. Additionally, anaesthesiologists are advised to ensure that the minimum alveolar concentration (MAC) of volatile anaesthetics, such as halogenated agents, is maintained at an appropriate level to prevent the risk of awareness. Maintaining the appropriate depth of anaesthesia throughout the procedure, particularly in high-risk surgeries, is essential to reducing the likelihood of awareness. Preoperative education and reassurance for patients, along with careful intraoperative monitoring, can also help alleviate the anxiety associated with the fear of awareness [5].

## Conclusion

In conclusion, awareness during general anaesthesia is a significant but often under-recognized complication that can lead to severe psychological distress. Although relatively rare, the impact of intraoperative awareness on patients' mental health can be profound, leading to symptoms of PTSD, anxiety, and depression. It is essential for healthcare providers to be vigilant in screening for awareness after surgery, to provide appropriate psychological support for affected patients, and to implement strategies to reduce the risk of awareness in future procedures. By addressing this issue proactively, the medical community can help ensure that the benefits of anaesthesia continue

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to outweigh its risks and better protect the well-being of patients undergoing surgery.

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## Conflict of Interest

There is no conflict of interest by author.

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