

# Enhanced recovery after surgery (ERAS): Revolutionizing postoperative care.

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## Introduction

Enhanced Recovery After Surgery (ERAS) is a comprehensive, multimodal approach designed to optimize recovery after surgery. It involves a series of evidence-based interventions aimed at minimizing stress, reducing complications, and accelerating recovery for patients undergoing surgical procedures. ERAS protocols are increasingly being adopted across a range of surgical specialties, including colorectal, orthopedic, gynecological, and cardiac surgeries. This article explores the key principles and benefits of ERAS, highlighting its impact on patient outcomes, healthcare efficiency, and the overall healthcare system. Traditionally, postoperative care focused on providing comfort and managing pain, with extended hospital stays often required for recovery. However, this approach did not address the underlying factors contributing to prolonged recovery, such as physical deconditioning, reduced mobility, and delayed return to normal function. [1,2].

ERAS emerged as a solution to these challenges, incorporating the latest research on how the body responds to surgery and how recovery can be optimized. The concept was first introduced in the early 2000s by a group of surgeons in Denmark, led by Professor Henrik Kehlet. They aimed to develop a set of perioperative practices that would reduce the physical and psychological stress of surgery and promote faster recovery. The ERAS protocol involves a series of evidence-based interventions before, during, and after surgery to improve outcomes and reduce complications. These principles are centered around several core areas. One of the key aspects of ERAS is educating patients about what to expect during the perioperative period. This includes information on pain management, nutrition, and the importance of early mobilization. Malnutrition is a common issue in surgical patients, and optimizing nutrition before surgery can help improve outcomes. [3,4].

ERAS protocols recommend early nutritional screening and, if necessary, supplementation to ensure patients are in the best possible condition before surgery. Traditionally, patients were required to fast for extended periods before surgery. ERAS guidelines recommend shortening the fasting period to allow patients to consume clear liquids up to two hours before surgery and a light meal up to six hours before surgery. ERAS protocols emphasize the use of minimally invasive techniques

where possible, which reduce surgical trauma, minimize blood loss, and shorten recovery times. These techniques, such as laparoscopic surgery, lead to less postoperative pain and a quicker return to normal function. Traditionally, large volumes of intravenous fluids were given during surgery, which can lead to complications like fluid overload. ERAS protocols advocate for a more balanced approach to fluid management, avoiding excessive hydration and focusing on maintaining normal physiological function. [5,6].

ERAS emphasizes multimodal pain management, combining different approaches such as regional anesthesia (e.g., epidural or nerve blocks), non-opioid analgesics, and minimal use of opioids. This reduces reliance on opioids, which are associated with side effects and delays in recovery. One of the most significant changes brought about by ERAS is the emphasis on early mobilization. Encouraging patients to start moving, even if only to sit up or stand, as soon as possible after surgery is critical for improving circulation, preventing complications like blood clots, and promoting faster recovery. ERAS protocols recommend early refeeding after surgery. Patients are encouraged to begin eating solid food as soon as they are able, which helps to maintain gastrointestinal function and support healing. [7,8].

The benefits of ERAS are well-documented and have been shown to improve outcomes in multiple surgical specialties. Some of the key advantages. By optimizing recovery, ERAS protocols often lead to shorter hospital stays, reducing healthcare costs and freeing up hospital beds for other patients. ERAS has been associated with a reduction in postoperative complications, including infections, blood clots, and respiratory problems. This is due to a combination of factors, including better pain management, early mobilization, and optimized fluid management. While ERAS has shown significant promise, there are still challenges to widespread implementation. These include the need for appropriate training for healthcare providers, the cost of implementing some of the recommended interventions (such as nutritional support or advanced pain management strategies), and the need to adapt protocols for different surgical specialties [9,10].

## Conclusion

Enhanced Recovery After Surgery (ERAS) represents a transformative approach to postoperative care, offering significant benefits for both patients and healthcare systems.

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By optimizing the entire perioperative experience, from preoperative preparation to postoperative rehabilitation.

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