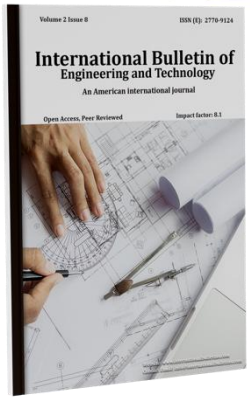

ENHANCED RECOVERY AFTER SURGERY (ERAS): A COMPREHENSIVE SURGICAL REVIEW OF PERIOPERATIVE CARE, COMPLICATION REDUCTION, AND RECOVERY ENHANCEMENT

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Abstract

The Enhanced Recovery After Surgery, which is also known as ERAS is a way of taking care of patients before during and after surgery. This way of taking care of patients is based on a lot of research. It helps to reduce the stress of surgery on the patient. The goal of Enhanced Recovery After Surgery is to help patients get faster after a big surgery.

This review looks at all the information about Enhanced Recovery After Surgery protocols. It pays attention to the important things that doctors and nurses do to take care of patients before during and, after surgery. The review also looks at how Enhanced Recovery After Surgery helps to reduce problems after surgery and how it helps patients get out of the hospital. Overall Enhanced Recovery After Surgery is a way to improve the recovery of patients after a surgery. When we look at all the information from reviews, meta-analyses and what the big medical groups say, like the ERAS Society recommendations that are good until 2025 we see that ERAS is really helpful for lots of different kinds of surgery.

It helps people get out of the hospital a little sooner one or two days sooner and it also helps reduce problems after surgery by about 20 to 32 percent.

The good thing is that it does not make people have to go to the hospital more often or increase the number of people who die.

Even though it can be hard to put ERAS into practice it is now a part of taking care of patients, in many areas of medicine. ERAS is used in fields because it is helpful.

Keywords: ERAS; perioperative care; postoperative complications; length of stay; multimodal analgesia; surgical outcomes

Introduction

The old way of taking care of patients before and after surgery usually meant they had to stop eating for a time. They were also given a lot of fluids. Had tubes put in their nose and stomach. They had to stay in bed for a while. Were given strong pain medicine. This led to patients taking a time to get better having more problems and staying in the hospital for longer.

The Enhanced Recovery After Surgery way of doing things started in the 1990s. The ERAS Society made it official. This new way is based on what works. It helps reduce the stress of surgery on the body. It also helps patients get back to normal quickly and makes sure they are happy with their care. Enhanced Recovery After Surgery protocols are all, about making sure patients get the care possible after surgery. Enhanced Recovery After Surgery is a way of doing things because it uses real evidence to make decisions.

ERAS pathways are used to get patients ready for surgery. They use cuts when they can give patients lots of different kinds of pain medicine and make sure they get the right amount of fluid. Patients can start eating and drinking after surgery and they get to move around quickly.

ERAS was first used for people having colon surgery. Now it is used for lots of types of surgery like cancer surgery for women, heart surgery, back surgery, liver surgery and bone surgery.

Some big studies that looked at lots of studies from 2024, to 2025 found that ERAS pathways help people leave the hospital sooner. ERAS pathways also help reduce problems after surgery and save money on healthcare. The best part is that ERAS pathways do all of this while keeping patients safe or even making their care better. This review examines ERAS components, evidence for complication reduction and recovery enhancement, and implications for modern surgical practice.

Methods

This story is written in a format called IMRAD. It does not try to find information but instead it looks at the good information that is already out there. The information comes from some groups like the ERAS Society. They have guidelines that were updated until 2025 for things like problems. It also comes from reviews and analyses of studies that were done with many people. These studies were mostly published from 2018 to 2025. The writers looked at some databases like PubMed, Embase and Cochrane to get the information. They were mainly interested in the ERAS way of doing things compared to the way. They wanted to know what happened to patients during and after surgery like how they stayed in the hospital if they had any problems if they had to come back, to the hospital and if they died. The ERAS way is compared to the care way. The focus was on studies that combined lots of results like seventy four studies. These studies were about areas of medicine and they were updated. No new number crunching was done the results are just what we got from recent studies about the same things, like the large meta-analyses and specialty-specific updates.

Results

The ERAS protocols usually have around 20 to 25 things that doctors and nurses do. These things happen before during and after surgery. The main things that doctors and nurses do based on the 2024-2025 guidelines, from the ERAS Society are:

Preoperative: Patient education/counseling, nutritional optimization, cessation of smoking/alcohol, carbohydrate loading (in select guidelines), and prehabilitation.

Intraoperative: Goal-directed fluid therapy, multimodal opioid-sparing analgesia (regional blocks, non-opioids), minimally invasive approaches, avoidance of hypothermia, and antibiotic prophylaxis.

Postoperative: Early mobilization (day of surgery), early oral intake/nutrition, prompt removal of drains/catheters/NGTs, multimodal pain control, nausea prophylaxis, and early discharge criteria.

Studies show that there are results from meta-analyses. These benefits are seen every time meta-analyses are done. Meta-analyses always seem to have outcomes.

* Meta-analyses are a way to see these benefits.

The good things, about meta-analyses are clear. Meta-analyses are helpful because they show these benefits.

Hospital LOS reduction averages 1.6–2.0 days across specialties (e.g., ~1.7 days in a 2024 meta-analysis of RCTs; similar in gynecologic oncology and colorectal subsets).

Complications decrease significantly: 29–32% overall reduction (e.g., risk ratio ~0.68–0.71 in large meta-analyses), particularly in low-grade events, ileus, nausea/vomiting, and non-surgical complications.

* The readmission rates are going down a bit. They are not going down a lot, a small amount. The readmission rates are showing some reduction. It is not a big deal. The reduction, in readmission rates is modest.

* There is no increase in the number of people who die within 30 days. The hospital costs for care might be a little lower which is a good thing for the Medical Center and the patients who receive treatment there and this can be considered as some trends toward cost savings for the Medical Center and the patients who receive treatment there specifically the cost of medical care, at the Medical Center.

* When people take opioids they often feel better. Their pain scores go down. This is because doctors use different methods to help them.

The opioid consumption gets better. People can move around and do things sooner which is really good, for them.

This is what happens when doctors use different ways to treat the opioid consumption and the pain it makes the recovery go faster.

The benefits of this are pretty clear. When people follow the rules most of the time than seventy to eighty percent they tend to stay in the hospital for a shorter period of time and have fewer problems. This is true for a lot of kinds of surgeries like operations on the colon womens health issues, back problems, heart problems and orthopedic surgeries, which are surgeries, on the bones and joints.

Discussion

The ERAS protocols help the body deal with the stress of surgery. This means people can get faster and it is still safe. When people get faster they do not have to stay in the hospital as long and they have fewer problems. This is good because it means they do not need to use many healthcare services and they feel better. The ERAS protocols do this by reducing the stress of surgery like making sure people have carbohydrates and fluids. They also help the gut work properly by giving people food and getting them moving soon after surgery. Additionally the ERAS protocols reduce the effects of pain medications like opioids. The ERAS protocols are important because they help with recovery and make the hospital experience better for patients. The main goal of ERAS protocols is to make surgery and recovery, for people and they do this by reducing stress and helping the body heal faster.

There are still some challenges with the ERAS program. For example it is hard to get everyone to follow the rules all the time. This can be as low as 70 percent at first. The ERAS program also needs people from areas to work together.. It needs to be able to work in places where resources are limited.

The new guidelines, like the one from 2025, about issues say that we should check how well the ERAS program is working and try to make it better.

The ERAS program is going to change in the future. It will be tailored to patient factors like if a patient is frail or has diabetes. The goal is to make sure everyone gets the level of care even people who do not have a lot of resources.

In conclusion, ERAS represents a transformative, evidence-based shift in perioperative medicine, reliably enhancing recovery, reducing complications, and shortening hospital stays across surgical disciplines

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