


# ERAS

Enhanced Recovery  
After Surgery




# LEARNING OBJECTIVES

At the conclusion of this talk participants will be able to...

- Understand the guiding principles of **Enhanced Recovery after Surgery** programs
  - Identify the benefits and evidence supporting **Enhanced Recovery after Surgery** on perioperative outcomes
  - Education and lessons learned
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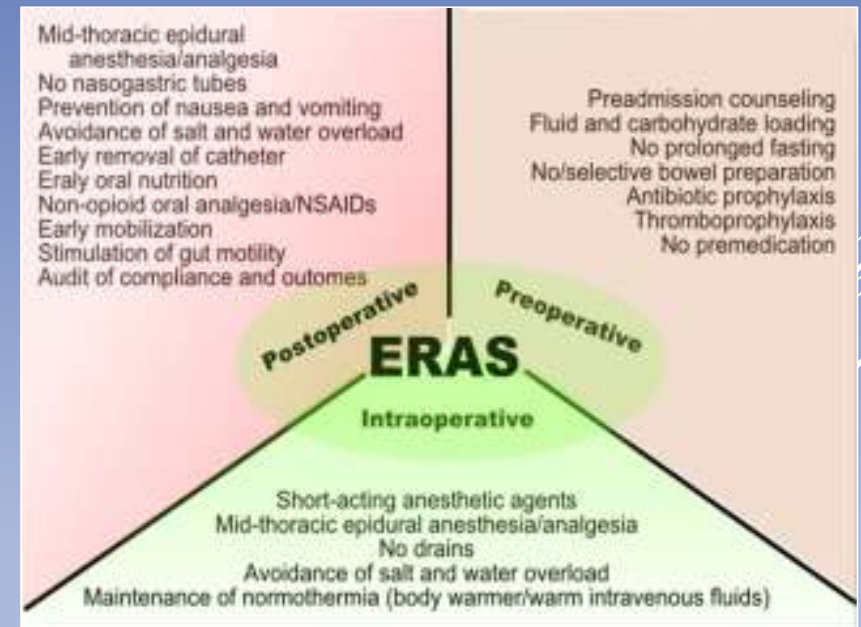
Enhanced Recovery After Surgery is the implementation of **interdisciplinary, standardized, evidence based** perioperative guidelines, which integrate preoperative, intraoperative and postoperative care.



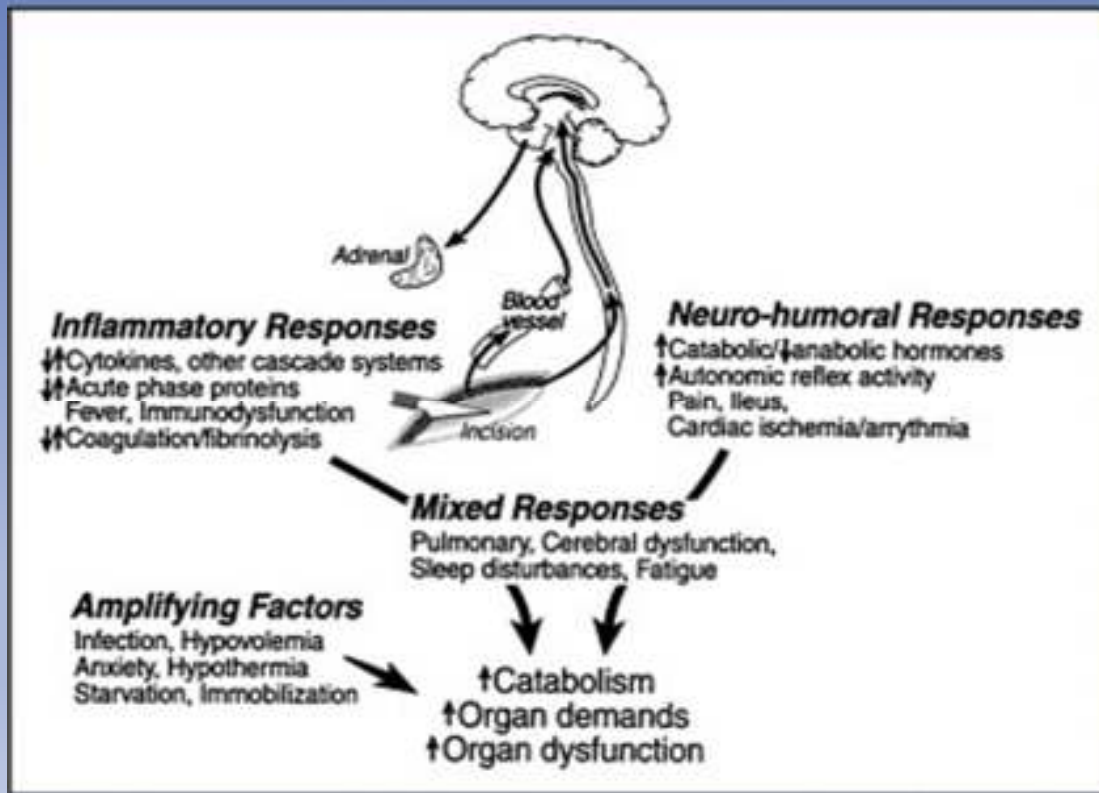
# ENHANCED RECOVERY AFTER SURGERY

## By definition

- Integrated
- Interdisciplinary Interventions
- Evidence based
- Procedure specific
- Multimodal up to 20 care elements



# IMPACT OF SURGICAL INTERVENTIONS



# SUMMARY OF ERAS GUIDELINE RECOMMENDATIONS

Patient centered & evidence based  
Built to decrease stress & optimal recovery  
Designed to decrease complications & length of stay

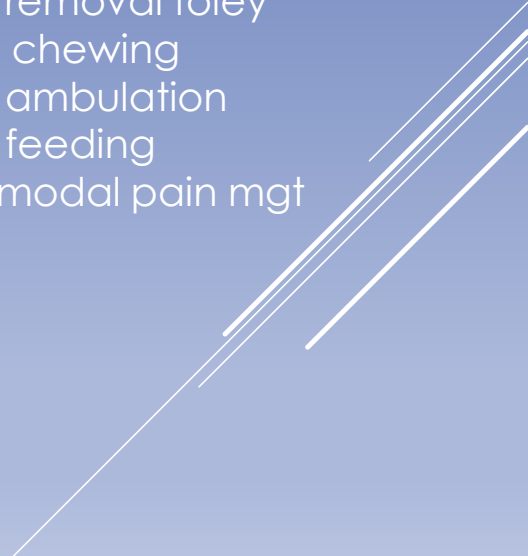
## Preoperative

- Preop counseling
- Reduced fasting duration
- Carbohydrate drinks
- No mechanical bowel prep

## Intraoperative

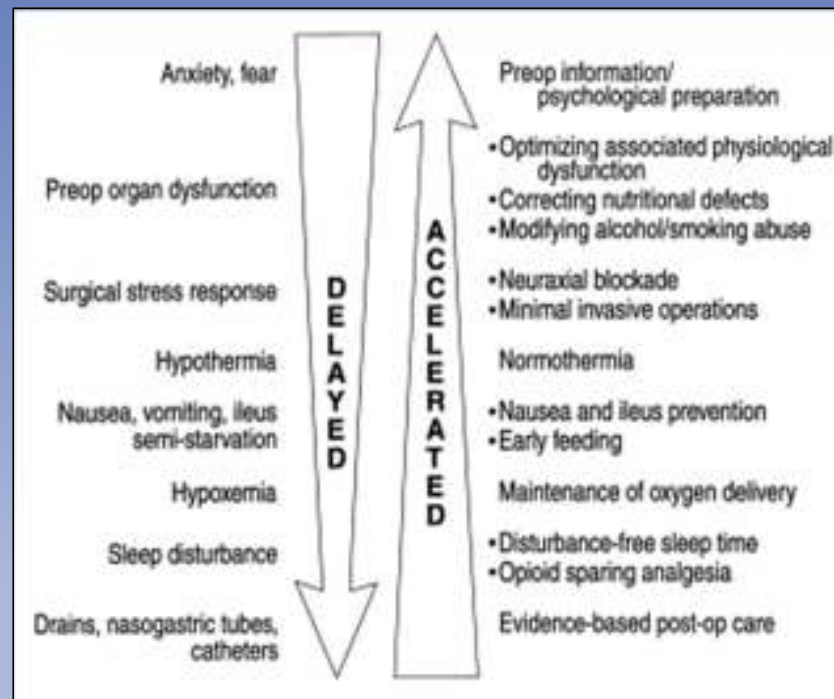
- MIS surgery
- NSAIDS
- ±TEA
- No abdominal drains
- No NG tubes
- Multimodal pain mgmt.
- Thromboprophylaxis
- SSI prophylaxis
- Goal-directed fluid mgt
- Normothermia
- TEA or IV Lidocaine
- Short acting anaesthetics

## Postoperative

- Fluid restriction
  - Early removal foley
  - Gum chewing
  - Early ambulation
  - Early feeding
  - Multimodal pain mgt
- 

# WHAT KEEPS PATIENTS IN THE HOSPITAL?

Pain issues  
PONV  
Fatigue  
Fluid overload  
Limited mobility  
Ileus  
Deconditioning  
DVT/PE



# WHAT ERAS IS NOT

- A standard order set alone
- Someone else telling me how to take care of my patients
- About kicking patients out of the hospital before they are ready

## Shifting Perioperative Care

### Traditional Care

- Provider / Physician driven
- Variability in practice
- Provider centric

### ERAS Care

- Interdisciplinary Team Based
- Standardized Care Pathways
- Patient Centred care



# CHALLENGING OUR TRADITIONS

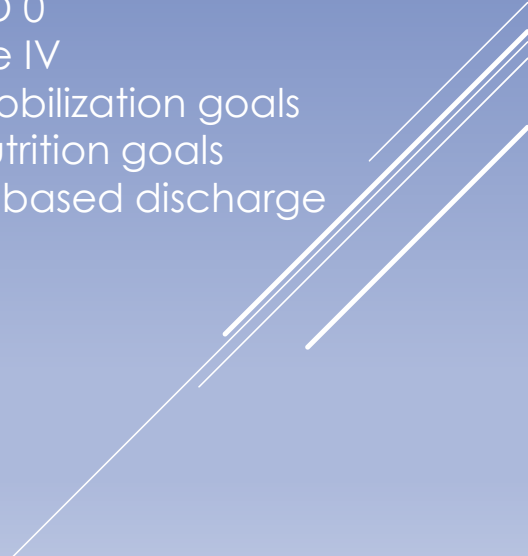
## Surgeon

- No routine bowel prep
- No NGs
- No drains
- Food after surgery
- No foley or out POD1
- Criteria-based early discharge

## Anesthesiologist

- No routine fasting
- Carbohydrate drink
- Epidural analgesia or blocks
- Goal directed fluids
- Active warming
- Narcotic sparing anaesthesia & analgesia

## Nursing

- Eat POD 0
  - Remove IV
  - Daily mobilization goals
  - Daily nutrition goals
  - Criteria based discharge
- 

# ERAS REQUIRES CULTURE CHANGE

ANAESTHESIA



SURGERY



NURSING



# SHIFTING FROM SURGEON-CENTRIC TO PATIENT-CENTRIC

- Realization that there are many aspects of care which can only be addressed by a multidisciplinary group
- Patient engagement, education and expectations beginning at decision to treat

# TASKS FOR PATIENT

- Smoking cessation
  - Reduce alcohol consumption
  - Increase physical Activity
  - Follow preoperative instructions, including current fasting guidelines
  - Participate in postoperative recovery
- 

# Path to Home Guide: Gynaecology Surgery

	Day of Surgery	1 Day After Surgery	2 Days After Surgery	3 Days After Surgery
Nutrition	<p>Gum, fluids, high protein and high calorie diet.</p>	<p>Continue diet.</p>	<p>Continue diet.</p>	<p>Continue diet.</p>
Activities		<p>Walk 1X or more daily</p> <p>You may go home today</p>	<p>Walk 3X or more daily</p>	
Tubes and Lines				
Pain Control	<p>pills</p> <p>Pain is at a level comfortable for you</p>	<p>pills</p> <p>Pain is at a level comfortable for you</p>	<p>pills</p> <p>Pain is at a level comfortable for you</p>	<p>pills</p> <p>Pain is at a level comfortable for you</p>
Breathing Exercises	<p>Every day breathing exercises</p> <div style="display: flex; justify-content: space-around;"> <div style="text-align: center;"> <p>Inhale deeply</p> </div> <div style="text-align: center;"> <p>Exhale deeply</p> </div> <div style="text-align: center;"> <p>Continue inhale</p> </div> <div style="text-align: center;"> <p>Continue exhale</p> </div> </div>			



IWK Health Centre



The RECOVER study  
IWK REB# 1022790

Centre de rééducation  
de la vieillesse

McGill University  
Health Centre

Office d'éducation des patients  
Patient Education Office



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## Enhanced Recovery After Surgery: Urogynaecology Surgery

**Enhanced Recovery After Surgery** is a program that helps you recover better after your surgery. It aims to help get you back to your normal self quickly after surgery.

**Stay active!**  
Being physically active before your surgery will help with your recovery!

**Drink!**  
Clear fluids up to 3 hours before your surgery.

**Manage your pain!**  
You will be given oral pain medication prior to your surgery.

**How can I get ready for surgery?**

**Limit Alcohol!**  
Limit the amount of alcohol you drink 4 weeks before your surgery!

**Quit Smoking!**  
Ask your nurse for smoking cessation information.

**Ask Questions!**  
Talk to your Pre-Admission Nurse about ways to help you prepare for your surgery.



Version: 17 Jan 2018 (Pre)





## Enhanced Recovery After Surgery: Urogynaecology Surgery

**Enhanced Recovery After Surgery** is a program that helps you recover better after your surgery. It aims to help get you back to your normal self quickly after surgery.

### How can I heal faster after surgery?

#### **Eat!**

Healthy foods that are high in protein the **first evening** after surgery!

#### **Manage your pain!**

You will be able to move and breathe easier.

#### **Do breathing exercises!**

It helps prevent chest infections.

#### **Drink fluids!**

As soon as you can after surgery.

#### **Chew gum!**

It keeps your bowels moving.

#### **Move!**


**Sit** in a chair for meals and **walk** in the hallways to help prevent blood clots in your legs.



Version: 17 Jan 2018 (Post)




# TASKS FOR PERIOPERATIVE STAFF


- Increase patients awareness of ERAS and the importance of patients' participation in their care.
  - Educate patients' on current fasting, nutrition and preoperative guidelines
  - Set patient expectations around length of stay and discuss a discharge plan
- 




# TASKS FOR ANAESTHESIOLOGIST

- Avoidance of preoperative long-active sedatives
  - The use Opioid-sparing, multimodal pain management ( local anaesthetics, NSAIDs, lidocaine, Ketamine, etc)
  - Maintain normothermia
  - Perioperative fluid management to avoid sodium/fluid overload
  - A move toward Total IV anaesthesia and less volatile anaesthetic
- 

# TASKS FOR SURGEON

- Judicious use of oral bowel preparation
  - Avoid tubes and drains
  - Use long acting local anaesthetics
  - Opioid- sparing, multimodal pain management
  - Perioperative fluid management to avoid sodium/fluid overload
- 
- A decorative graphic consisting of several parallel white lines of varying lengths, slanted upwards from left to right, located in the bottom right corner of the slide.

# TASKS FOR NURSING & ALLIED HEALTH

- Reduce IV fluid administration, encourage oral fluids
  - Encourage early oral nutrition and gum chewing
  - Mobilize patient POD 0 and consistently throughout admission
  - Administer opioid-sparing, multimodal pain medications
  - Timely removal of urinary Catheters.
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# HOW ERAS LOOKS: IWK ADULT SURGERY PROGRAM

- Upon signing consent in the clinic, the surgeon will give the patient a yellow folder. The folder will contain; “ patient passport” pamphlet, smoking cessation and surgery specific teaching pamphlet.
- The OR bookings office will contact the patient with an OR date & time and a preadmission appointment date & time. Patients will be asked to write the dates and times in their “ patient passport” pamphlet.

Patient Label

## Patient Passport: Adult Gynaecology Surgery

*Please bring this passport with you to your Pre-admission Appointment and on the Day of Surgery.*

Surgeon: Dr. \_\_\_\_\_

Procedure: \_\_\_\_\_

Surgery length: \_\_\_\_\_ hours

Days in Hospital:  day surgery     1     2     3

*The OR booking office will contact you by phone with these dates.*

Pre-Admission Clinic Date (if needed): \_\_\_\_\_ Time: \_\_\_\_\_

Register at a Kiosk or in Admitting, Main Level (2), Lobby, Women's Site.  
Then go to the Preadmission Clinic, 6B (Level 6).

Surgery Date: \_\_\_\_\_ Time: \_\_\_\_\_

Register in Admitting at \_\_\_\_\_ (time), Main Level (2), Lobby, Women's Site.




# PRE-ADMISSION

- Patient Education using the new “ **Patient Passport Pamphlet**”. Pamphlet will outline pre and post-op teaching.
- **Inpatients will all be seen in Pre-admission Clinic. This visit includes;**
  - Nursing Assessment
  - Anaesthesia Assessment
  - Pharmacy
  - Bloodwork/EKG
  - Patient will order their post op day 1 meal.

# PRE-OP-DAY OF SURGERY

- Gynecology Pre-Admission Surgery Orders with include Pre-op orders for Multi modal analgesia **1 hour** before surgery: **Acetaminophen 1000mg** and Celecoxib ( **200mg/400 mg**) or **Naproxen ( 250mg/500mg)**.
- VTE prophylaxis discussion with the surgical team.- Dalteparin is considered 1<sup>st</sup> line of treatment

# PACU

- **Changes to Anaesthesia high alert orders in PACU including;**
  - -1<sup>st</sup> line of Analgesics includes- Acetaminophen
  - -early transition to PO pain meds. Patients encouraged to sit at bedside and take sips of fluids.
  - -decreased IV rates to 70ml/hr. Saline locked for transfer.
  - -Discontinue O2 when patient hits %92 saturation.
- 




# ADULT SURGERY INPATIENT UNIT: PRACTICE CHANGES

- Patients **must** be assisted to bedside (**POD#0**) and sit in the chair for all meals and ambulate q4-6hrs (**POD#1**). If patients are unable and/or refuse, a consultation to Physio **must** be requested and detailed documentation **must** be recorded on the patients chart.
- Patients will be instructed to chew gum when they arrive on the unit and start drinking fluids. Patients will eat their 1<sup>st</sup> pre-ordered, high caloric, high protein diet.
- Urine output will be monitored over 4 hours- details will be outlined on the PPO. *(Patients receiving less fluid volumes intraoperatively are not expected to have large urine outputs)*
- If foley is in situ, it will be removed on POD #1.


# PPO'S

- 4 New **PPO's** ( *Pre-Printed Orders*) have been developed to be used in the following areas ( *Pre-admission, PACU, Adult Surgery Inpatient unit*):
  - Gynecology Pre-Admission Surgery Orders
  - PACU Anaesthesia Orders, Women's & Newborn Health HIGH ALERT
  - Routine Gynecology Post Op Orders- High Alert
  - Venous Thromboembolism Prophylaxis Order Gynecology & Breast Health High Alert

# PLANNING BEFORE IMPLEMENTATION

- ERAS planning began a year before implementation
  - The Key to success was to get “ buy in” from all disciplines
  - Respected champions for each discipline was vital
  - Educational rollout to staff was fundamental in the success of the program.
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# EDUCATIONAL ROLLOUT & LESSONS LEARNED

- Providing staff with education on how ERAS would affect their practice was important before changes were implemented
  - As protocols changed- new documentation emerged-PPO's
  - Staff now working with standardized care plans
  - Teaching slide deck was prepared and presented to all disciplines
  - Lessons Learned: Missed staff & disciplines
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# TAKE AWAY MESSAGES... ERAS



## ▶ Potential

- to improve the health of individuals and performance of health care professionals by reducing the length of hospital stay, costs, and complications following surgery.

## ▶ Requires

- Shifting from surgeon-centric to patient-centric
- Realization that there are many aspects of care which can only be addressed by a multidisciplinary group
- Patient education and expectations
- Education of staff before implementation

# REFERENCES

1. Ljungqvist O, Scott M, Fearon KC. Enhanced recovery after surgery: A review. *JAMA Surgery*. 2017; 152(3): 292-98.
2. ERAS Compliance Group. The impact of enhanced recovery protocol compliance on elective colorectal cancer resection: Results from an international registry. *Annals of Surgery*. 2015; 261(6): 1153-59.
3. Lassen K, Soop M, Nygren J, et al.; Enhanced Recover After Surgery (ERAS) Group. Consensus review of optimal perioperative care in colorectal surgery: Enhanced Recovery After Surgery (ERAS) Group recommendations. *Archives of Surgery*. 2009; 144(10): 961-69.
4. Zargar-Shoshtari K, Hill AG. Optimization of perioperative care for colonic surgery: A review of the evidence. *ANZ Journal of Surgery*. 2008; 78(1-2): 13-23.
5. Kiecolt-Glaser JK, Page GG, Marucha PT, MacCallum RC, Glaser R. Psychological influences on surgical recovery: perspectives from psychoneuroimmunology. *American Psychologist*. 1998;53(11): 1209-1218.
6. Devine EC. Effects of psychoeducational care for adult surgical patients: a meta-analysis of 191 studies. *Patient education and counselling*. 1992; 19(2): 129-142.
7. Merchant R, Chartrand D, Dain S, Canadian Anesthesiologists' Society, et al. Guidelines to the practice of anaesthesia-revised edition 2015. *Canadian Journal of anaesthesia*. 2015; 62(1): 54-67.
8. Dirks ML, Wall BT, van de Valk B, et al. One week of bed rest leads to substantial muscle atrophy and induces whole-body insulin resistance in the absence of skeletal muscle lipid accumulation. *Diabetes*. 2016; 65(10): 2862-75.
9. Stowers MD, Lemanu DP, Colman B, Hill AG, Munro JT. Review article: Perioperative care in enhanced recovery for total hip and knee arthroplasty. *J Orthop Surg (Hong Kong)*. 2014; 22(3): 383-92.
10. Chou R, Gordon DB, de Leon- Casasola OA, et al. Management of postoperative pain: A clinical practice guideline from the American Pain Society, the American Society for Regional anaesthesia and Pain Medicine, and the American Society of Anesthesiologists' Committee on Regional anaesthesia, Executive Committee, and Administrative Council. *J Pain*. 2016; 17(2): 131-57.
11. Clarke K, Tong D, Easley KA, Norrick B, Ko C, Wang A, Razavi B, Stein J. Reduction in catheter-associated urinary tract infections by bundling interventions. *Inter J Quality Health Care*. 2012; 25: 43-9.