



Neurosurgery- Enhanced Recovery After Surgery (ERAS)

Department of Neurosurgery

In an effort to provide the best care before, during, and after spine surgery, the Department of Neurosurgery has introduced an evidence-based approach to delivering spine care at Penn Medicine, called **Enhanced Recovery After Surgery (ERAS)**. The principles of ERAS have been used for many different surgeries and have shown improved surgical outcomes, decreased hospital length of stay and improved patient satisfaction.

Your doctors, nurses and care team members have created this protocol to help you recover faster and more comfortably from spine surgery. The protocol will address your pain, nutrition, movement, surgical site care and educational needs. Our goal is to deliver the highest quality of care across all phases of your surgical journey.

Key Components of the Protocol:

Before Surgery:

- Patient education and texting reminders
- Going into surgery as healthy as possible by improving the following:
 - Nutritional status / diabetes management
 - Smoking cessation
 - Following your personalized pain management protocol (if indicated)
- Decreasing the amount of time before surgery that you go without drinking fluids
- Addressing sleep-related breathing disorders
- Establishing clear expectations about discharge planning

During Surgery:

- Using many types of medications to control pain and nausea
- Limiting use of urinary catheters
- Use of safety checklists in the operating room

After Surgery:

- Getting out of bed and walking early and often
- Allowing you to eat as soon as possible, as tolerated
- Chewing gum to help improve recovery of bowel function.
- Caring for your surgical wound and reducing risk of infection
- Having you fill your prescriptions for medications to take at home while you are in the hospital
- Preset discharge criteria:
 - Good pain control with oral medications
 - Eating and drinking without difficulty or nausea
 - Ability to walk and perform daily activities safely
 - Having no other significant medical concerns
 - Having good support to help you at home
- Following-up with your surgical team, medical doctors, and specialists to ensure a smooth recovery after discharge from the hospital



Patient Checklist: History & Physical Visit Prior To Surgery (1/4)

I. Necessary Appointments Before Surgery

- Preadmission Testing
 - Routine pre-operative labs
 - Serum albumin if Body Mass Index (BMI) is <18.5 or >25
 - Hemoglobin A1c if diabetic
 - Chest X-ray, if requested by your surgical team
 - Resting EKG, if requested by your surgical team
- Appointment with Primary Care Physician or Cardiologist; if requested by your surgical team
- Additional Consultations, if requested by your surgical team:
 - Nutrition Consultation
 - Pain Medicine Consultation
 - Sleep Medicine Consultation
 - Endocrine Consultation
 - Anesthesia Consultation

II. Prescriptions/ Instructions Before Surgery

- Purchase one 20 oz. bottle of non-red Gatorade or Powerade. A second bottle will be provided by your Neurosurgeon's office.
- Discuss holding your NSAIDS (e.g. Ibuprofen and naproxen), Aspirin, Plavix or other anti-platelet agents for 7 days prior to surgery with your surgeon. Stop any Garlic, Vitamin E or Omega-3 supplements 7 days prior to surgery.
- Discuss holding your Coumadin or other anticoagulation medications for 7 days prior to surgery with your cardiologist and surgeon
- Continue to take any other medications not listed above after discussing with your Neurosurgical provider.
- Continue regular diet unless instructed otherwise by your surgery team.
- Refrain from smoking for a minimum of four weeks prior to surgery.
- Continue your normal activity until day of surgery.
- Begin Bactoshield CHG (Chlorhexidine) 4% body wash 3 days prior to surgery

III. Engaged Recovery at Penn (ERAP) Text Messaging

- Sign up to participate in our text messaging program
- Receive and respond to text messages that contain valuable information to help you through your surgical experience.



Patient Checklist: Day Before Surgery (2/4)

I. Day Before Surgery

- You may eat a regular diet
- Drink 20 oz. of non-red Gatorade or Powerade
- After midnight, do not eat. You can continue to drink clear liquids and Gatorade/Powerade up to 1 hour before your arrival to the hospital
- Continue using Bactoshield CHG 4% body wash
- If you have not been contacted by 5pm the day prior, call your hospital Operating Room (OR) to obtain your surgery time

Hospital	OR Number
Pennsylvania Hospital	215-829-3294
Penn Presbyterian	215-662-5010
Hospital of the University of Pennsylvania	215-615-5599

Patient Checklist: Day of Surgery (3/4)

I. Day of Surgery

- Take your medications as instructed by your surgical team.
 - If you have diabetes, hold your oral diabetes medication and take ½ your insulin dose

If you have any questions regarding your medications, please contact your surgeon's office. (see Resources section below)
- You may take pain medications as instructed before surgery
- Use Bactoshield CHG 4% Body Wash prior to coming to the hospital.
- Drink a 20 oz. non-red Gatorade or Powerade. **This drink must be finished 1 hour before your arrival to the hospital**
- May sip clear liquids up to 1 hour before your arrival to the hospital
- Bring your pack of gum to the hospital, if provided by your surgeon's office
- Bring your CPAP machine to hospital (if you use one)



Patient Checklist: Day of Discharge (4/4)

I. Day of Discharge from Hospital

- You will be eating and drinking a regular diet
- Continue to walk daily
- Receive education for care of your incision(s)
- Receive medication education for newly prescribed medications and fill your prescriptions while in the hospital, prior to discharge
- A nurse or advanced practice provider will call you within 2-3 days of your hospital discharge.
- If you have staples and/or sutures in your wound, they will be removed by the visiting nurse, your primary care physician or in the Neurosurgery office. You may **call to schedule this 2 week follow up visit with the Neurosurgery office or with your primary care provider.**
- Call the Penn Neurosurgery office to schedule a postoperative visit with your surgeon 4 - 6 weeks after your surgery or if you have any questions about your surgery.**

Neurosurgery Resources

	Surgeon's office number:
Pennsylvania Hospital	215-829-6700
Penn Presbyterian	215-294-9494
Hospital of the University of Pennsylvania	215-662-3487