

CERVICAL SPINE SURGERY

Enhanced Recovery After Surgery (ERAS)

Your Guide to Healing



UVA Spine Center

Fontaine Research Park

415 Ray C. Hunt Drive, Suite 3100

Charlottesville, VA 22903

Patient Name

Surgery Date/Time to Arrive

Surgeon

We want to thank you for choosing the University of Virginia Health System for your surgery. Your care and well-being are important to us. We are committed to providing you with the best possible care using the latest technology.

This handbook should be used as a guide to help you through your recovery and answer questions that you may have. Please give us any feedback that you think would make your experience even better.

Please bring this book with you to:

- Every office visit
- Your admission to the hospital
- Follow up visits

Contact Information

The main hospital address:

UVA Health System
 1215 Lee Street
 Charlottesville VA 22908

Contact	Phone Number
Department of Neurosurgery	800.362.2203 Fax 434.924.2994
Spine Center – Clinic	434-924-2203
If you don't receive a call by 4:30pm the day before surgery (or by Friday at 4:30pm if your surgery is scheduled for Monday) please call:	434.982.0160
Anesthesia Perioperative Medicine Clinic(APMC)	434.924.5035
Hospital Inpatient Unit: 6W/6N	6W: 434.924.2488 6N: 434.924.8201
UVA Main Hospital	434.924.0000 (after 4:30pm and on weekends ask for the Neurosurgery resident on call)
Lodging Arrangements/ Hospitality House	434.924.1299 434.924.2091
Parking Assistance	434.924.1122
Interpreter Services	434.982.1794
Hospital Billing Questions	800.523.4398
Continuum Home Health	434.984.2273 or 800.336.4040

Table of Contents

Section 1:

Introduction to Cervical Spine

Surgery Frequently Asked Questions

(FAQ) What is ERAS?

Before Your Surgery

Preparing for Surgery

Days Before Surgery

Section 2:

Day of Surgery

After Surgery

Section 3:

After Discharge

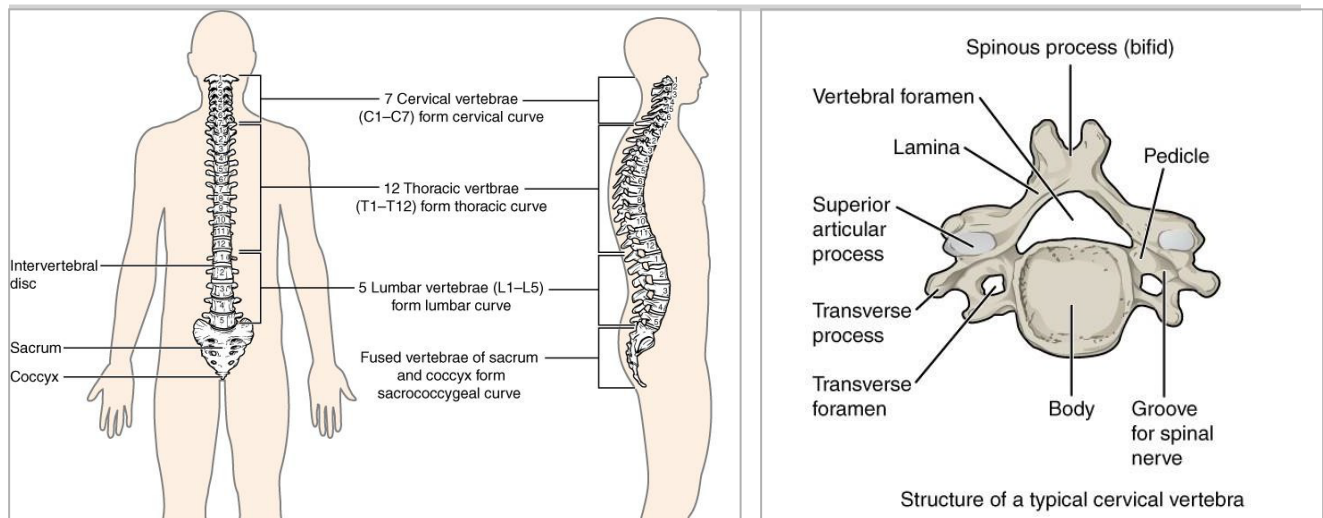
Recovery: Equipment

Section 4:

Patient's Checklist

(this page intentionally left blank)

Introduction to Cervical Spine Surgery



Anterior Cervical Discectomy and Fusion (ACDF) –Surgery is used to decompress (take pressure off) the cervical spine. It is performed by an incision on the front of your neck. The surgery removes damaged or diseased bone and surrounding discs to relieve symptoms caused by pressure on the spinal cord and nerves. The advantages of ACDF are that it requires little manipulation of the spinal cord or cervical roots. A fusion is when bone graft is placed between the vertebrae, and a plate may be used to hold the bones in place during healing.

Posterior Cervical Laminectomy – Surgery is performed through an incision in the back of your neck when a single lateral disc herniation is present. The surgeon removes a section of bone, called the lamina, from one or more vertebrae to relieve pressure on the spinal cord and nerves. The main advantages of a posterior approach are that it involves no change in the structure of the cervical spine and no risk of damage to anterior neck structures.

Posterior Cervical Foraminotomy – Surgery that removes bone and/or portions of a herniated or diseased disc to relieve neck and radiating arm pain caused by parts off the disc pressing on nerve roots.

Posterior Cervical Fusion – Surgery where bone graft is placed between the vertebrae. The graft may be an allograft from a bone bank or an autograft bone taken from your own hip. The surgeon may screw a small metal plate or use rods and screws over the area to hold the bones in place while the vertebrae heal and limit movement between them.

Frequently Asked Questions

Why do I need surgery?

The discs of the spinal column usually allow comfortable movement. Age, injuries, and some degenerative conditions, such as arthritis, can cause damage to the discs.

The discs may thin, dry out, or swell and bulge, resulting in inadequate cushioning. When discs become damaged, this is called degeneration. Discs can also swell or break open, which is called herniation. Sometimes the resulting pain causes muscle stiffness and soreness. The pain can radiate to other areas of the body, causing headaches or back and shoulder pain. It may also cause neuropathy, which is damage to nerves, causing tingling, prickling and numbness.

Will I need a blood transfusion?

Most of our patients do not need a blood transfusion, however you may need blood during or after surgery depending upon which type of surgery you have. Other options and medications are available before surgery that may help decrease the need for a blood transfusion.

How long is the surgery?

Expect approximately 1.5 to 2 hours for each spine (vertebral) level. The right amount of time is taken to ensure that your surgery is successful and that you are safe.



Will I need physical therapy at home?

Your recovery requires movement after surgery. Your surgeon and the physical therapist in the hospital will give you advice on movement after the operation. We encourage you to follow through with Physical Therapy after your surgery. You will be given a prescription for therapy during your clinic appointment. Please determine your insurance coverage for Physical Therapy before your surgery and make sure you will have transportation to your Physical Therapy appointments.

How long will I stay in the hospital?

If you have a cervical decompression you should expect to be in the hospital for about 1-2 days after your surgery. If you have a cervical fusion, expect to be in the hospital 1-3 days.

Visit uvahealth.com/spinerecovery to watch a short video learn more about your spine surgery. The video covers:

- what to expect during your recovery at UVA
- the right way to get out of bed and moving after surgery
- tips for dressing, showering and other everyday tasks

Enhanced Recovery After Surgery (ERAS)

What is Enhanced Recovery?

Enhanced recovery is a program for improving the experience for patients who need major surgery. ERAS helps patients recover sooner so life can return to normal as quickly as possible. The ERAS program focuses on making sure that patients are actively involved in their recovery.



There are four main stages in the ERAS program:

1. Planning and preparing before surgery– giving you plenty of information so you feel ready.
2. Reducing the physical stress of the operation – allowing you to drink fluids up to 2 hours before your surgery.
3. A pain relief plan that focuses on giving you the right medicine you need to keep you comfortable during and after surgery.
4. Early feeding and moving around after surgery – allowing you to eat, drink and walk around as soon as you can.

It is important that you know what to expect before, during and after your surgery. Your care team will work closely with you to plan your care and treatment. You are the most important part of the care team.

It is important for you to participate actively in your recovery and to follow the ERAS program. By working together, we hope to keep your hospital stay as short as possible.

Before Your Surgery

Clinic

During your clinic visit we will check to see if you need surgery and what type you will need. You will work with our entire team to prepare for surgery:

- The surgeons, who will have fellows, residents, or medical students working with them
- Physician Assistants (PAs)
- Nurse Practitioners (NPs)
- Clinical nurse coordinators
- Administrative assistants
- Registered nurses



During your clinic visit, we will:

- Discuss your home medications. Please bring all of your prescription and over-the-counter medications with you to your pre-surgery appointment.
- Ask questions about your medical history
- Perform a physical exam
- Ask you to sign the surgical consent forms

You will also receive:

- Instructions on preparing for surgery and for making a discharge plan.
- Instructions for what to do before surgery if you are on blood thinners.
- Special body wash to be used to shower prior to surgery.
- Instructions on quitting smoking if you currently smoke.

You will decide who your care partner is going to be:

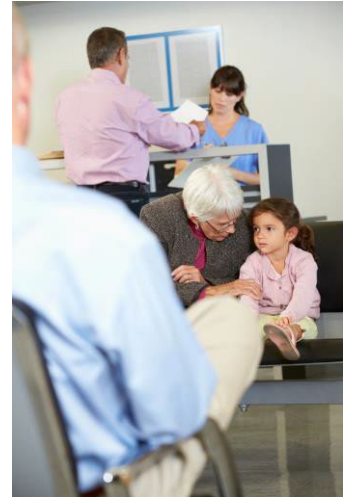
- Care partner(s) are 1 or 2 adults identified by you to be an active part of your healthcare team.
- Care partner(s) may visit or stay with you around the clock.
- Your care partner(s) may be the same people you identify to be your help once you discharge home.
- Your care partner and the person who will be providing your ride home will need to be at the hospital by 9 AM the morning of your discharge. It is important that they are here to listen to discharge instructions and learn how to safely care for you at home.

Anesthesia Perioperative Medicine Clinic (APMC)

The Anesthesia Perioperative Medicine Clinic will review your medical and surgical history to determine if you will need an evaluation prior to surgery.

If an in person anesthesia evaluation is needed the Anesthesia Perioperative Medicine Clinic will notify you.

- An appointment will be scheduled for an office visit a few weeks prior to the surgical date.
- Your medications will be reviewed
- You may have a blood test, test of the heart (EKG), and/or other tests the surgeon or anesthesiologist requests.
- For questions or if unable to keep the appointment with Anesthesia Perioperative Medicine Clinic please call 434-924-5035. Failure to keep this visit with Anesthesia Perioperative Medicine Clinic before surgery may result in cancellation of surgery.



There may be times that you are instructed to go to the Anesthesia Perioperative Medicine Clinic after your appointment with your surgeon. If this is the case you are welcome to a same day appointment but please allow for up to 2 hours.

Please note: If you were told by your surgical team that you did not need any testing or evaluation prior to surgery but receive a call to schedule with the Anesthesia Perioperative Medicine Clinic, this is because the anesthesia team feels it is in your best interest when they review your history.

Sometimes, after examining you or based on the result of your tests, we may ask that you see a specialist, such as a cardiologist (heart doctor), to evaluate you further before your surgery.

Do you take anticoagulant/antiplatelet (blood thinner) medication?



If you are taking any blood thinning medications be sure to tell your doctor and nurse as your medication may need to be stopped before surgery. See the list of some of these medications on the next page.

It is the prescribing provider's responsibility to provide instructions for how long you can safely be off this medication.

It is very important to follow the instructions given to you to prevent your surgery from being postponed or cancelled!

If you have any questions on the instructions you received, call your surgeon's office right away.

Medications to Stop Prior to Surgery

14 Days Prior

Stop all vitamin, herb, and joint supplements, such as:

CoQ10	Glucosamine	Juice Plus®	Ogen	Omega 3, 6, 9
Chondroitin	Flaxseed oil	St. John's Wort	Ginkgo	Ginseng
Echinacea	Fish oil	Saw palmetto	Garlic	Multivitamins
Emcy	Kava	Valerian	Ephedra	MSM

7 Days Prior

STOP all aspirin containing products, such as:

Alka-Seltzer®	Excedrin®	BC Powder®	Goody's Powder®	Percodan®
Aspirin (81mg to 325mg)	Fasprin® (81mg)	Bufferin®	Norgesic®	Ecotrin®
Disalsid® (Salsalate)	Pepto-Bismol®	Dolobid® (Diflunisal)		

Stop all non-steroidal anti-inflammatory medications (NSAIDs), such as:

Advil® (ibuprofen)	Aleve® (naproxen)	Arthrotec® (volatren/cytotec)
Ansaid® (flubiprofen)	Anaprox® (naproxen)	Cataflam® (diclofenac)
Celebrex® (celecoxib)	Clinoril® (sulindac)	Daypro® (oxaprozin)
Feldene® (piroxicam)	Indocin® (indomethacin)	Meclomen® (meclofenamate)
Mediprin® (ibuprofen)	Mobic® (meloxicam)	Motrin® (ibuprofen)
Naprelan® (naproxen)	Naprosyn® (naproxen)	Nuprin® (ibuprofen)
Orudis® (ketoprofen)	Oruvail® (ketoprofen)	Relafen® (nabumetone)
Tolectin® (tolmetin)	Voltaren® (diclofenac)	

Remember: If you are taking any blood thinning medications be sure to tell your doctor and nurse as it may need to be stopped before surgery. IF you have heart stents and take Aspirin and Plavix, check with your cardiologist about stopping prior to surgery. It is very important to follow the instructions given to you to prevent your surgery from being postponed or cancelled!

If you have any questions on the instructions you received, call your surgeon's office right away.

Medications you may continue prior to surgery:

Iron, Tylenol® or other pain medications such as Codeine®, Lortab®, Percocet®, Ultram® (tramadol), or Vicodin®.

If uncertain, please discuss your medications with your doctor and nurse.

Quitting Smoking Before Surgery

If you smoke, we encourage you to stop smoking at least 4 weeks before surgery because it will:

- Improve wound healing after surgery
- Help avoid complications during and after surgery



If you are not able to be off cigarettes at least 4 weeks before surgery, we ask that you cut back on your smoking and encourage you to quit smoking as soon as possible after surgery. This is very important to your health.



Please let your surgeon's nurse know if you smoke. Some Long-Term Benefits of Quitting May Include:

- Improved Survival
- Fewer and less serious side effects from surgery
- Faster recovery from treatment
- More energy
- Better quality of life
- Decreased risk of secondary cancer

Some key things to think about before your surgery, as you begin to think about quitting:

- All hospitals in the United States are smoke free. You will not be allowed to smoke during your hospital stay
- Your doctor may give you medicine to help you handle tobacco withdrawal while in the hospital and after you leave.

Here are some tips to help you throughout your journey:

- Speak with your provider about medications that can help you with transitioning from a smoker to a nonsmoker.
- Identify your triggers and develop a plan to manage those triggers.
- Plan what you can do instead of using tobacco. Make a survival kit to help you along your quit journey. In this kit have: nicotine replacement therapy, sugar-less gum or candy, coloring books, puzzles, or bubbles for blowing.

Keys to Quitting and Staying Smoke Free:

- Continue your quit plan after your hospital stay
- Make sure you leave the hospital with the right medications or prescriptions
- Identify friends and family to support your quitting

You Don't Have to Quit Alone!

Please call your Primary Care Provider to discuss Tobacco Cessation



1.800.QUITNOW



<https://smokefree.gov/>

In certain circumstances, your surgeon may test you for nicotine and recommend postponing surgery until you have quit entirely.

Bowel Preparation Prior to Surgery

In order to prepare your bowel for surgery, we ask that you take 1 dose (1 heaping tablespoon) of Miralax daily on each of the 3 days before you come in for surgery. This is easiest taken in the late afternoon or early evening. This will help to get your bowels regular before you begin taking pain medications, which can cause constipation. Patients who are prone to loose stools or diarrhea may decrease the amount of Miralax taken each day.



Weight Loss

Losing weight can make your recovery easier. Beginning an exercise program prior to surgery and/or consulting with a dietician can help you reach your weight loss goals, if needed. Please let your surgeon or nurses know if you would like further information regarding weight loss.



Preparing for Surgery

When you leave the hospital after your surgery, you will need some help from family or friends, 24 hours a day, for at least 3-5 days. You should arrange for support at home prior to coming for surgery. It will be important to have help with meals, taking medications, etc.

A few things you can do before you come into the hospital:

- Clean and put away laundry
- Clean your bed linens, especially if you have a pet who shares your bed.
- Put the things you use often at waist height to avoid having to bend down or stretch up too much to reach them.
- Buy the foods you like and other things you will need since shopping may be hard when you first go home. Prepare meals that you can freeze and easily reheat.
- Cut the grass, tend to the garden and do all house work.
- Arrange for someone to get your mail and take care of pets and loved-ones, if necessary.
- Be sure you have a working digital thermometer. We will ask you to monitor your temperature once you are discharged from the hospital.
- Arrange transportation to and from the hospital and all appointments.



Remember to review the page in section 1 for medications you may be taking and when to stop taking them before your surgery. *This is very important to prevent your surgery from being postponed or cancelled!*

If you have any questions on the instructions you received, call your surgeon's office right away.

Pre-Surgery Checklist

What you SHOULD bring to the hospital:

- This ERAS Handbook.
- A list of your current medications.
- Any paperwork given to you by your surgeon
- A copy of your Advance Directive form, if you completed one
- Your “blood” bracelet, if you were given one
- A book or something to do while you wait
- A change of comfortable clothes for discharge
- Any toiletries that you may need
- Your CPAP or BiPAP, if you have one
- If you use an oxygen tank, be sure you have enough oxygen and tank supplies for the ride home after surgery
- Have your Front Wheeled Walker and other necessary equipment available for use the morning after surgery.



What you SHOULD NOT bring to the hospital:

- Large sums of money
- Valuables such as jewelry or non-medical electronic equipment

Please know that any belongings you bring will go home with your care partner or be locked away in “safe keeping.”

For your safety, you should arrange for:

- Your care partner and responsible ride home should be at the hospital by 9 AM the morning of your discharge. It is important that they are here to listen to discharge instructions and learn how to safely care for you at home. We aim to discharge by noon.
- If possible, identify someone to stay with you the first 3-5 days after discharge to help take care of you.



Days Before Surgery

Scheduled Surgery Time

A nurse will call you the day before your surgery to tell you what time to arrive and where to check in at the hospital for your surgery. If your surgery is on a Monday, you will be called the Friday before.



If you do not receive a call by 6:00 pm, please call 434.924.5455.

Please write the time and check in location that the nurse tells you on page 1 of this handbook in the space provided.

Food and Drink the night before surgery

- Stop eating solid foods at midnight before your surgery.
- Be sure to have a 20-ounce Gatorade™ ready and available for the morning of surgery. If you are diabetic, you should drink a 20-ounce Gatorade™ G2 or ZERO instead. Drink this on your way into the hospital in the morning.



Instructions for Bathing

We will give you a bottle of HIBICLENS foam (body wash) to use once a day, for 5 days prior to your surgery; this includes the night before and the morning of your surgery.



HIBICLENS is a skin cleanser that contains chlorhexidine gluconate (an antiseptic). This key ingredient helps to kill and remove germs that may cause an infection. Repeated use of HIBICLENS creates a greater protection against germs and helps to lower your risk of infection after surgery.

Before using HIBICLENS, you will need:

- A clean washcloth
- A clean towel
- Clean clothes

IMPORTANT:

- HIBICLENS is simple and easy to use. If you feel any burning or irritation on your skin, rinse the area right away, do NOT put any more HIBICLENS on, and call the clinic.
- Keep HIBICLENS away from your face (including your eyes, ears, and mouth).
- DO NOT use in the genital area. (It is ok if the soapy water runs over but do not scrub the area.)
- Do NOT shave your surgery site. This can increase the risk of infection. Your healthcare team will remove any hair, if needed.

Directions for when you shower or take a bath:

1. If you plan to wash your hair, do so with your regular shampoo. Then rinse hair and body thoroughly with water to remove any shampoo residue.
2. Wash your face and genital area with water or your regular soap.
3. Thoroughly rinse your body with water from the neck down.
4. Move away from the shower stream.
5. Apply HIBICLENS directly on your skin or on a wet washcloth and wash the rest of your body gently from the neck down.
6. Rinse thoroughly.
7. Do NOT use your regular soap after applying and rinsing with HIBICLENS.
8. Dry your skin with a clean towel.
9. Do NOT apply any lotions, deodorants, powders, or perfumes after using HIBICLENS.
10. Put on clean clothes after each shower and sleep on clean bed linens the night before surgery.

Day of Surgery

Before you leave home



- Remove nail polish, makeup, jewelry and all piercings.
- Continue drinking Gatorade™ on the morning of your surgery. Do NOT drink any other liquids. If you do, we may cancel your surgery.
- Remember to drink your Gatorade™ on the way to the hospital. If you are diabetic, you should drink Gatorade™ G2 or ZERO instead.
- Remember to wash with the HIBICLENS soap (follow instructions on previous pages).

Hospital arrival

- Arrive at the hospital on the morning of surgery at the time you wrote on page 1 - (this will be approximately 2 hours before surgery).
- Finish your water or Gatorade™ as you arrive. You CANNOT drink after this.
- Check in to the location as instructed by the call nurse.
- Your family will be given a tracking number so they can monitor your progress.

Surgery

When it is time for your surgery, you will be brought to the Surgical Admissions Suite (SAS).



In SAS, you will:



- Be identified for surgery and get an ID band for your wrist.
- Be checked in by a nurse and asked about your pain level.
- Be given an IV and weighed by the nurse.
- Be given several medicines that will help keep you comfortable during and after surgery.
- Meet the surgery team where your consent for surgery will be reviewed. Your family member can be with you during this time.
- Meet the anesthesia team who will review your medical history and will discuss your anesthesia plan.

In the Operating Room



From SAS, you will then be taken to the operating room (OR) for surgery and your family will return to the family waiting lounge.

Many patients do not recall being in the OR because of the medication we give you to relax and manage your pain.

Once you arrive in the OR:

- We will do a “check-in” to confirm your identity and the location of your surgery.
- You will be connected to monitors.
- Boots will be placed on your feet to reduce the risk of developing blood clots during surgery.
- You will be given antibiotics through your IV prior to surgery to reduce your risk for infection.
- Just before starting your surgery, we will do a “time out” to check your identity and confirm the location of your surgery.

After this, your surgical team will perform your operation.

During your surgery, the Operating Room nurse will call or text approximately every 2 hours to update your family, when possible.



After Surgery

Recovery Room (PACU)

After surgery, you may be taken to the recovery room (PACU). Patients can remain in the recovery room for about 4-6 hours and then may be assigned a room on an acute Care Unit (6 West/6 North). Once you are awake:



- You will be given clear fluids to drink.
- Post-operative nausea and vomiting is very common after your surgery. We give you medication to reduce this.

The surgeon will also call your family after surgery to give them an update, or the surgeon might visit them in the Surgery Consult Room in the 1st floor Surgical Family Waiting Lounge.

Acute Care Unit on 6th floor: 6 West/6 North

Once to your room, you:

- May be in a semi-private room with a roommate, with a privacy curtain drawn around your bed.
- Will have a large dressing at your surgical site to help to control bleeding and reduce swelling.
- You may be given a lightweight cervical collar (brace), depending on your surgery.
- Will have x-rays taken and once reviewed (cleared) you will get out of bed (with help) to start moving as soon as possible. This speeds up your recovery and decreases the chances you will get blood clots and pneumonia.
- Will be encouraged to take deep breaths to exercise your lungs and help prevent pneumonia
- Will be given oxygen and will have your temperature, pulse, and blood pressure checked after you arrive
- Will have an IV in your arm to give you fluid and you will be allowed to drink fluids
- Will have inflatable sleeves or boots placed on your legs to help prevent blood clots. These should be worn whenever you are in the hospital bed after surgery.
- May also receive a blood thinner shot in the abdomen to help prevent blood clots
- Will resume your home medications (with the exception of some diabetes, blood pressure, and blood thinning medications)
- Will get up and out of bed to the chair on the day of your surgery, with help from the nurse or physical therapist
- May have one or more small tubes coming from your incision to drain any fluids inside. Your nurse will empty the drain a few times per.

CALL, DON'T FALL

Cervical Collar

A cervical collar (brace) may be placed on your neck after surgery. It is used to support your neck, control pain, and limit neck movement during recovery from surgery. If a collar is recommended for you, your surgeon will discuss how long it must be worn.

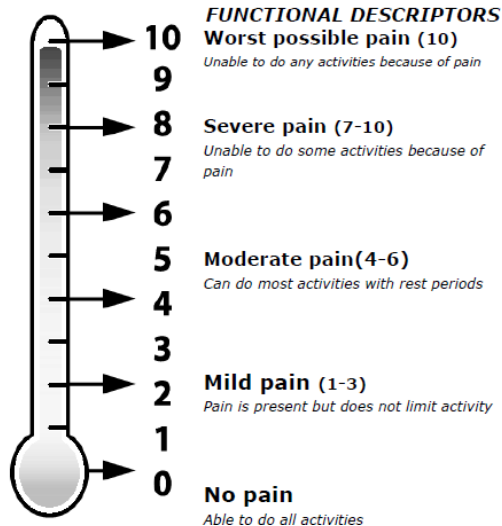


Pain control following surgery

Managing your pain is an important part of your recovery. We will use the UVA Pain Rating Scale where you rate your pain on a scale from 0 to 10 - where 0 means no pain and 10 means the worst imaginable pain. We will ask you regularly about your level of comfort because it is important that you are able to take deep breaths, cough, and move.

Preventing and treating your pain early is easier than trying to treat pain after it starts so we have created a specific plan to stay ahead of your pain. We will manage your pain, but will not be able to eliminate all pain.

UVA ADULT PAIN SCALE TO HELP YOU CONTROL YOUR PAIN



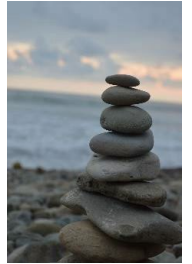
- We will treat your pain during surgery with an injection at the surgery site.
- You will get several other pain medicines around-the-clock to keep you comfortable.
- You will be prescribed narcotic pain pills (for example, oxycodone) as needed for additional pain.

This pain plan will decrease the amount of narcotics we give you after surgery. Narcotics can significantly slow your recovery and cause constipation.

If you are on long standing pain medication prior to surgery, you will be provided with an individualized regimen for pain control with the assistance of our pain specialists.

Comfort Menu

Keeping you comfortable and controlling your pain is very important to us. As part of your recovery, we like to offer you different ways to address your pain in addition to medication. We hope this comfort menu will help you and your healthcare team to better understand your pain and recovery goals. Please discuss your pain control goals and comfort options with your nurse.



- Distraction:** focus your mind on an activity like creating art with our art supplies, doing puzzle books and reading magazines
- Ice or Heat Therapy:** ice packs and dry heat packs are available, depending on your surgery
- Noise or Light Cancellation:** an eye mask, earplugs and headphones are available for your comfort and convenience. We can also help you create a sleep plan.
- Pet Therapy:** hospital volunteers visit the unit with therapy animals. Ask about their availability.
- Positioning/Movement:** changing position in your bed/chair or getting up to walk (with help) can improve your comfort.
- Prayer and Reflection:** connect with your spiritual or religious center of healing and hope through prayer, meditation, reflection and ritual. Also, ask about our chaplaincy services.
- Controlled Breathing:** taking slow deep breaths can help distract you from pain you are feeling. This can also help if you are feeling nauseated (upset stomach).
Using the 4-7-8 technique, you can focus on your breathing pattern:
 - Breathe in quietly through your nose for 4 seconds
 - Hold the breath for 7 seconds
 - Breathe out through your mouth for 8 seconds
- Television Distraction:** we offer a relaxation channel through the UVA in-room television. Turn to channel 17.
- Calm App:** for Android or iOS: if you have a smart device, download the free **Calm** app for meditation and guided imagery. You can find it by searching in the app store.

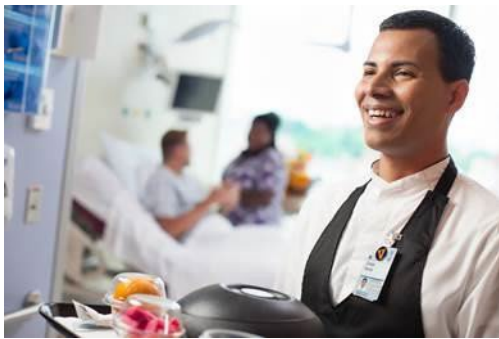


Bowel Management Plan

Constipation is very common with the use of anesthesia and narcotic pain medication. It is very important to avoid constipation and hard stools after surgery. We have established a bowel management plan to prevent constipation. You will be given a stool softener (Colace and Senna) and laxative (MiraLAX) when you are in the hospital. It is important for you to know that you will also be given a suppository medication to help prevent constipation while in the hospital. As long as you are taking narcotic pain medicine, it is important that you take these. If diarrhea occurs, please stop this medication.

First Day After Surgery

On the day after your surgery, you will:



- Be able to eat regular foods as soon as you are ready.
- Be encouraged to drink.
- Likely have your IV stopped
- Be asked to get out of bed, get dressed, sit in chair and walk the hallways, with help from nursing staff, physical and occupational therapy.
- Prepare for discharge.

You will be able to go home when you are:

- Comfortable and your pain is controlled.
- Off all IV fluids and drinking enough to stay hydrated.
- Not nauseated and able to tolerate medications by mouth.
- Not running a fever.
- Able to get around with your walker or cane and have worked with Physical Therapy.



Complications Delaying Discharge

Trouble Swallowing: one of the most common complications after anterior spine surgery (ACDF). We will monitor you closely and it should resolve quickly.

Incision Drainage: the incision may drain fluid. Clear, pink fluid in small amount is ok. We will monitor you closely to watch for changes in color, odor and amount of drainage.

Ileus: is the lack of movement of your bowels that leads to buildup and potential blockage of food. It is temporary, but is often painful and causes bloating of your abdomen. It is very common with the use of anesthesia and narcotic pain medication and is one of the reasons we do our best to manage your pain with non-narcotic options.

Urinary Retention: the inability to completely empty the bladder. Sometimes your bladder is slow to start working on its own again and urinary retention (difficulty or inability to urinate) occurs. Urinary retention is more common in men but it can also happen in women. If you develop urinary retention, we may have to put a temporary catheter in or give you special medication to treat it. In some cases, we may discharge you home from the hospital with a catheter until your urinary retention resolves. We do everything we can to help prevent urinary retention after surgery.

Cerebrospinal Fluid Leak (CSF): is a rare complication of spine surgery. A lumbar drain may be placed to manage a CSF leak if it is not able to be repaired during surgery.

Discharge

Before you are discharged, you will be given:



- A copy of your discharge instructions.
- A list of any medications you may need.
- A prescription for pain medicine and outpatient physical therapy.
- Instructions on when to return to the surgical clinic (usually 6 weeks), depending on your surgery. You *may* need to return for suture or staple removal
- Equipment (such as a walker or cane) if unable to obtain before surgery

If you will be on a blood thinner medication, you will receive instructions at discharge

Before you leave the hospital

- We will ask you to identify how you will get home.
- We will ask who will stay with you.
- Be sure to collect any belongings that were stored in “safe keeping.”

Our Case Managers help with discharge needs. Please let us know the names, locations, and phone numbers of:

- Your home pharmacy:

- Your home healthcare agency (if you have one) OR Outpatient Physical Therapy:

- Any special needs after your hospital stay:

After Discharge

When to Call

Complications do not happen very often, but it is important for you to know what to look for and who to call in case you start to feel bad.



Red Zone: Medical Emergency– Call 911

- Unrelieved shortness of breath
- Chest pain

Yellow Zone: Worsening Symptoms – call your Home Health nurse or call the surgeon’s line.

- Temperature over 101.5 °F
- Continuous drainage from your incision
- Colored or cloudy drainage from your incision
- Odor or redness to the incisional area
- Any increase in swelling or pain in your lower leg
- Severe calf pain
- No bowel movement in 3 days
- You experience unusual signs of bleeding, such as dark brown or red urine, blood in stool (red or black), nosebleeds or any bleeding that does not stop
- You are vomiting, nauseated or have diarrhea
- You have a heart beat that feels fast, too slow, or skips
- You are feeling faint
- You have a change in your mental status
- You are feeling weaker instead of stronger
- You are unable to pass urine for more than 6 hours



Green Zone: Symptoms are under control

- Low grade temperature of 100.0-101.4 °F
- Mild constipation
- Light drainage on your incisional dressing



If you any have trouble between 8am and 4:30pm, call the Department of Neurosurgery at 800.362.2203. After hours, please call the UVA Main Hospital at 434.924.0000 and ask for the neurosurgery resident on call.

Wound Care

Your surgical dressing will be changed before you leave the hospital. It will be replaced with a lightweight dressing called Telfa. Your dressing will need to be changed daily for 7 days after surgery. Most patients have sutures that are found under the skin and will dissolve naturally.

- You may take showers only if you keep your incision covered with a water resistant bandage such as Tegaderm or other plastic covering.
- If you have a brace to wear after surgery, you may remove this to shower but should limit back movement as much as possible.
- The best time to change your dressing is after you shower.



To Change Your Dressing:

You will need to purchase ultra-absorbent wound dressings (Telfa) from any pharmacy. Some available dressings have adhesive around the border. Other non-adhesive dressings can be taped down with adhesive medical tape.

- Wash your hands before changing your dressing.
- Remove the water resistant dressing and the soiled dressing.
- If the incision is wet or damp, gently pat dry with a clean towel.
- You may have paper strips (Steri-Strips) covering the incision. These will fall off on their own.
- Look at your wound when you change the dressing for signs of infection including redness, swelling and a large amount of drainage. A small amount of bloody or blood tinged drainage is normal. If you have any of these signs, contact your doctor immediately.
- Apply a new telfa dressing every day for 7 days. You do not need a dressing over your incision after 7 days, unless you have external stitches or staples.



If you have external stitches or staples that close your incision, they will need to be removed 7-14 days after surgery. You may have these removed by your primary care doctor or call the Department of Neurosurgery to schedule an appointment.

- Do not soak in the tub or get in a pool for at least 6 weeks or until you are instructed that it is safe to do so.
- It is important to NOT scrub, pick at or attempt to clean the incision. Do not apply any creams, lotion, antibiotics or hydrogen peroxide.
- In order to prevent infections, the most important thing you and your family members can do is to keep your hands clean and take proper care of your incision. It is important to wash hands before and after incision care.
- You will want to make sure that your home environment (particularly your bed and resting areas) are kept very clean to eliminate risks for infection. Keep pets out of your bed and away from your incision.

Infection



Signs of infection are listed in the Yellow Zone on page 25.

If you develop a low fever, this may mean that you need to work on deep breathing.

You should use your incentive spirometer (lung exerciser) 10 times every 2 hours while awake. You should continue every 2 hours for 7 days. You should walk at least 3 times per day to help prevent pneumonia after surgery.



Pain

You may have Tylenol for improved pain control. Take this over-the-counter medication as prescribed.

Additionally, we may send you home with a prescription for pain medication (narcotic) for severe pain. If you would like this filled at the hospital pharmacy, please tell your nurse so it will not cause delay in your discharge home.

Narcotic pain medications often cause nausea (upset stomach). To help reduce the risk of nausea, take your pain medication with a small amount of food.

Your health care team will work with you to create a treatment plan based on the medications you are prescribed.

It is important to remember that misuse of narcotic pain medicines is a serious public health concern. If you take more of your narcotic pain medication than was prescribed or more often than what was prescribed, you will run out of your medication before your pharmacy will allow a new prescription to be filled. This is important because prescriptions for narcotic pain medications cannot be called in to your pharmacy. The prescription has to be picked up in person at your doctor's office with a valid ID.

Virginia has a Prescription Monitoring Program for these types of medications to help keep patients safe. Ask your health care team if you have specific questions.

Pain Medication Weaning

If you are taking narcotic pain medication, you will need to wean off these medications as your pain improves. Weaning means slowly decreasing the amount you take until you are not taking it anymore. Weaning to lower doses of narcotic pain medication can help you feel better and improve your quality of life.

It's important to remember that narcotic pain medication may not provide good pain relief when taken over a long period of time and sometimes they can actually cause your pain to get worse. Narcotic pain medications can also have many concerning side effects including constipation, nausea, tiredness and dependency (addiction). The side effects of narcotic pain medications increase with higher doses which means the more you take, the worse the symptoms may be.

To wean from your narcotic pain medication, we recommend slowly reducing the dose you are taking. *You can increase the amount of time between doses.*

If you are taking a dose every 4 hours, extend that time:

- Take a dose every 5 to 6 hours for 1 or 2 days
- Then, take a dose every 7 to 8 hours for 1 or 2 days.



You can also reduce the dose. If you are taking 2 pills each time, start taking fewer pills:

- Take 1 pill each time. Do this for 1 or 2 days.
- Then, increase the amount of time between doses, as explained above.

If you are not sure how to wean off of your narcotic pain medication, please contact your family doctor.

Once your pain has improved and/or you have weaned off your narcotic pain medication, you may have pills remaining. The UVA Pharmacy is now a DEA registered drug take-back location. There is a Drop Box available in the main lobby of the pharmacy 24 hours 7 days per week for patients or visitors to safely dispose of unwanted or unused medications. 29

Constipation

Constipation is very common with the use of narcotic pain medicine. The ERAS program decreases the risk of constipation by using pain medicine alternatives to help keep you comfortable.



It is very important to AVOID CONSTIPATION AND HARD STOOLS after surgery.

If you are on a regular diet, include plenty of fiber. Good sources of fiber include fresh fruits, vegetables, dried beans and whole grains. You may use fiber supplements with water.

It is important that you drink 6-8 cups of non-caffeinated fluids per day to prevent constipation. Water is best.

We will ask you to take a stool softener (Colace) and laxative medication (MiraLAX) to help prevent constipation once you are home. Please continue to take this each night until you stop your narcotic pain medication. If diarrhea occurs, please stop taking the Colace and MiraLAX.

Walking and regular activity can also help prevent constipation.

Hobbies and Activities

Walking is encouraged from the day following your surgery. Start slowly and give your muscles time to warm up before starting any activity. Remember to use caution as you resume your previous activities and ask your physical therapist for specific instructions.

Plan to walk three or four times daily.

You should NOT:

- Do any heavy lifting for 6 weeks.
(no more than a gallon of milk = 10 lbs).
- Do not make any sudden movements. You should avoid twisting of the neck.

You SHOULD:

- Be able to climb stairs from the time you are discharged.
- Return to hobbies and activities soon after your surgery. This will help you recover.

Remember, it can take up to 2-3 months to fully recover. Plan rest periods for each day. Your body is using its energy to heal your wounds on the inside and out.



Resuming Sexual Relationships

You can resume sexual activity safely immediately after surgery, unless your surgeon recommends a different timeline for you.



Driving

You should not drive until you are off pain medications and have full control of your legs. Do not drive for the first 2 weeks after surgery. You can ride in a car after surgery but you must follow techniques and precautions given by your physical therapist.

Work

- You should be able to return to work 4–6 weeks after your surgery. This estimate might be longer or shorter depending on your recovery rate, how you are feeling, and what type of work you do. Patients with more strenuous jobs may require up to 3 months of recovery before returning to work. Please discuss your specific work activities with your surgeon and check with your employer on the rules and policies of your workplace, which may be important for returning to work.
- If you need a “Return to Work” form for your employer or disability papers, ask your employer to fax them to our office at 434.924.2994.

Write any questions you have here:

RECOVERY After Discharge

Special equipment

Please bring a list of equipment you have access to. We encourage you to get equipment prior to surgery. You can obtain equipment through online stores, borrowing from family/friends, home supply stores, thrift shops, local community resources, and pharmacies.

The following equipment may be necessary after surgery:



The following equipment is optional after surgery:



Long shoe horn



Simple Spine Surgery Pathway:
The Patient's Checklist

GOAL: Safe transition from hospital to home or next care setting through learning basic knowledge of postoperative care and monitoring.

	Actions	Check when complete
Actions	<p>Plan for your care after hospital discharge.</p> <p>Options may include:</p> <ul style="list-style-type: none"> - acute rehab - home with home health - home with outpatient therapy <p>Physical and occupational therapy will recommend appropriate rehabilitation options after surgery.</p> <p>Arrange to have help available at home 24/7 for assisted supervision for 2-3 days.</p>	
Actions	<p>The following equipment <i>may be necessary</i> after surgery.</p> <ul style="list-style-type: none"> - Front Wheel Walker - Cane <p>The hospital does not supply these items. <i>A prescription will be given to you at your appointment if your insurance allows it to be filled before surgery. Otherwise you will receive a prescription for equipment at the time of discharge.</i></p> <p>Your therapist will work with you after surgery to determine your needs.*</p>	
Actions	<p>The following equipment <i>may be helpful</i> following your surgery:</p> <ul style="list-style-type: none"> - Reacher - Long sponge - Sock aid - Long shoe horn - Leg lifter - Raised toilet seat - Bath seat 	

	<p>Adaptive equipment that can be used at home(do not bring with you to the hospital):</p> <ul style="list-style-type: none"> - Toilet safety frames or grab bars - Bedside commode - Hand held shower - Shower grab bars <p>* You can obtain equipment through online stores, borrowing from family/friends, home supply stores, thrift shops, local community resources, and pharmacies.</p>	
Medications	Make an updated <u>list</u> of your medications. Include all prescriptions, over the counter medications and supplements including herbals.	
2 weeks prior to surgery	Actions	Check when complete
Actions	You will go to the Anesthesia Perioperative Medicine Clinic (APMC). Further testing and any lab work may be done at this time.	
Medications	Stop taking any vitamins, supplements, and herbs 2 weeks before your surgery including Vitamin E, fish oil, flaxseed, and OTC supplements. See list in section 1 of your handbook.	
Medications	Stop taking birth control pills and any male or female hormone (including creams or patches) 2 weeks before surgery	
Week prior to surgery	Actions	Check when complete
Actions	Beginning 5 days before your scheduled surgery, use the Hibiclens foam soap provided to you as instructed in your handbook.	<input type="checkbox"/> Day 1 <input type="checkbox"/> Day 2 <input type="checkbox"/> Day 3 <input type="checkbox"/> Day 4 <input type="checkbox"/> Day 5
Actions	<p>Pack your hospital bag.</p> <p>You will need loose, clean clothing to wear the morning after surgery as well as your front wheeled walker if you already have one.</p>	

Actions	Bring the things you are going to use (phone, emergency contact information and other frequently used items) to the main floor of your home.	
Actions	<p>Make clear walking paths large enough for your walker by:</p> <ul style="list-style-type: none"> - moving furniture - clearing cords - removing throw rugs - taping down the edges of large area rugs - take your walker for a test drive through the bathroom doors 	
Medications	Stop taking ibuprofen (Motrin® or Advil®), naproxen (Aleve®) and aspirin-containing medications 1 week before surgery.	
Medications	Starting three days prior to surgery, take a dose of Miralax to help regulate your bowels before surgery. This is easiest taken in the late afternoon or early evening.	<input type="checkbox"/> Day 1 <input type="checkbox"/> Day 2 <input type="checkbox"/> Day 3
Actions	<p>Purchase the following items to have at home. You will use them when you return home after your surgery.</p> <ul style="list-style-type: none"> <input type="checkbox"/> Tylenol (acetaminophen) 325mg tablets (for pain) <input type="checkbox"/> Colace (docusate sodium) 100mg tablets (stool softener) <input type="checkbox"/> Miralax (polyethylene glycol) powder (for constipation) <input type="checkbox"/> Dry, non-adhering gauze (dressing for incision) <input type="checkbox"/> First aid/medical tape (dressing for incision) 	

Morning of Surgery	Action	Check when complete
Medications	Take any medication you were instructed to take the morning of surgery.	
Actions	Use the Hibiclens foam soap provided to you as instructed in your handbook.	
Diet	Do not eat the morning of surgery. Continue drinking clear liquids such as water, apple juice and Gatorade™ as directed by the phone call nurse.	

	Drink your Gatorade™ before check in, then nothing more to drink. If you are diabetic, you may drink Gatorade™ G2.	
Actions	Bring your CPAP or Bi-PAP machine with you, if you use one.	
Actions	Bring your blood band with you, if you were given one.	
Actions	Bring an updated <u>list</u> of your medications. Do not bring your medications.	
Actions	Bring this ERAS handbook and this checklist in to the hospital with you when you check in for surgery.	

After Surgery	Action	Check when complete	RN Initials
Mobilize	You will get out of bed with assistance from physical therapy or nursing staff on the same day of your surgery. You will also get out of bed and sit in the chair for meals.		
Pain management	Discuss with nurse what will be used to manage post-operative pain. Demonstrate understanding of UVA's pain scale.		
Diet	You may have a regular diet as tolerated.		
Post-operative Day 1	Action	Check when complete	RN/OT/PT Initials
Mobilize	You will get out of bed with assistance and walk to the bathroom or in the hallway with physical therapy or nursing staff.		
Mobilize	You will also get out of bed and sit in the chair for <u>all</u> meals.		
Infection prevention	Identify signs and symptoms of wound infection. Demonstrate appropriate wound care, including hand washing.		
Pain Management	Pain well-controlled on oral pain medications. Describe pain management plan for discharge.		

Diet	Continue regular diet as tolerated.		
Self-care	You will get dressed with occupational therapy or nurses using adaptive equipment.		

Discharge	Action	Check When Complete	RN Initials
Actions	Your care partner and responsible ride home will need to be at the hospital by 9AM the morning of your discharge. It is important that they are here to listen to discharge instructions and learn how to safely care for you at home. We aim to discharge by noon.		
Discharge Instructions	Verbalize understanding of signs and symptoms of a potential complication and what actions to take in the event of a complication.		
Discharge Preparation	Ensure you have a ride home from the hospital, extra oxygen (if you need it), and all of your belongings that may have been stored in "safe keeping" during your hospital stay.		

KCC 2.3.2020