INFORMED CONSENT FOR SPINAL SURGERY

Please read this entire form carefully before signing. You have the right to ask questions at any time. Do not sign until you understand and agree with everything in this document.

1. PATIENT & PROCEDURE IDENTIFICATION

Patient Full Name: _____ **Date of Birth:** _____

_____ _____

Procedure(s) to be Performed: _____ _____

_____

2. PURPOSE OF THIS SURGERY

Spinal decompression surgery is performed to relieve pressure on the spinal cord or nerve roots. This pressure can cause pain, numbness, weakness, or problems with bladder and bowel function. The goal of decompression is to reduce or eliminate these symptoms and to prevent further damage to your nerves. In some cases, decompression alone is not sufficient to relieve symptoms. When the spine is unstable — due to degeneration, deformity, fracture, or because the decompression itself removes bone or disc material that normally provides support — a spinal fusion may also be performed. Fusion joins two or more vertebrae (bones of the spine) together using bone graft material often screws/rods/plates, so that they heal into a single solid unit. The goal of fusion is to eliminate motion at the affected level, reduce pain caused by instability, and protect the nerves over the long term. Whether fusion is planned, possible, or not anticipated in your case will be discussed with you by your surgeon before the operation.

3. WHAT WILL HAPPEN DURING SURGERY

You will receive general anesthesia with a breathing tube so you will not feel pain during the procedure. Your surgeon will make an incision (cut) in your back, neck, or side — depending on which part of your spine needs treatment. Bone, disc material, or other tissue that is pressing on your spinal cord or nerves will be removed. In some cases, screws, rods, bone graft from your body/bone bank or spacers (implants) may be used to stabilize the spine. Your surgeon will close the incision when the procedure is complete. The exact surgical steps may vary based on what is found during your operation.

4. EXPECTED BENEFITS

Surgery may provide some or all of the following benefits:

- Relief from pain in the neck, back, arms, or legs
- Improved strength, sensation, and coordination
- Better bladder and bowel control (if affected before surgery)
- Prevention of further nerve damage
- Improved ability to perform daily activities

There is no guarantee of any specific outcome. Results vary from person to person.

5. GENERAL RISKS OF SURGERY AND ANESTHESIA

All surgery carries risk, regardless of how routine the procedure is. General risks include:

- Infection — in the wound (superficial) or deep in the spine (discitis, osteomyelitis, epidural abscess), which may require antibiotics or a return to the operating room
- Bleeding — including accumulation of blood (hematoma) that may require surgical drainage if compressing the spinal cord, nerves or airway
- Blood clots — in the leg veins (deep vein thrombosis) or lungs (pulmonary embolism), which can be life-threatening
- Anesthesia reactions — including breathing problems, allergic reactions, or cardiac events
- Pneumonia or other lung complications
- Wound healing problems
- Stroke
- Cardiac arrest
- Vision changes or blindness (rare)
- Reactions to medications, implants, or transfused blood products
- Death (rare)

6. RISKS SPECIFIC TO SPINAL SURGERY

In addition to the general risks above, spinal surgery carries the following specific risks:

Neurological Risks:

- Spinal cord injury — which can cause permanent weakness, paralysis, or loss of sensation
- Nerve root injury — which can cause pain, numbness, tingling, or weakness in the arms or legs
- Foot drop or other motor deficits
- Loss of bladder or bowel control (cauda equina syndrome)
- Worsening of existing spinal cord dysfunction (myelopathy) or leg cramping with walking (neurogenic claudication)
- Numbness or altered sensation in the skin

Structural and Surgical Risks:

- Dural tear — a small hole in the membrane surrounding the spinal cord that can cause spinal fluid leakage; usually repaired during surgery but may require bed rest or additional procedures
- Arachnoid cyst formation or arachnoiditis — scarring of the nerves inside the spinal canal
- Implant failure — screws, rods, or spacers may loosen, break, or shift and may require reoperation
- Pseudarthrosis — failure of a bone graft to fuse, which may require additional surgery
- Adjacent segment degeneration — increased wear at spinal levels above or below the surgical site
- Problems at other levels of the spine requiring future treatment or surgery

Risks with Cervical (Neck) Surgery:

- Hoarseness or voice changes — from irritation or injury to the laryngeal nerve (nerve controlling the voice box); bleeding in neck which can push on airway and cause death
- Difficulty swallowing — from swelling or retraction of the esophagus (food tube)
- Esophageal (food tube) injury
- Injury to the carotid artery or jugular vein
- Vertebral artery injury — a major blood vessel in the neck — which can cause stroke
- Horner's syndrome — drooping eyelid, small pupil, and reduced sweating on one side of the face

Recurrence Risks:

- If the spinal problem is caused by a tumor or infection, it may recur or spread despite surgery
- Symptoms may return or be incompletely relieved; compression on nerves can recur

7. NEUROLOGICAL MONITORING DURING SURGERY

During surgery, special monitoring equipment may be used to track the function of your spinal cord and nerves in real time. This helps your surgeon detect and respond to any changes that could indicate nerve stress or injury.

You should be aware of the following:

- Monitoring carries small risks of its own, including mouth or tongue injury from electrode placement, or very rarely, seizure; injury to nerve in hand or localized hair loss from needle in scalp
- Monitoring may not be possible in all cases due to the severity of your spinal condition or technical limitations
- If reliable signals cannot be obtained or are lost during surgery, your surgeon will not have real-time information about nerve function — this could increase the risk of an undetected nerve injury
- Some monitoring methods may require specific anesthesia protocols and may not be FDA-approved for all uses

8. ALTERNATIVES TO SURGERY

Surgery is not the only option. The following non-surgical treatments have been discussed with you:

- No treatment — watchful waiting
- Physical therapy and structured exercise
- Pain medications and anti-inflammatory drugs
- Epidural steroid injections or nerve blocks
- Chiropractic care, manual therapies, acupuncture, massage
- Continued management by your primary care physician or pain specialist

Your surgeon has explained the likely effectiveness and risks of each alternative. You have chosen to proceed with surgery.

9. WHAT MAY HAPPEN IF YOU DO NOT HAVE SURGERY

You have the absolute right to refuse surgery or any other treatment. However, without surgery, the following may occur:

- Your pain may continue or worsen
- Nerve damage may progress and become permanent
- Your ability to walk or use your arms may decline

Your surgeon has discussed these risks with you in the context of your specific diagnosis.

10. NO GUARANTEE OF OUTCOME

No promises or guarantees have been made about the results of this surgery. Surgery may not fully relieve your symptoms. In some cases, symptoms may remain the same or worsen after surgery. Medicine is not an exact science, and outcomes cannot be predicted with certainty. You must stop smoking one month before surgery and remain smoke free for at least six months after surgery.

11. UNEXPECTED FINDINGS DURING SURGERY

Once surgery has begun, your surgeon may discover conditions that were not visible on imaging studies before the operation. If this occurs, your surgeon may need to change, expand, or modify the planned procedure to best treat your problem and protect your safety.

By signing this consent, you authorize your surgeon and his associates to perform such additional or modified procedures as may be necessary under those circumstances.

12. BLOOD PRODUCTS AUTHORIZATION

Surgery carries a risk of blood loss. In some cases, a blood transfusion may be needed during or after your procedure. Blood transfusion carries its own risks, including allergic reaction (ranging from mild fever and hives to a rare but life-threatening hemolytic reaction if blood types are mismatched), transmission of infectious disease (including hepatitis B, hepatitis C, and HIV, though the current risk is extremely low due to modern screening), transfusion-related acute lung injury (TRALI), transfusion-associated circulatory overload

(TACO), and immune system effects that may increase susceptibility to infection. Your surgical and anesthesia teams take every precaution to minimize blood loss and to use transfusions only when medically necessary.

I authorize the use of blood or blood products if my surgeon or anesthesiologist determines they are medically necessary.

If you have specific religious or personal beliefs about blood products, please discuss them with your surgeon and anesthesiologist BEFORE the day of surgery.

13. IMPLANTS AND MEDICAL DEVICES

Your surgeon may use one or more of the following during your procedure:

- Bone screws, rods, or plates to stabilize the spine
- Screws and other spinal implants are placed using anatomical landmarks, imaging guidance, and/or navigation technology; however, a screw may be positioned in a way that contacts or irritates a nearby nerve root or the spinal cord, causing new or worsening pain, numbness, or weakness. If this occurs, a second operation to reposition or remove the screw may be necessary.
- Interbody spacers or cages to restore disc height and support fusion
- Bone graft material (your own bone, donor bone, or synthetic material);
- Electrodes or probes for neurological monitoring
- In some cases, a biologic protein called bone morphogenetic protein (BMP) may be used to stimulate bone growth and promote fusion. Use of BMP is off-label for certain spinal applications, and carries its own risks including abnormal bone formation (heterotopic ossification), fluid build up, and inflammation of nerves. Your surgeon will discuss whether BMP is planned for your specific procedure.

Specific device information is available upon request and will be documented in your operative report.

14. RESIDENT AND TRAINEE PARTICIPATION

This practice is affiliated with a teaching program. Surgical residents, fellows, or medical students may participate in your care and in your operation. All trainees work under the direct supervision of your attending surgeon, Dr. Antoniades, who will be present for the key portions of your procedure.

15. RESEARCH PARTICIPATION (OPTIONAL)

Dr. Antoniades conducts spinal research sponsored by professional societies, industry partners, or independently. You may be asked to participate in a research protocol related to your condition or surgery. Participation is entirely voluntary and has no effect on the quality of your care if you decline.

16. SMOKING AND NICOTINE — IMPORTANT WARNING

Smoking and nicotine use significantly worsen surgical outcomes. This includes cigarettes, cigars, chewing tobacco, nicotine patches, and e-cigarettes. Nicotine reduces blood flow to healing tissues and greatly increases the risk of infection, poor wound healing, and fusion failure.

You are responsible for stopping all nicotine and smoke exposure before and after surgery. If you continue to use tobacco or nicotine products, you accept an increased risk of complications, including the need for reoperation.

17. POST-OPERATIVE CARE AND YOUR RESPONSIBILITIES

A successful outcome depends not only on the surgery itself, but also on your commitment to recovery. After surgery, you will be given specific instructions that may include:

- Activity restrictions and wound care

- Prescribed medications, including pain control and blood clot prevention
- Use of a brace or collar (if applicable)
- Physical therapy or rehabilitation
- Follow-up appointments with your surgeon

Failure to follow your post-operative instructions may delay healing, cause complications, or require additional surgery. If you have questions about your care at any time, contact your surgeon's office.

18. QUESTIONS AND UNDERSTANDING

Before signing, please confirm the following:

- I have read this entire consent form, or it has been read to me.
- I have had enough time to think about this decision.
- I have been able to ask all the questions I have, and my questions were answered to my satisfaction.
- I understand that I may seek a second opinion from another surgeon at any time — Dr. Antoniades encourages this.
- I understand that I may refuse surgery or withdraw my consent at any time before the operation begins, without penalty or effect on my medical care.

This consent is valid unless I revoke it in writing, or unless my medical condition changes significantly before surgery.

19. CAPACITY AND VOLUNTARY CONSENT

By signing below, the patient (or authorized representative) confirms:

- I am at least 18 years of age, or I am the legal guardian or authorized representative of the patient named above.
- I am alert, oriented, and capable of making this decision.
- I am not under the influence of medications, substances, or other factors that impair my judgment.
- My consent is given freely and voluntarily. No one has pressured or coerced me into signing this form.
- I understand the information in this form, including the risks, benefits, and alternatives.

20. SIGNATURES

Patient or Authorized Representative:

Signature | **Printed Name/ Date and time**

Surgeon Attestation:

I have explained the nature of the proposed procedure, its risks, benefits, and alternatives to the patient or authorized representative, and have answered all questions to the best of my ability.

Spiro Antoniades, M.D. — Signature
3449 Wilkens Ave suite 305 Balt Md Tel 410-877-7776
Fax 410-368-9997

Date / Time

Witness:

Witness Signature | **Printed Name / Title/ date and time**