



For more information please visit us online at: <http://www.osmh.on.ca/diagnostics/>

If you or your support person do not clearly understand the procedure, please ask for clarification

KEY POINTS:

- Uterine artery embolization (UAE) is a minimally invasive treatment for symptomatic uterine fibroids (non-cancerous growths in the uterus).
- The procedure is highly effective, with 80% of patients experiencing significant symptom relief.
- UAE is performed under local anesthetic with light sedation, avoiding the need for major surgery.
- Recovery is quicker than with surgical options, though it can take up to six months for the fibroids to shrink fully.

YOU WILL NEED AN MRI SCAN:

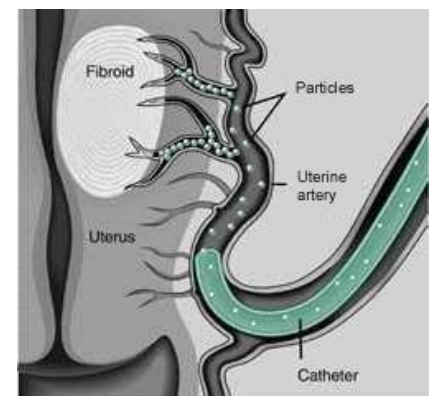
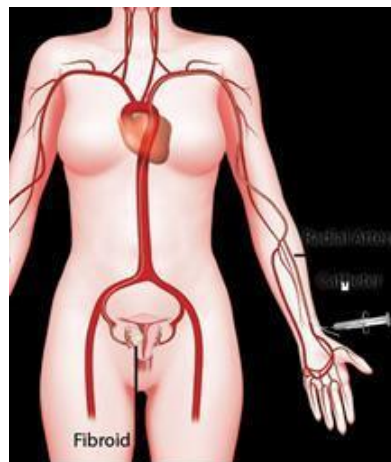
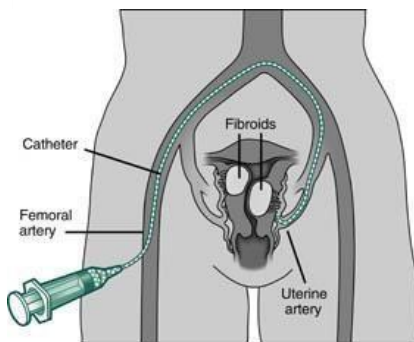
An MRI is essential to determine if you are a good candidate for Uterine Artery Embolization (UAE). It provides detailed images of the uterus, helping us plan the procedure and identify any other conditions, such as endometriosis or adenomyosis, that might be contributing to your symptoms.

THE RESULTS:

- It may take up to six months to see the full effects of UAE, as fibroids take time to shrink and symptoms gradually improve.
- At 12 months, 80–90% of women experience significant relief from bleeding and pressure symptoms, with fibroids shrinking by 40–70% and uterine volume by 40–50% within three months.
- Fibroids successfully treated with UAE do not regrow, though new fibroids may develop over time.
- UAE may not be effective in up to 20% of women, and surgery could be required in those cases.

FOLLOW-UP:

A follow-up MRI is typically done **six months after UAE**. No further follow-up with our department is needed, and you can return to routine gynecologic check-ups. Be patient as it may take up to six months for symptoms to improve. If symptoms persist, you may be among the 10–20% for whom UAE is ineffective and should discuss alternative treatments with your doctor.



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UTERINE ARTERY EMBOLIZATION

What is it?

Uterine Artery Embolization (UAE), also known as *Uterine Fibroid Embolization (UFE)*, is a minimally invasive treatment for uterine fibroids: common, non-cancerous growths in the uterus. While most fibroids do not cause symptoms, some can lead to issues such as **heavy periods, pelvic pain or pressure, pain during intercourse, back or leg pain, constipation, bloating, and bladder pressure with frequent urination.**

Treatment is typically only needed for fibroids causing symptoms. Options include medications to shrink fibroids, surgical procedures like myomectomy (removal of fibroids) or hysterectomy (removal of the uterus), and UAE. If you are being considered for UAE, your gynecologist has likely discussed these options with you and referred you for evaluation. UAE offers an effective, non-surgical alternative to manage symptomatic fibroids.

Why do I need it?

Your gynecologist may recommend this procedure if you have uterine fibroids causing any of the symptoms mentioned above.

What are the alternatives?

Treatment is usually not needed for fibroids that don't cause symptoms. For those that do, several options are available. Medications can be prescribed to help shrink fibroids and manage symptoms. Surgical treatments include myomectomy, which removes only the fibroids, and hysterectomy, which involves removing the entire uterus. Your gynecologist will have discussed these alternatives with you before recommending an evaluation for Uterine Artery Embolization (UAE).

What are the potential risks and side effects?

Most women find UAE tolerable, requiring **1–2 weeks to recover** (majority recover within one week).

Common side effects:

- Pain and cramping (mild to severe), managed with prescribed medications.
- **Post-embolization syndrome** (pain, nausea, fever, fatigue) lasting up to two weeks; fever is common and not usually a concern unless prolonged with chills/sweats.
- Spotting or vaginal discharge in up to 50% of women, lasting several weeks.
- Irregular periods for months; spotting may last up to six weeks.
- Delayed or absent periods after UAE, especially in older women (3% under 40; up to 45% over 45).

Rare side effects:

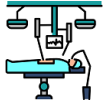
- Uterine infection (<1%), which may require hysterectomy and typically develops weeks to months after UAE. Symptoms include worsening pain, fever, and discharge.
- Passing fibroid tissue (2–3% of women), which is normal and not harmful.

There is a small risk of an **allergic reaction** to the x-ray dye. While the effect of UAE on fertility is uncertain, many women have had successful pregnancies after the procedure, and the **minimal radiation exposure** poses no harm to future pregnancies.



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HOW IS THE PROCEDURE PERFORMED?

Before

For specific questions regarding the clinical need for this procedure, please contact your ordering provider.

Patient Preparation:

You should wear loose-fitting clothing that is easy to change out of. **You will need to arrange for someone to drive you home after you have recovered from the procedure.** One support person (spouse, friend, caregiver, family member) may accompany you on the day of your appointment, but not into the procedure room.

You may have clear fluids up to **four hours** before the procedure. Continue taking your morning medications, **except for blood thinners** (see next page), with a small sip of water.

Please bring a list of the medications you are currently taking and a list of any drug/medication allergies you may have.

Please phone the Diagnostic Imaging booking line at **705-325-2201 ext. 3505** for cancellations or rebooking if you are unable to attend your appointment.

Notes / Questions *(write down any notes or questions you may have for your doctor, healthcare practitioner, or the care team in Diagnostic Imaging on the day of your appointment. You can also use this space to write down a list of your current medications):*

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Bloodwork⁴

Bloodwork is required and must be done within **2 weeks** of your appointment (within 72 hours for inpatients). Your doctor may order:

- INR (must be ≤ 1.8)
- PTT
- CBC (platelets must be $\geq 50 \times 10^9/L$ or greater)

If you take **Warfarin (Coumadin)**, you'll need a new INR drawn the **day before** your procedure.

Important: Missing bloodwork may cause delays or your procedure to be rescheduled.

Blood Thinners / Anticoagulants / Antiplatelets Medications⁴

Stop the listed medications as per the below schedule before your procedure unless instructed otherwise. If unsure, then consult your doctor or healthcare provider about which medications to pause, for how long, when to restart them, and any concerns you may have.

| Medications | When to Stop | Restart After |
|---|-----------------------------------|------------------------------------|
| Acova (Argatroban) | 2-4 hours | 4-6 h |
| Aggrenox (ASA/dipyridamole)*** | 3-5 days | Next day |
| Angiomax (Bivalirudin) | 2 hours | 4 h |
| Arixtra (Fondaparinux) | 2 days (3 days if eGFR is <50) | 24 h |
| ASA (Aspirin) | Do not stop | N/A |
| Brilinta (Ticagrelor)*** | 5 days | Next day |
| Coumadin (Warfarin)*/** | 5 days (recheck INR) | Same day (evening) |
| Effient (Prasugrel)*** | 7 days | Next day |
| Eliquis (Apixaban)** | 2 days (3 days if eGFR is <50) | Second day |
| IV Heparin (unfractionated)** | 4 hours (check PTT) | 6 h |
| LMWH (prophylactic): enoxaparin (Lovenox), dalteparin (Fragmin)** | 12 hours | Next day |
| LMWH (therapeutic): enoxaparin (Lovenox), dalteparin (Fragmin)** | 24 hours | Next day |
| Plavix (Clopidogrel)*** | 5 days | 6 h (if 75 mg) 24 h (if 300 mg) |
| Pradaxa (Dabigatran)** | 2 days (3 days if eGFR is <50) | Next day |
| Savaysa (Edoxaban) | 2 days | Next day |
| Subcutaneous Heparin (unfractionated)** | 8 hours (check PTT) | Same day (evening) |
| Xarelto (Rivaroxaban)** | 2 days (3 days if eGFR is <30) | Next day |
| * Consider bridging with heparin (need admission) for high thrombosis risk cases ** Consider using reversal agent if emergent or STAT *** Consider continuation for arterial procedures including mesenteric, renal, subclavian, and infra-inguinal angioplasty/stent | | |

Important Notes

- Patients on Warfarin (**Coumadin®**) need an **INR** test the **day before** the procedure.
- Those with **prosthetic valves, prior clots, or stroke-related atrial fibrillation** may need bridging therapy to prevent thrombosis.
- **Do not** stop blood thinners if you have **coronary or brain stents**—consult your doctor first.
- If anticoagulation is stopped, your doctor must provide instructions.
- Applies only to elective procedures, not emergencies.

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Coming To The Hospital

You must first sign-in with **Centralized Patient Scheduling & Registration (CPSR)**, which is located immediately to your left when you enter the hospital from the main entrance (off Dunlop Street, across from the gift shop). You'll receive a wristband and, for new tube insertions, be directed to **Day Surgery**. They'll prepare you and take you to **Diagnostic Imaging** at your scheduled time.

Please bring to the hospital your OHIP card and a list of current medications you are taking.

You may also bring a book, water, phone/tablet with earphones, and a snack in a small bag for when you are recovering from the procedure.

During

This procedure is performed in the Interventional Radiology Department of Diagnostic Imaging.

The duration of your appointment time will vary from 1 hour – 3 hours.

You will recover in the Post Anesthesia Care Unit (PACU) for another 1 hour – 2 hours.

1. You will change into a hospital gown and lie on your back on a fluoroscopy table.
2. A medical radiation and imaging technologist (MRIT) will explain the procedure and answer any questions you have.
3. The procedure is performed under sterile conditions. Your wrist or groin will be cleaned with a hospital-approved cleansing agent, and sterile drapes will be applied.
4. You will be awake for the procedure but will receive pain medication and a local anesthetic (Lidocaine) to numb the area.
5. Once the area is numb, the interventional radiologist will insert a needle into an artery, guided by ultrasound and x-rays.
6. If in your wrist, they will also administer an antispasmodic medication. It may have a burning sensation, but only momentarily.
7. A thin wire and catheter (narrow tube) will be inserted through the vein and guided to the uterine arteries under x-ray imaging.
8. Once in position, the radiologist will inject particles into the uterine arteries, stopping the flow of blood to the fibroids.
9. Additional x-rays will be taken to confirm the arteries are fully blocked. You will not feel the catheter or wires moving inside your arteries.
10. After treatment, the catheter will be removed, and the radiologist will apply firm pressure to the puncture site to prevent bleeding. A closure device or dressing may also be applied.
11. You will recover in the Post-Anesthesia Care Unit (PACU) and be discharged once you meet recovery criteria. In some cases, an overnight hospital stay may be needed for observation.

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WHAT TO EXPECT AFTER^{1,2,3}



Recovery & Going Home

You will be sent to the **Post Anesthesia Care Unit (PACU)** to recover from the procedure. A nurse will monitor your blood pressure, pulse, and the puncture site to ensure there is no bleeding. You will rest in bed for 3 - 4 hours, and most patients go home the same day. In rare cases, an overnight stay may be required. This possibility will be discussed with you at the time of your consultation appointment.

If your wrist artery was used, the interventional radiologist will check the puncture site and closure device **after one hour** to determine if it can be removed or needs to stay longer.

You will need someone to drive you home after the procedure. Don't drive for the next 24 hours or while you're taking strong pain medicine. If you were given medication to help you relax or manage pain during the procedure, then you cannot drive for the next 24 hours.



Diet & Activity

- Rest for the remainder of the day. Sleep when you feel tired.
- Have an adult family member, caregiver, or friend stay with you the night after the procedure in case you need help.
- **You will need 1 – 2 weeks off your job to recover (most recover in 1 week)**
- Resume your normal diet after 24 hours, but if you feel nauseous, try bland, low-fat foods like rice, chicken, toast, or yogurt.
- You may resume light activities after 24 hours.
- Avoid lifting anything heavier than 4.5 kilograms (10 pounds) or straining on the toilet for 48 hours.
- Do not participate in sports or strenuous activity.
- You can bathe or shower whenever you feel ready.
- Gradually increase your physical activity as you feel comfortable.
- Check your temperature twice daily for the next five days.
- If you were given antibiotics or pain medication, take them as directed. Some pain is normal.

Please discuss with the radiologist anything you should avoid or not participate in after this procedure



Wound Care

- You will have a standard bandage / dressing covering the insertion site of your procedure
- It is normal to feel soreness in the area of the insertion site for 2 – 3 days.
- Keep a dressing / bandage over the insertion site for the first day.
- After 24 hours you should change the dressing / bandage. You may replace it with a Band-Aid that is big enough to cover the insertion site from the catheter.
- It is important to keep the insertion site clean and dry.
- Your insertion site should stay soft and dry as it heals. If you notice minor bleeding:
 1. Lie flat immediately.
 2. Apply **firm pressure** with a clean cloth or tissue for **15 minutes**. If possible, have someone else help.
 3. After 15 minutes, the site should be dry and flat. Cover it with a bandage.
 4. Notify your doctor or healthcare provider right away. If bleeding does not stop then go to the Emergency Department of the nearest hospital.



Diagnostic Imaging – Interventional Radiology

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Bathing

- You can shower or bathe normally after 24 hours as, as long as the insertion site is scabbed over or closed.
- Be gentle as you wash over this area of your body.

Talk to the interventional radiologist about bathing techniques if you have concerns.



Medication

- **Fill the prescriptions that were given to you and follow the instructions on the labels carefully.**
- **If your doctor or healthcare provider advised you to stop any medications for this procedure then consult with them first about the safety of when you can start your medications again;**
- Otherwise, resume your normal medication schedule.
- If you **normally** take acetylsalicylic acid (Aspirin™) or another blood thinner medication, ask your doctor or healthcare provider when to start taking it again. Make sure that you understand exactly what they want you to do;
- Otherwise, **do not** take (Aspirin™) or anti-inflammatory medicines (ex: ibuprofen) for **1 week** after the procedure.
- Over-the-counter pain relievers like **Tylenol** can help ease any discomfort.

Notes / Questions (write down any notes or questions you may have for your doctor, healthcare practitioner, or the care team in Diagnostic Imaging on the day of your appointment.):

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WHEN TO SEEK HELP³



Call 911:

If you believe you require emergency care – **call 911**. Reasons to call 911 include:

- You have passed out (lose consciousness), or become very dizzy, weak, or less alert
- You have severe trouble breathing
- You have a fast or uneven pulse
- You experience sudden chest pain and shortness of breath
- Significant bleeding from the puncture site (i.e. bright red blood that won't stop)
- Continuous profuse blood streaming from the wound
- A jet of blood pumping from the puncture wound
- Quickly increasing swelling of the area around the wound, which may be pulsating



Call your doctor, healthcare provider, or Health Connect Ontario immediately if you experience:

- Increased pain, swelling, warmth, or redness at the procedure site
- Redness or warmth around the procedure site or pus or blood draining from the procedure site
- Your access arm or hand is pale, painful, or cold during treatment
- A fever (more than 100°F / 38°C)
- Chills, with or without fever
- Bright red blood has soaked through the bandage / dressing over the procedure site.
- You have bleeding from your access site that does not stop after 15 - 20 minutes of gentle pressure.
- You have new or worse pain at the procedure site.
- You are vomiting, or have new or worse nausea and/or vomiting
- Pain or cramping in the abdomen not relieved by pain medication
- Redness or red streaks around the puncture site
- Bleeding, pain or drainage at the puncture site
- Calf tenderness or pain
- Numbness or tingling in the foot, thigh or leg (groin puncture), or numbness or tingling in the hand, forearm or upper arm (wrist puncture)
- Swelling of the ankle and/or foot (groin puncture) or swelling of the arm or neck (wrist puncture)
- Increased bruising extending beyond the puncture site
- Colour change and/or coolness of the leg or foot (groin puncture) or arm or neck (wrist puncture)

Health Connect Ontario may be reached 24-hours a day, including weekends, by:

- Calling 8-1-1
- Calling 1-866-797-0007 (TTY – teletypewriter service)
- Visiting <https://healthconnectontario.health.gov.on.ca/> and selecting “Chat with us”

BRING THIS INFORMATION PACKAGE WITH YOU SHOULD YOU URGENTLY NEED TO SEE YOUR DOCTOR OR GO TO THE EMERGENCY DEPARTMENT OF YOUR NEAREST HOSPITAL.

Use this material for your information only. It does not replace advice from your doctor or other health care professionals. Do not use this information for diagnosis or treatment. Consult with your health care provider about a specific medical condition.

References:

1. Catheter Embolization. Accessed October 9, 2024. RadiologyInfo.org. <https://www.radiologyinfo.org/en/info/cathembol>
2. Endovascular Embolization. Access October 9, 2024. Lexi-Comp Online. <https://online.lexi.com/>
3. Bland Embolization Patient Education. Accessed October 9, 2024. Northwestern Medicine. <https://www.nm.org/patients-and-visitors/patient-education/hematology-oncology/bland-embolization-patient-education>
4. Patel et al. Society of Interventional Radiology Consensus Guidelines for the Periprocedural Management of Thrombotic and Bleeding Risk in Patients Undergoing Percutaneous Image-Guided Interventions—Part II: Recommendations. JVIR 2019; 30:1168–1184.

Adapted from the Sunnybrook Health Sciences Uterine Artery Embolization patient care package
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