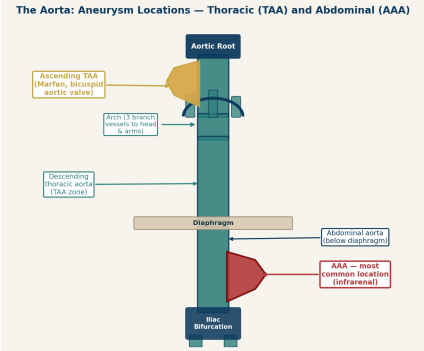
Aortic Aneurysm

When the Body's Largest Artery Develops a Bulge — What You Need to Know

An aortic aneurysm is a balloon-like enlargement of the aorta — the large artery that carries blood from the heart to the body. It is usually silent until it ruptures. Screening, surveillance, and timely repair save lives.



Online: https://go.riasalimd.com/aortic-aneurysm-guide

Rias KS Ali, MD FACC

Board Certified in Interventional Cardiology & Cardiovascular Disease

4740 Mile Stretch Drive, Holiday FL 34690 | Office: (727) 943-5200 | Fax: (727) 943-5201 | RiasAliMD.com

Last Updated: August 2026

Names & Terms You Will Hear

Term	Meaning
Aortic aneurysm	A weak, balloon-like bulge in the aorta. The wall stretches over time. It can burst without warning.
AAA (abdominal aortic aneurysm)	An aneurysm in the belly portion of the aorta. It forms below the kidney arteries in 9 out of 10 cases. The most common type.
TAA (thoracic aortic aneurysm)	An aneurysm in the chest. It can form at the root, the ascending aorta, the arch, or the descending aorta.
Aortic root	The first part of the aorta. It sits just above the heart's aortic valve. Common site for aneurysms in Marfan syndrome.
Aortic dissection	A tear in the inner lining of the aorta. Blood forces the layers apart. Type A (chest) is a surgical emergency. Type B (belly) is often treated with medicine. Call 911 for sudden tearing chest or back pain.
Acute aortic syndrome	A group of life-threatening aortic events — rupture, dissection, wall bleeding. All cause sudden, severe, tearing pain. Call 911 at once.
EVAR — endovascular aneurysm repair	A minimally invasive repair for belly aneurysms. A stent-graft is placed through the groin. No large incision needed.
TEVAR — thoracic endovascular aortic repair	EVAR applied to the descending chest aorta. Lower risk than open chest surgery for most patients.
Open surgical repair	Surgery to replace the weak aorta with a cloth graft. More invasive, but very durable. Often best for younger, healthy patients.
Endoleak	Blood still seeping into the aneurysm sac after EVAR or TEVAR. Found on follow-up imaging. Some types need re-treatment. Reason annual scans are needed for life after endovascular repair.

Term	Meaning
Heritable thoracic aortic disease	Gene conditions that weaken the aortic wall. Marfan syndrome, Loeys-Dietz syndrome, vascular Ehlers-Danlos, and bicuspid aortic valve all belong to this group.
Surveillance imaging	Scheduled scans — ultrasound, CT, or MRI — to track aneurysm size. Growth over 0.5 cm in 6 months is a signal to discuss repair.

CALL 911 NOW if you have any of these:

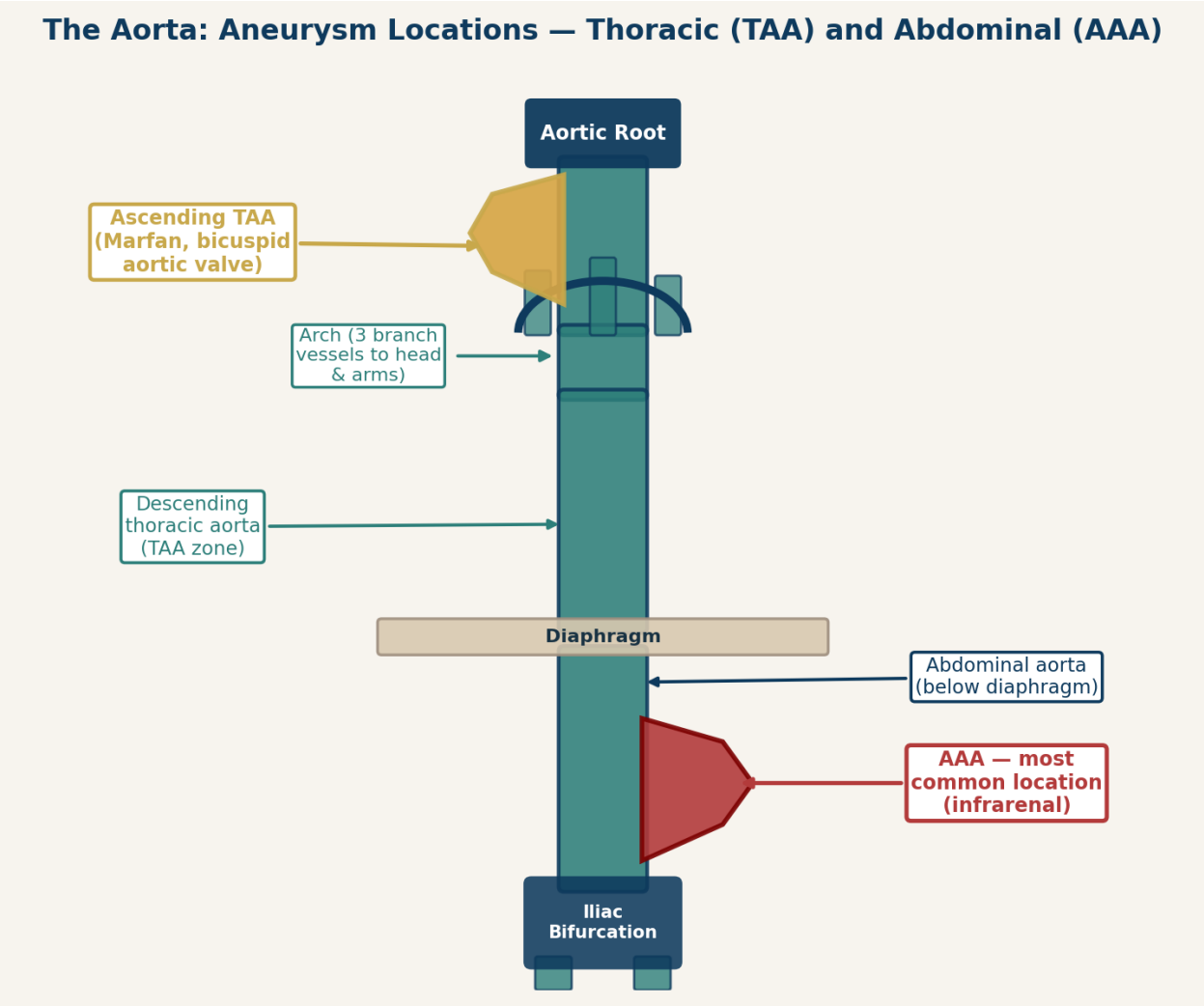
- **Sudden, severe tearing or ripping pain** in your chest, back, or belly
- **Sudden fainting or collapse** with known aortic disease
- **Sudden leg weakness or numbness** after severe chest or back pain

These are signs of aortic **rupture or dissection**. Do not drive yourself. Do not wait. **Call 911 immediately.**

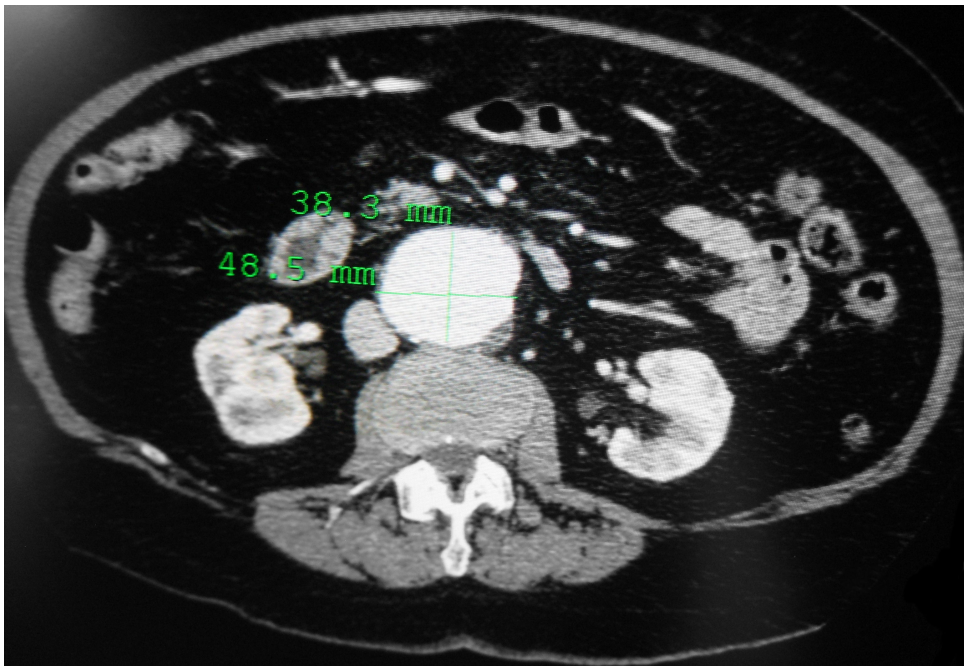
If someone near you collapses: call 911, start CPR if you know how, and ask for an AED.

Aortic Aneurysm?

- The aorta is the body's main artery. It starts at the heart, curves through the chest, and runs down to the pelvis. It feeds blood to every organ below the lungs.
- An aortic aneurysm is a weak bulge in the aorta wall. The normal belly aorta is about 2 cm wide. An aneurysm forms when it grows to 3 cm or more. Repair is usually discussed at 5.5 cm.
- The wall weakens from plaque buildup, high blood pressure, aging, or a gene condition. The pressure of each heartbeat pushes the weak spot outward — like a balloon.
- There are two main types. **AAA** forms in the belly — below the kidney arteries. This is where 9 of every 10 aneurysms occur. **TAA** forms in the chest — at the root, the ascending aorta, the arch, or the descending aorta.
- The biggest danger is rupture — the wall bursts. Rupture is deadly. Even with emergency surgery, fewer than half of patients survive. Rupture risk climbs steeply as the aneurysm grows.
- Most aneurysms cause **no pain or symptoms** until they are very large or rupturing. This is why screening and regular scans are so important. Sudden, severe, tearing chest or belly pain is a 911 emergency.
- Growth is hard to predict. Most AAAs grow about 2–3 mm per year. Some grow faster. Serial imaging is the only way to stay ahead of it.



The aorta spans from the heart through the chest and abdomen. A thoracic aortic aneurysm (TAA) forms in the chest — most often at the ascending aorta in Marfan syndrome and bicuspid aortic valve disease. An abdominal aortic aneurysm (AAA) forms most often in the infrarenal aorta, just below the kidney arteries.



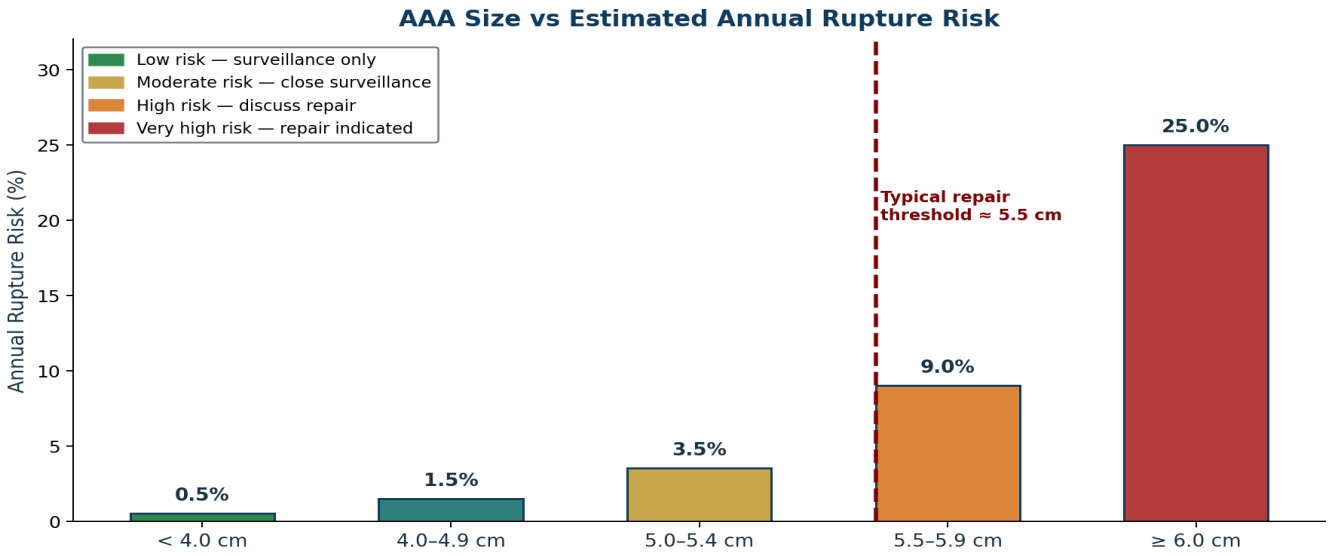
A real contrast CT scan (axial view, abdomen) showing an abdominal aortic aneurysm. The calipers mark the dilated aorta at 48.5 mm — well past the normal caliber of about 20 mm — sitting next to the inferior vena cava and kidneys. This is what the aneurysm from the diagram above actually looks like on a patient's scan. Image: James Heilman, MD, Wikimedia Commons (CC BY-SA 3.0).

AAA vs TAA: Key Differences in Location, Cause, Threshold, and Repair

Feature	AAA (Abdominal)	TAA — Root/Ascending	TAA — Descending
Most common cause	Atherosclerosis + Smoking + Aging	Marfan, bicuspid AV, Loeys-Dietz, HTAD	Atherosclerosis; Chest trauma (rare)
Normal diameter	~ 2.0 cm	~ 3.0–3.5 cm (root)	~ 2.5 cm
Repair threshold	5.5 cm men, 5.0 cm women	5.5 cm (general); 5.0 cm (Marfan/BAV)	5.5 cm general; 5.0 cm if symptomatic
Preferred repair	EVAR (if anatomy OK) or open surgery	Open surgery (requires heart bypass)	TEVAR (if anatomy OK) or open thoracic
Screening	Ultrasound: men 65–75 who ever smoked	Echo + CT/MRI: BAV, Marfan, family Hx	CT/MRI: if genetic syndrome or symptoms

Why It Matters

- A ruptured AAA is fatal in about 80% of cases — even with emergency surgery. Yet planned repair before rupture has a death rate below 5% at top centers.
- About 200,000 people in the US are told they have an AAA each year. Around 10,000 die from rupture — most before reaching the hospital. Most deaths are preventable with early detection.
- About 1 in 20 men over 65 who ever smoked has an undetected AAA. A single ultrasound screen finds it. It is painless, free under most insurance, and takes 10 minutes.
- Genetic aneurysms are different. Marfan syndrome, Loeys-Dietz syndrome, and bicuspid aortic valve weaken the wall from birth. Dissection can happen at smaller sizes. Repair thresholds are lower. Relatives need screening too.
- Aortic dissection — a tear in the wall — can strike without a large aneurysm. Knowing your aorta's size and your risk lets you and your doctor act before crisis.
- The outlook is good when the condition is found and managed well. Regular scans, blood pressure control, quitting smoking, and timely repair prevent most ruptures.



Annual rupture risk rises steeply with aneurysm diameter. An AAA under 4 cm has less than 1% annual rupture risk. At 5.5 cm the risk is approximately 9% per year; at 6.0 cm or above it exceeds 25% per year. The repair threshold at 5.5 cm (men) reflects the crossover point where elective repair risk is lower than the cumulative rupture risk of continued observation. Source: ACC/AHA 2022 Aortic Disease Guideline.

Risk Factors

Some patients are more likely to develop this condition. Knowing your risk helps your care team take extra precautions.

Risk Factor	Why It Increases Risk
Smoking (current or past)	The #1 preventable risk for AAA. Smokers have 3–5 times the risk. Tobacco damages the aortic wall. Quitting slows aneurysm growth.
High blood pressure	Steady high pressure stretches and weakens the wall. BP below 130/80 is the target. Beta-blockers and ARBs lower wall stress.
Age 65 and older	AAA is rare before age 55. Risk rises sharply with age. Most are found between 65 and 85.
Male sex	Men get AAA 4–6 times more than women. Women tend to get it later but rupture at smaller sizes.
Family history of AAA	A parent or sibling with AAA raises your risk 2–4 times. Screen at age 60 if a first-degree relative had AAA.
Plaque buildup in arteries	The same plaque that causes heart attacks also weakens the aortic wall. Heart disease, leg artery disease, and AAA often occur together.
Genetic syndromes (Marfan, Loeys-Dietz, bicuspid aortic valve)	These gene conditions weaken the aortic wall from an early age. TAA can occur in young adults. Repair thresholds are lower.
High cholesterol or diabetes	Speed up plaque buildup. Statins are used for most patients with aortic aneurysm.

AAA — Belly Aneurysm: Key Facts

- AAA is the most common type. It forms below the kidney arteries in 9 out of 10 cases.
- It causes no pain or symptoms in most cases. Most are found on a screening ultrasound or a CT done for another reason.
- Average growth is about 2–3 mm per year. Some grow faster. Men 65–75 who ever smoked should get a one-time ultrasound screen.
- Rupture risk by size: under 4 cm = less than 1% per year. 4–5 cm = 1–5% per year. 5.5 cm = about 9% per year. 6 cm or more = over 25% per year.
- Repair is recommended at 5.5 cm in men and 5.0 cm in women. It is also recommended for fast growth or symptoms at any size.
- EVAR is the most common repair in the US. It has a lower early death rate. But annual CT scans for life are required. Open surgery is more durable.

TAA — Chest Aneurysm and Genetic Forms

- TAA involves the chest aorta: the root, the ascending part, the arch, or the descending part.
- Genetic conditions are the main cause in younger patients. Marfan syndrome, Loeys-Dietz syndrome, vascular Ehlers-Danlos syndrome, and bicuspid aortic valve all weaken the aortic wall from birth.
- In older adults without a genetic condition, TAA is caused by plaque buildup, high blood pressure, and age — the same as AAA.
- Repair thresholds are lower in genetic forms: Marfan or bicuspid valve: 5.0 cm. Loeys-Dietz syndrome: 4.5 cm. Rapid growth or symptoms lower the threshold further.
- Close relatives of anyone with a genetic aortic condition should be screened. An echo and a CT of the chest aorta is the usual starting point.
- Descending chest TAA is often treated with TEVAR at 5.5 cm. Leg weakness from spinal artery injury is a risk — about 3–5% of cases.

Who Should Be Screened for AAA?

The USPSTF recommends a **one-time belly ultrasound** for:
• Men aged 65–75 who have **ever smoked** — even if you quit years ago

Also consider screening if:
• A parent or sibling had AAA — screen at age 60
• You have a **bicuspid aortic valve** — get echo and CT or MRI of the chest aorta
• You have **Marfan or Loeys-Dietz syndrome** — regular imaging from young adulthood

The scan is painless. It takes about 10 minutes. It can find an aneurysm before it bursts.

Treatment Options

- **Blood pressure control — the most important medicine:** Target BP below 130/80 mmHg. Beta-blockers lower heart rate and wall stress. ACE inhibitors or ARBs are preferred in Marfan syndrome. Good BP control slows aneurysm growth.
- **Statin therapy:** Atorvastatin 40–80 mg or rosuvastatin 20–40 mg daily. Statins reduce plaque and lower heart attack risk. Recommended for all patients with aortic aneurysm.
- **Quit smoking:** Smoking speeds aneurysm growth. Quitting slows it. Options include varenicline, bupropion, and nicotine patches or gum. Ask Dr. Ali for help.
- **Activity limits:** Avoid heavy lifting or straining if your aneurysm is 5 cm or more. These actions spike blood pressure and stress the wall. Walking, swimming, and cycling are fine — ask your doctor.
- **Surveillance imaging schedule:** AAA 3.0–3.9 cm: ultrasound every 3 years. AAA 4.0–5.4 cm: every 6–12 months. AAA 5.5 cm or more: refer for surgery review. TAA: scan at diagnosis, 6 months later, then yearly.
- **AAA repair thresholds:** Men: repair at 5.5 cm or if growing more than 0.5 cm in 6 months, or if painful. Women: consider repair at 5.0 cm — rupture risk is higher at smaller sizes. Symptomatic at any size: refer for repair.
- **TAA repair thresholds:** General: 5.5 cm. Marfan or bicuspid aortic valve: 5.0 cm. Loeys-Dietz or high-risk features: 4.5 cm. Rapid growth or symptoms lower the threshold. Your aortic team decides.
- **Open surgical repair:** The weak aorta is replaced with a cloth graft. Required for the chest aorta (ascending and arch). Very durable — the graft rarely needs re-treatment. Death rate is 3–5% for planned AAA repair. Recovery takes 6–8 weeks.
- **EVAR (endovascular repair for AAA):** A stent-graft is placed through the groin. No big incision. Death rate is 0.5–2%. Hospital stay is 1–2 days. Annual CT scans are needed for life to watch for endoleak. The EVAR-1 and OVER trials showed lower early death rates than open repair. By 9 years, outcomes are similar.
- **TEVAR (endovascular repair for descending chest TAA):** Same concept as EVAR but for the descending chest aorta. Lower surgical risk than open chest surgery. Leg weakness from spinal artery injury can occur in about 3–5%. Annual CT scans needed.
- **Aortic team and shared decisions:** Complex cases — arch aneurysms, genetic syndromes, very large aneurysms — need a team. Cardiac surgery, vascular surgery, and genetics review options together. No one-size approach fits everyone.

Aortic Aneurysm Repair Options: Open Surgery vs EVAR vs TEVAR

Feature	Open Repair (AAA / ascending TAA)	EVAR (AAA)	TEVAR (descending TAA)
Incision	Large abdominal incision required	Groin catheter only	Small groin or femoral incision
Hospital stay	5–8 days	1–2 days	2–4 days
Recovery	6–8 weeks	1–2 weeks	2–4 weeks
30-day mortality	3–5% (elective)	0.5–2% (elective)	3–5% open; ~2% TEVAR
Long-term durability	Excellent; no regular re-imaging needed	Good; annual imaging required for endoleak	Good; annual imaging required
Best for	Younger, fit patients; long life expectancy	High surgical risk; older patients (AAA)	High surgical risk (descending TAA)

The three main repair strategies for aortic aneurysm differ in invasiveness, recovery, durability, and long-term imaging requirements. Open repair is most durable and requires no lifelong CT surveillance. EVAR and TEVAR are less invasive but require annual imaging for life. The right choice depends on anatomy, age, surgical risk, and surgeon expertise.

Acute Aortic Syndrome — Dissection and Rupture: Call 911

- Aortic dissection is a tear in the inner wall of the aorta. Blood enters the tear and splits the layers apart. It can happen in an aneurysm or on its own.
- Type A dissection involves the ascending aorta. It is a surgical emergency. Death risk rises about 1–2% per hour without surgery. Go to a cardiac surgery center at once.
- Type B dissection involves only the descending aorta. It is often treated with strict blood pressure control in the hospital. TEVAR may be used if blood flow to organs is cut off or if it grows rapidly.
- Rupture: the wall bursts and blood pours out. Death rate is about 80% overall. Even emergency surgery saves fewer than half. Symptoms are sudden, severe, tearing pain — then collapse and shock.
- Symptoms of acute aortic syndrome: sudden, severe, tearing or ripping pain in the chest, back, or belly. Pain may travel to the back or down the legs. May come with fainting, arm pulse loss, or leg weakness.
- Call 911 at the first sign of these symptoms. Tell the dispatcher you have known aortic disease.

When Is Repair Recommended? (ACC/AHA 2022 Summary)

AAA (belly aneurysm):
• Men: repair at **5.5 cm** or if it grows more than 0.5 cm in 6 months
• Women: consider repair at **5.0 cm** — rupture risk is higher at smaller sizes
• Pain or tenderness: repair at any size

TAA (chest aneurysm — root or ascending):
• General: repair at **5.5 cm**
• Marfan or bicuspid aortic valve: repair at **5.0 cm**
• Loeys-Dietz syndrome: repair at **4.5 cm**

These are general guidelines. Your aortic team will decide based on your full picture.

Comfort Measures at Home (No Medication Needed)

These simple steps support healing and ease symptoms. Use them alongside any medication your doctor prescribes.

- Check blood pressure at home. Record readings. Target below 130/80 mmHg. Good control over months slows aneurysm growth.
- Stop smoking. It is the most powerful change you can make. Ask Dr. Ali about quit aids — varenicline (Chantix), bupropion, nicotine patches, or gum all work.
- Eat a low-salt, heart-healthy diet. DASH and Mediterranean diets lower blood pressure. Aim for less than 2 grams of salt per day.
- Choose safe exercise. Walking, swimming, and cycling are good. Avoid heavy lifting or hard straining if your aneurysm is large. Ask your doctor what is safe for you.
- Manage stress. Stress raises blood pressure. Try mindfulness, yoga, or good sleep habits. Tell your doctor if anxiety is getting in the way.
- Keep every imaging appointment. A missed scan could mean a missed growth signal. Never skip your ultrasound or CT.
- Tell your family. If you have a genetic aortic condition or family history, your parents, siblings, and children need imaging too. Genetic counseling is available.

Risks, Benefits, and Alternatives

Every choice has trade-offs. Use this table to start the shared decision conversation.

Option	Risks	Benefits	Alternatives
Surveillance only (watch with imaging + medicine)	Aneurysm may grow. Rupture risk if scans are missed. Requires lifelong imaging commitment.	No procedure risk. Right choice below repair size. BP control and statins slow growth. Time to plan a calm, scheduled repair.	Immediate repair if above threshold. Continued watching past threshold raises rupture risk.
Open surgical repair (AAA or ascending TAA)	Death rate 3–5% for planned AAA repair at top centers. 6–8 week recovery. Blood transfusion possible. Kidney function can be affected briefly.	Very durable — graft lasts a lifetime. No annual CT scans needed. Best for young, healthy patients. Standard for ascending chest TAA.	EVAR if anatomy fits. Continued watching if below threshold. Earlier repair in genetic syndromes.
EVAR (endovascular repair — AAA)	Needs suitable anatomy. Annual CT for life — endoleak in 5–15% by 5 years. Re-treatment needed in 10–15% by 10 years.	Death rate 0.5–2%. Hospital stay 1–2 days. Recovery 1–2 weeks. Good for older or higher-risk patients.	Open repair if too young or anatomy does not fit. Continued watch if below threshold.
TEVAR (endovascular repair — chest TAA)	Leg weakness from spinal artery injury in about 3–5%. Annual CT for life. Endoleak possible.	Lower risk than open chest surgery. Shorter hospital stay. Works well for descending TAA 5.5 cm or more.	Open chest surgery if anatomy does not fit. Continued watch if below threshold.
Medicine only (BP + statin + quit smoking)	Does not shrink aneurysm. Must be paired with imaging. May not stop growth alone.	Slows growth. Lowers heart and stroke risk. Required even after repair. No procedure risk.	Repair when threshold is met. Closer imaging for borderline cases.

Common Misconceptions

Myth	Reality
MYTH: No symptoms means no danger.	FACT: Most aortic aneurysms are completely silent — until they rupture. No pain or symptoms is exactly what happens with most aneurysms. Rupture kills about 80% of people overall. Screening and regular scans exist for this reason: to find and fix an aneurysm before it bursts.
MYTH: All aneurysms need surgery right away.	FACT: Most aneurysms are watched — not fixed right away. Blood pressure control, a statin, and quitting smoking are the first steps. Surgery is only needed when the aneurysm is large enough that rupture risk is greater than the surgery risk. For most men, that size is 5.5 cm.
MYTH: Endovascular repair is always safer than open surgery.	FACT: Endovascular repair (EVAR/TEVAR) has a lower early death rate. But it needs annual CT scans for life. Re-treatment is more common over 10 years. For young, healthy patients, open surgery may last longer and need fewer follow-up tests. The best choice depends on age, anatomy, and surgeon skill.
MYTH: Rupture is always obvious — severe pain and collapse.	FACT: Rupture can start with sudden, severe, tearing pain. But it can also cause fast collapse or sudden death with little warning. Any sudden, severe chest, back, or belly pain in someone with known aortic disease is an emergency. Call 911 now.
MYTH: Only elderly men who smoke get aortic aneurysms.	FACT: Smoking and age are big risk factors for belly aneurysms. But chest aneurysms can happen in teens and young adults with Marfan syndrome or bicuspid aortic valve. Women get aneurysms too — and their aneurysms burst at smaller sizes. Family history matters. If a parent or sibling had an aneurysm, get screened.

Myth	Reality
MYTH: After repair, no more follow-up is needed.	FACT: After EVAR or TEVAR, annual CT scans are required for life. Blood can still leak into the sac (endoleak), and the graft needs watching. After open surgery, imaging and risk-factor control continue. The whole aorta needs lifelong care.
MYTH: Blood pressure medicine cannot help an aneurysm.	FACT: Good BP control is the most important medical tool. It slows aneurysm growth. Beta-blockers reduce wall stress. ARBs such as losartan are especially useful in Marfan syndrome. Good BP management can delay or even prevent surgery.

Possible Complications

Knowing what can go wrong helps you spot problems early. Most complications are uncommon, especially with treatment.

Where / What	What Can Happen
Rupture	The wall tears and blood pours into the body. Ruptured AAA: 80% overall death rate. Even with emergency surgery, fewer than half survive. Planned repair is far safer.
Aortic dissection	A tear in the inner wall splits the layers apart. Type A (ascending aorta): emergency surgery needed at once — risk rises 1–2% per hour without repair. Type B (descending): often treated with strict BP control or TEVAR.
Fast growth past repair threshold	Most aneurysms grow slowly. Some grow fast. Growth over 0.5 cm in 6 months means repair is discussed at any size. Never skip a scheduled scan.
Endoleak after EVAR or TEVAR	Blood seeps back into the sac despite the stent-graft. Some types need re-treatment. Annual CT scans catch this before it becomes a problem.
Spinal cord injury after TEVAR	Covering spinal arteries during TEVAR can cause leg weakness or paralysis. Happens in about 3–5%. A spinal drain and staged repair lower this risk.
Kidney injury after open repair	Open belly repair may need clamping near the kidney arteries. This can affect kidney function briefly. Complex aneurysms near the kidney or bowel arteries carry more risk.
Heart attack or stroke	People with aortic aneurysm often have plaque in other arteries too. Heart attack is a major cause of death both during and after repair. Statins and antiplatelet therapy help prevent this.

Where / What	What Can Happen
Graft infection (rare)	A cloth graft can get infected. It is rare but serious. Treatment requires long courses of antibiotics and sometimes a graft replacement. Preventive antibiotics are given before surgery and before dental work in the first year.

Points to Know

If you remember nothing else, remember these key points.

- Most aortic aneurysms cause **no symptoms**. Screening with ultrasound finds them before rupture. This is why the one-time screen for men 65–75 who ever smoked is so important.
- Rupture risk climbs steeply with size. At 5.5 cm, rupture risk is about 9–25% per year. Planned repair before rupture is far safer than emergency surgery.
- **Call 911 now** for sudden, severe, tearing pain in the chest, back, or belly — especially if you know you have aortic disease. Do not wait. Do not drive.
- Control your blood pressure. Target below 130/80 mmHg. Taking your medicines every day is the most effective medical step you can take.
- Smoking is the top preventable risk for AAA. Quitting slows aneurysm growth even now. Ask Dr. Ali about quit aids.
- EVAR is less invasive but requires **annual CT scans for life**. Open surgery is more durable but a bigger procedure. The right choice depends on your age, anatomy, and health.
- If you have Marfan syndrome, bicuspid aortic valve, or family history of aortic disease, your close relatives need aortic imaging too. Repair thresholds are lower for genetic forms.
- After any aortic repair, cardiovascular follow-up and imaging continue for life. A repaired aorta still needs long-term care.

When to Call Us - and When to Call 911

If you are not sure, call. We would rather hear from you twice than miss a real problem.

- **Call 911 right now:** sudden, severe, tearing or ripping pain in the chest, back, or belly. May be rupture or dissection. Do not drive yourself.
- **Call 911 right now:** sudden fainting or collapse with known aortic disease.
- **Call 911 right now:** severe chest or back pain plus sudden weakness or numbness in both legs.
- **Call your doctor today:** your imaging follow-up is more than 1 month overdue. Never delay a scheduled scan.
- **Call your doctor this week:** new or worsening back, flank, or belly pain that is different from normal — especially near a known AAA site.
- **Make an appointment:** you are a man aged 65–75 who has ever smoked and have never had an aortic ultrasound. The USPSTF recommends this one-time screen.
- **Make an appointment:** a parent, sibling, or child had an aortic aneurysm, dissection, or sudden aortic death. You should be screened at age 60.
- **Make an appointment:** you have been told you have a bicuspid aortic valve and have never had aortic imaging.

Office: (727) 943-5200

Trusted Resources

The links below are the trusted resources Dr. Ali used to write this guide and that he recommends you visit for more information. Each is a clickable link in the digital version and a Short.io tracked URL on the printed version.

- AHA — Aortic Aneurysm - American Heart Association overview including risk factors, symptoms, and treatment options
- Cleveland Clinic — Aortic Aneurysm - Detailed patient education on symptoms, types, diagnosis, and repair options
- Mayo Clinic — Aortic Aneurysm - Comprehensive overview including genetic forms and when to seek care
- Society for Vascular Surgery — AAA Patient Information - Surgeon-authored patient education on AAA screening, surveillance, and EVAR vs open repair
- USPSTF — AAA Screening Recommendation - Official screening guidelines: one-time ultrasound for men aged 65–75 who have ever smoked
- Marfan Foundation - Patient and family resources for Marfan syndrome and heritable aortic disease; includes family screening guidance
- Loeys-Dietz Syndrome Foundation - Support and information for patients and families with Loeys-Dietz syndrome and heritable thoracic aortic disease

Sources Used to Build This Guide

Every recommendation in this guide is grounded in one or more of the studies, guidelines, or trusted resources below. Short links are tracked so Dr. Ali can see which references patients are reading; nothing personally identifying is captured.

- ACC/AHA 2022 Guideline for Diagnosis and Management of Aortic Disease *[Guideline]*
  Primary authoritative source for repair thresholds, surveillance intervals, heritable aortic disease, and procedural recommendations (AAA + TAA)
- USPSTF — Abdominal Aortic Aneurysm Screening Recommendation (2019) *[Guideline]*
  One-time ultrasound screening for men 65-75 who ever smoked; basis for AAA screening recommendation
- Society for Vascular Surgery — Clinical Practice Guidelines for AAA *[Guideline]*
  SVS thresholds for AAA repair, surveillance intervals, EVAR vs open repair recommendations
- EVAR Trial Investigators — EVAR-1 Long-Term Outcomes (NEJM) *[Trial]*
  Landmark RCT comparing EVAR vs open repair for AAA: early mortality benefit EVAR, late durability concerns, lifelong surveillance required
- OVER Trial — Open vs Endovascular Repair for AAA (JAMA) *[Trial]*
  US RCT of EVAR vs open repair: EVAR had lower perioperative mortality in men; outcomes converge by 9 years
- Cleveland Clinic — Aortic Aneurysm: Overview *[Patient Education]*
  Plain-language patient framing for symptoms, risks, and treatment options
- Mayo Clinic — Aortic Aneurysm: Symptoms & Causes *[Patient Education]*
  Patient-friendly explanation of aneurysm types, silent nature, warning signs, and genetic forms
- AHA — Aortic Aneurysm *[Patient Education]*
  American Heart Association patient education on aneurysm detection, lifestyle, and emergency symptoms
- Marfan Foundation — About Marfan Syndrome *[Patient Education]*
  Hereditary aortic disease — Marfan syndrome patient resources and genetic testing guidance
- Loeys-Dietz Syndrome Foundation *[Patient Education]*
  Heritable thoracic aortic disease — Loeys-Dietz syndrome information and screening recommendations
- TEVAR for Descending TAA — Endovascular Outcomes (Ann Thorac Surg) *[Study]*
  TEVAR outcomes for descending thoracic aneurysm: lower perioperative mortality vs open, spinal cord ischemia 3-5% risk cited

About This Guide

Rias KS Ali, MD FACC | Board Certified in Interventional Cardiology & Cardiovascular Disease

4740 Mile Stretch Drive, Holiday FL 34690 | Office: (727) 943-5200 | Fax: (727) 943-5201 | RiasAliMD.com

Version: 2026-08-15

Reviewer note: Reviewed against Cleveland Clinic, Mayo Clinic, AHA, and Society for Vascular Surgery patient resources. This guide adds: ACC/AHA 2022 guideline repair thresholds by aneurysm type and genetic syndrome; EVAR-1 and OVER trial data; heritable aortic disease syndromes named (Marfan, Loeys-Dietz, vascular EDS, bicuspid aortopathy); USPSTF AAA screening criteria; color-coded size-vs-rupture chart; Open vs EVAR vs TEVAR comparison table; acute aortic syndrome 911 callout; cross-links to hypertension and PAD companion guides.

Disclaimer

This guide is for educational purposes only and does not replace medical advice from your physician. Recommendations may not apply to every patient. Always follow the specific instructions of Dr. Ali and your care team. In an emergency call 911 or go to the nearest emergency department.

Take This Guide With You

Scan or visit: https://go.riasalimd.com/aortic-aneurysm-guide

Online: https://go.riasalimd.com/aortic-aneurysm-guide

Office: (727) 943-5200

4740 Mile Stretch Drive, Holiday FL 34690 | Office: (727) 943-5200 | Fax: (727) 943-5201 | RiasAliMD.com