JUSTIN HOUMAN MD
MEN'S HEALTH
TOWER UROLOGY

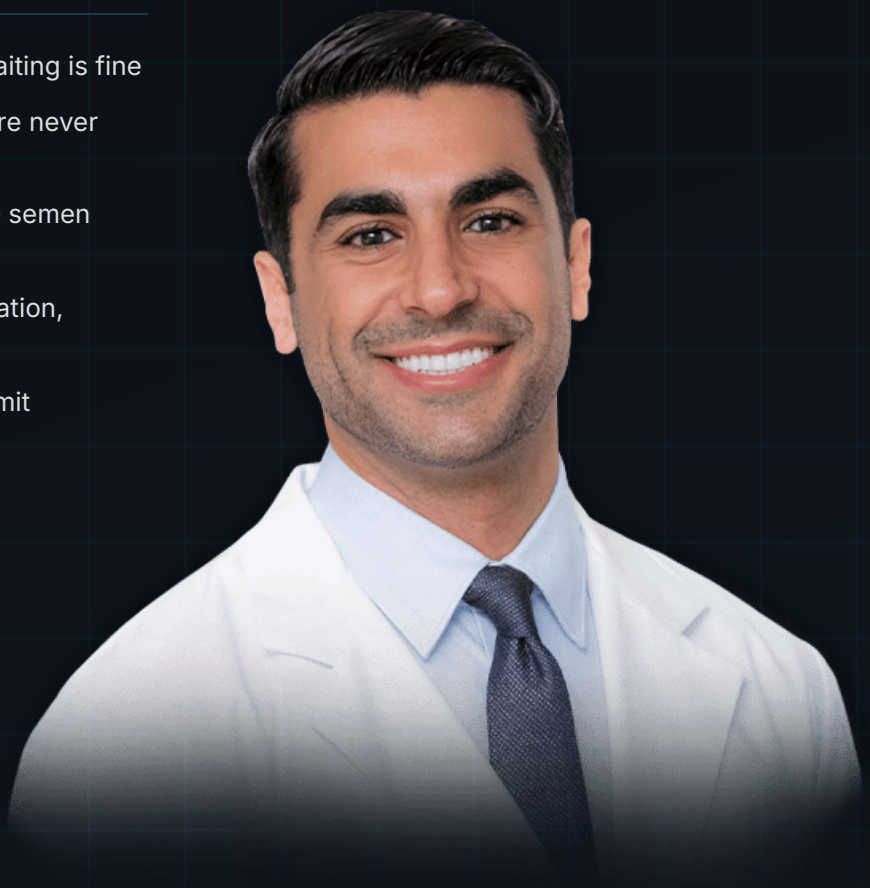
FREE GUIDE

VARICOCELE

Who needs a varicocele fixed?

About 15% of all men have a varicocele. In guys who are struggling to conceive, it's about 40%. It's a very correctable cause of infertility, not just for the man, but for the couple.

- Who needs it fixed, and when watchful waiting is fine
- The testosterone connection most guys are never told about
- The DNA fragmentation test, for when the semen analysis looks fine
- Surgery vs embolization: recurrence, radiation, recovery
- What to ask any surgeon before you commit



Dr. Justin Houman, MD, FACS

Board-certified men's health urologist

Assistant professor of urology, Cedars-Sinai Medical Center
Tower Urology, Los Angeles

Cedars Sinai

01 WHAT IT IS

Varicose veins of the scrotum.

A varicocele is basically varicose veins of your scrotum. Think of the varicose veins you see in the legs. Men can get those around the testicle.

Blood is supposed to go down into the testicle and work its way back up to the heart. Anytime the valves that drain that blood back to the heart are incompetent, blood pools around the testicle, causing damage to the testicular function. It can lower sperm counts, it can cause pain, and it can lower your testosterone levels. It's usually on the left side, just because of the way the veins drain back to the body.

The scrotum acts as a thermostat.

The testicle needs to live within a very narrow temperature range. It has to be cooler than the rest of your body. The scrotum brings the testicles closer to the body and takes them away, depending on that temperature. When you have a varicocele, blood pools around the testicle, increasing the testicular temperature and causing damage to the sperm, even to the DNA within the sperm. It can also lower your testosterone levels.

02 HOW COMMON IT IS

Common, and very correctable.

15%
of **all men** have a varicocele.

40%
of **men who are struggling to conceive** have one.

It's one of the main reasons men are experiencing infertility, and probably the most common surgery I do for male factor infertility. So it's a very correctable cause of infertility, not just for the man, but for the couple. If you're experiencing infertility as a couple, look to the man, or at least get evaluated to see if your male partner has some form of varicocele.

03 WHAT IT CAN DO

Three problems, and a smaller testicle.

Varicoceles cause three problems. Number one, testicular pain. Number two, infertility. And number three, which a lot of people don't know, low testosterone. It can also shrink the testicle.

FERTILITY

Lower counts, damaged DNA

The extra heat damages the sperm and the DNA within the sperm. It's one of the biggest factors in male factor infertility.

TESTOSTERONE

Lower T levels

The testicle runs warmer, and that can impact its ability to produce healthy testosterone levels. A lot of people don't know this one.

PAIN

A dull ache, a heaviness

From the venous congestion down into the testicle. Pain is probably the main reason guys come in.

SIZE

A smaller testicle

One testicle can end up a lot smaller than the other, on the side with the varicocele.

04 THE PAIN PATTERN

It gets worse as the day goes on.

The typical varicocele pain is a dull, achy pain that gets worse throughout the day, as gravity keeps pulling blood down towards the testicle. It creates that heaviness. Guys will say that when they lie down, or when they wake up in the morning, the pain's gone, or it's much less than it is at the end of the day.

A lot of guys don't even know they have one.

Not everyone has painful symptoms. You can have a severe grade three varicocele and not even know it. I saw a guy recently who came in because he noticed blood in his semen. That wasn't from the varicocele, but on exam he had a grade three varicocele, and he'd been trying to have a kid for the last three months, not knowing he had it. So now we get a semen analysis and make sure.

If you're a man dealing with fertility issues, check to see if you have a varicocele. It's a very easy thing to do.

One patient's experience. Results vary from patient to patient.

05 WHO NEEDS IT FIXED

It's not for everybody.

Who needs their varicocele fixed? It's definitely not for everyone.

WHEN WATCHFUL WAITING IS FINE

If you're a guy who has a varicocele but you have **a normal semen analysis, no testicular pain, your testicles are developing the way they should, and you have normal testosterone levels,** the varicocele is not impacting your testicular function. There's no role for a varicocelectomy. There's no need to do it.

Who should get their varicocele fixed comes down to a couple of scenarios:

1. **Abnormal semen parameters.**
   Whether it's your concentration, your motility or your morphology. If you have a varicocele and those parameters are abnormal, getting it fixed can only help in terms of improving those counts.

2. **Testicular pain.**
   A varicocele does cause pain for some men, due to the venous congestion down into the testicle, and a varicocelectomy can improve that pain.

3. **A smaller testicle on the varicocele side.**
   If one testicle is a lot larger than the other and the smaller one has the varicocele, fixing it can improve the testicular volume on that side. More importantly, it can help testicular function. Sperm counts can improve, and testosterone production can improve as well.

Low testosterone is worth a look too. More on that on the next page.

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06 DON'T WAIT TOO LONG

It doesn't go away on its own.

A varicocele either stays the same or it gets worse. So if any of those four things changes, it's worth another look. And once it's affecting function, the earlier you intervene, the better your outcomes will be. Treating a varicocele in your early 20s versus your mid-30s can play a big role in terms of the type of damage that's caused to your testicles.

WATCH ME EXPLAIN IT

Varicoceles: fertility, testosterone and testicular pain

About 6 minutes. Scan with your phone camera, or **tap here** to watch on YouTube.

07 LOW TESTOSTERONE

Low testosterone? Check for a varicocele.

A patient asked me this: can a varicocele lower your testosterone levels? Studies show that men with varicoceles tend to have lower testosterone levels.

When blood pools there, the testicle runs warmer, and that can impact its ability to produce healthy testosterone levels. A varicocelectomy can repair the varicocele and raise testosterone levels on average.

> **It doesn't work for everyone, and it won't turn your low T levels into super high T levels. But it does improve your testosterone levels.**

Even if you're having low T, no one's really going to check you for a varicocele unless you go to certain doctors. If a young guy comes in with low testosterone, I'll check. We could always put him on medications to boost his testosterone, or we could fix his varicocele and fix the cause. That could keep you from having to take a medication for the rest of your life, or even get on TRT. And if you still want kids, keep in mind that taking testosterone decreases your sperm counts, really shutting it down.

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08 WHEN THE SEMEN ANALYSIS LOOKS FINE

The DNA fragmentation test.

Think of the semen analysis like a bird's-eye view: the count, the movement, how they look. It's not looking at the DNA within the sperm, which can play a big role in reproductive success. The DNA fragmentation test looks at the sperm itself. Having a normal semen analysis is great, but it doesn't necessarily mean the DNA integrity of the sperm is good.

Here's a situation I see. A guy has a mild varicocele and great semen parameters. He and his partner try to conceive, and they have a miscarriage, one, sometimes two. We do a DNA fragmentation test, and there's an issue: the DNA is damaged. Then we examine him, and he has a varicocele. The semen analysis is a good test, but it's not a perfect test.

WHO IT'S FOR

Not every guy, right off the bat

It's something we can do in some situations, depending on the semen analysis, the hormones and the exam. Couples struggling with fertility should consider it.

WHERE TO DO IT

Go for convenience

There are at-home testing companies, or an embryology lab can do it for you. Go for whatever is most convenient. Even the at-home tests can look at DNA fragmentation.

09 HOW I CHECK

How I diagnose a varicocele.

A proper fertility evaluation is a semen analysis, a hormone evaluation, and a physical exam to rule out a varicocele. The DNA fragmentation index is something we can do in some situations, depending on those first three.

1. **A physical exam.**
   We have you bear down, the Valsalva, and see if the veins dilate. There are varying degrees of it. Sometimes you feel something, sometimes you don't, so it does take someone who knows what they're doing.
2. **An ultrasound.**
   To see if there's any reflux of blood through those dilated veins.
3. **A semen analysis, more than once.**
   Semen analyses vary depending on whether you're ill, whether you slept poorly, even the time of year. If you've had one, get another one three months later to get another data point.
4. **A hormone evaluation.**
   Including your testosterone levels, since a varicocele can lower them.

10 YOUR TWO OPTIONS

Surgery or embolization.

If you have a varicocele, you've more than likely been presented with these two options, and you get two different answers depending on whose office you're in. The urologist will tell you that the microsurgical varicocelectomy is best. The interventional radiologist will tell you that embolization is best. Both are good, both work, depending on who the patient is and what their goals are.

OPTION 1, BY A UROLOGIST

Microsurgical varicocelectomy

A small incision in the groin area. Using a surgical microscope, we see each individual vein, tie it off, and avoid damaging any of the adjacent structures.

OPTION 2, BY A RADIOLOGIST

Varicocele embolization

No incision. A small catheter goes in through a vein, usually in the groin, and under x-ray it's guided down to block off the veins with coils or a sclerosing agent.

Both of these are same-day outpatient procedures.

11 SIDE BY SIDE

The two options, compared.

	Microsurgical varicocelectomy	Varicocele embolization
Who does it	A urologist, ideally fellowship-trained in male fertility	An interventional radiologist
How	Two to three centimeter incision at the pubic hairline, surgical microscope	Catheter through a vein, guided by x-ray fluoroscopy
Time	30 to 45 minutes per side, home the same day	Outpatient, home the same day
Worth naming	General anesthesia, but a lighter one: you're breathing on your own	Radiation, and it's hitting the testicles
Recurrence	**0.5 to 1%**	**10 to 13%**
Recovery	Some pain, Tylenol or Advil. Activities, sex and exercise within five to seven days	Much easier. Walking the same day, no real recovery

12 RECURRENCE

Recurrence is the biggest difference.

Recurrence means you get another varicocele, or that same varicocele comes back. Recurrence rates for the microsurgical varicocelectomy are anywhere from 0.5 to 1%. Very, very low. For varicocele embolization they're anywhere from 10 to 13%. Recurrence rates are the single biggest differentiator between the two. Patients ask why the difference:

1. **The x-ray misses small veins.**
   Under the microscope we see every single vein in the spermatic cord. Embolization is done under x-ray fluoroscopy, and some of those small veins aren't going to be identified.

2. **The gubernacular vein.**
   It carries blood from the bottom of the testicle back up to the heart, and it's a vein of recurrence. During the surgery we can see it and tie it off. You don't get that exposure with embolization.

3. **The collaterals.**
   It's not just one vein causing the problem. It's a tributary of veins: the veins inside the cord, the external spermatic veins, the gubernacular veins. Embolization can only treat the veins the catheter can reach, which is not all of them.

13 TWO THINGS NOBODY MENTIONS

Radiation and anesthesia.

EMBOLIZATION

Radiation

You're exposed to radiation, sometimes a higher dose, sometimes lower, depending on who's doing the procedure. The radiation is hitting the testicles, and the testicles are very radiation sensitive.

SURGERY

Anesthesia

You do undergo general anesthesia. It's a relatively straightforward, quick procedure, and you're breathing on your own, so it's a lighter anesthesia. But it's something worth naming.

Both of these are important to name and mention. Neither of them is a deal breaker.

14 WHEN EMBOLIZATION IS THE BETTER CHOICE

Two times I recommend embolization.

1. **A recurrence after a microsurgical varicocelectomy.**
   Although the recurrence rate is quite low, less than 1%, it does happen. Going back in after the surgery, you're dealing with a lot of scar, a lot of inflammation, and the planes are altered, so a redo surgery is much more difficult. These patients are fantastic candidates for an embolization.

2. **A patient who can't tolerate anesthesia.**
   This one is quite rare, since most men getting a varicocele treated are much younger. But if a patient can't tolerate anesthesia, whether it's a heart issue or a lung issue, embolization is the preferred option.

15 IF IT CAME BACK

Did your varicocele come back after treatment?

If you had a varicocele treated, through an embolization or a varicocelectomy, and now you have that aching back, or you feel like the veins are dilated, that happens more often than you think. Sometimes very small veins weren't visible during the first repair, and they enlarged over time.

The first step is to confirm that you actually have a recurrence: an exam where we have you bear down, and an ultrasound to see if there's any reflux of blood through those veins. If you had an embolization, usually a microsurgical varicocelectomy is how you address the recurrence. If you had a microsurgical varicocelectomy, the embolization is not a bad option.

16 READING THE STUDIES

Check who wrote the study.

I want to be up front. Generally speaking, both options are very good. Obviously I'm a surgeon. I do this surgery quite often, I enjoy doing it, and I think it has great outcomes. But when you look at the data, the data supporting the microsurgical varicocelectomy is generally published by urologists, and the data supporting varicocele embolization by interventional radiologists. So just see who's writing it and who's talking about it. That gives you a sense of where potential biases may be.

The main outcome we want to track is pregnancy rates, because most men getting this done are having infertility issues. One study comparing the two shows improved pregnancy rates, improved sperm density and sperm quality, and a lower complication rate with the microsurgical varicocelectomy. There's also another study that shows they're the same.

MY HONEST TAKE

If you're a couple struggling with fertility and you want a clear-cut, first-line answer, I generally recommend the microsurgical varicocelectomy. It comes down to two things. **Number one, the recurrence rates. Number two, the logic behind the collaterals.** Every time we do this surgery we see collaterals, and when you don't address them, you get persistent issues that can delay your time to the fertility benefits, even to relief from testicular pain.

17 THE SURGERY

What the surgery and recovery look like.

TIME

30 to 45 minutes per side

A relatively straightforward outpatient surgery. You go home the same day.

INCISION

Two to three centimeters

Right at the pubic hairline, to get as close to the testicle as possible.

RECOVERY

Five to seven days

To activities, sex and exercise. All you need for the pain is Tylenol or Advil.

GIVE IT TIME

Whatever we do, whether it's a hormonal change, a lifestyle change or a surgery, it takes a good three to four months at least to notice the benefits on the semen analysis.

18 INSIDE THE SURGERY

What the microscope protects.

I lift up the spermatic cord, and using a surgical microscope I identify every single dilated vein, and one by one I isolate them and tie them off. Some guys have three veins, some guys have 15. The microscope also helps us see the structures we don't want to touch:

1. **The testicular artery.**
   It carries blood flow to the testicle. We don't want to damage that.
2. **The lymphatics.**
   They carry fluid back to the body. Damage to them can cause a hydrocele, fluid around the testicle, which we see sometimes after a non-microsurgical varicocelectomy.
3. **The vas deferens.**
   It carries sperm from the testicle to the outside world. Damage to it can hurt fertility.

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19 CHOOSING A SURGEON

Questions to ask your surgeon.

Like anything else in surgery, you want to go to somebody who does these, and who does these a lot.

1. **Are you using a surgical microscope?**
   It's how we see every vein and protect the artery, the lymphatics and the vas deferens.
2. **What are your recurrence rates?**
   With the microsurgical approach, anywhere from 0.5 to 1%. Ask for the number.
3. **How many of these do you do?**
   I do about one to two of these every week. That's probably a good baseline.
4. **Are you fellowship-trained in male fertility?**
   After residency, some of us did additional training in male fertility, specifically this surgery.
5. **Do you go after the gubernacular vein?**
   A lot of surgeons don't, but tying it off can help reduce recurrence rates.

WATCH

How to choose a varicocele surgeon

A short video. Scan, or **tap here** to watch on YouTube.

ABOUT WHO WROTE THIS

I'm Dr. Justin Houman.

I'm a board-certified men's health urologist and assistant professor of urology at Cedars-Sinai Medical Center in Los Angeles. I practice at Tower Urology.

When I was in residency, very few urologists specialized in men's health. Men's health is really three buckets: sexual health, fertility health and hormonal health. These are the things that bring men to the doctor for the first time. Men won't tell you when they have high blood pressure, but they'll tell you when they can't get an erection.

A typical urology visit is no more than ten minutes. Patients are meant to be pushed through, not dug into to figure out what is actually going on. My practice is different. I like to figure out what the cause is, so it has better long-term outcomes. Being at Tower Urology at Cedars-Sinai, I have the background of an academic medical center, but with my own practice inside it I'm not on a corporate clock.

TRAINING
Fellowship-trained microsurgeon
Board-certified urologist with fellowship training in male reproductive medicine and microsurgery.

VOLUME
1,000+ varicocelectomies, 800+ implants
Microsurgery for fertility, pain and sexual health is a big part of my practice.

RECOGNITION
Super Doctors® Rising Stars℠
Selected for inclusion in 2027 Southern California Super Doctors® Rising Stars℠, Urology.

DESIGNATIONS
Centers of Excellence
Endo Xiaflex Center of Excellence (Peyronie's) and Boston Scientific AMS 700 Center of Excellence (penile implants).

VISITS IN PERSON OR BY VIDEO

You don't have to live in Los Angeles.

Telehealth is how a lot of my patients actually start. The first visit for a lot of patients, especially patients who are outside of Los Angeles, is a video call from home. We go through your symptoms, your history, and any labs or imaging you've had. Sometimes patients send those in beforehand. A lot of patients come to me for second opinions on results from other urologists, and we figure out what's missing, what hasn't been done. Many times an exam needs to be done in person before figuring out the next steps.

YOUR NEXT STEP

Find out if your varicocele needs fixing.

My practice is based in Los Angeles. I see patients from all over when it comes to male fertility issues, whether you're in the city, the state, nationwide, even outside the country. We can review your records, look at your ultrasound findings, and figure out if a microsurgical varicocelectomy is right for you.

REQUEST A VISIT

Book online

Scan, or tap here.
houmanmd.com/contact

CALL MY OFFICE

310-854-7822

Monday to Friday, 8:30am to 5pm
Tower Urology at Cedars-Sinai

Not in Los Angeles? If distance is what's stopping you from coming to see me, a video visit is a great alternative.

BEFORE YOU BOOK

I see patients Wednesday through Friday, and new-patient openings are limited each week.

One practical note so there are no surprises: I'm in-network with Medicare. Other insurance is out-of-network, and my office provides a superbill you can submit to your plan for reimbursement. My team will walk you through costs before you book anything.

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Tower Urology at Cedars-Sinai
8635 W 3rd St, Suite 1W, Los Angeles, CA 90048
houmanmd.com · Instagram @justin.houman.md · YouTube HoumanMD

This guide is for education only and is not medical advice. Reading it does not create a doctor-patient relationship. Every patient is different; talk with a qualified physician before making medical decisions.