

FLUTTER OR FIBRILLATION



A RHYTHM YOU CHOOSE · AND ONE YOU DON'T

Two rhythms that feel almost the same, raise the same stroke risk, and get very different repairs. **One of them we can usually cure.**

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A man walks into clinic with a pulse stuck at exactly 150. Three days of feeling off. A little winded on the stairs. A flutter in the chest he can't shake. He is fairly sure it is anxiety. His tracing comes off the printer with a sawtooth running through the bottom leads, and it is not anxiety. It is atrial flutter, and it is a rhythm I can usually end for good in about an hour.

Flutter and AFib get lumped together in conversation because they share so much. Both start in the upper chambers, both raise your risk of stroke, both leave you tired. They are built differently, they look different on a tracing, and the repairs are not the same. This guide is the printable version of my article on the two of them. Bring it to your next visit.

150

BEATS A MINUTE

A pulse locked at exactly 150 is flutter until we prove it is something else.

95%

FIXED IN ONE HOUR

Typical flutter is one of the few rhythms in cardiology we can end permanently.

Same

STROKE RULES FOR BOTH

Flutter used to be treated as the safer one. Modern data closed that gap.

What is actually happening up there?

CHAOS, OR A CIRCLE

FIBRILLATION IS CHAOS. Your two upper chambers, the atria, stop squeezing in a coordinated beat and start quivering. Hundreds of disorganized electrical wavelets run through the muscle at once, in no pattern at all. Most of them get started near the pulmonary veins, the four veins that carry blood back from your lungs into the left atrium. The AV node, the gate between your upper and lower chambers, passes only a fraction of that traffic through, so your pulse lands irregular and often fast.

FLUTTER IS ORGANIZED. In place of chaos there is one large circuit, and the signal runs around it like a train on a loop. In the common form that loop travels around a strip of tissue in the right atrium called the cavotricuspid isthmus, which sits between the tricuspid valve and the large vein returning blood from your lower body. The lap time is fast and steady, 240 to 340 atrial beats a minute. The AV node usually passes every other one, and that is what parks your pulse near 150.

One difference does most of the work in everything that follows. A loop has a place you can cut. Chaos does not.

TWO FLAVORS OF FLUTTER

The name on your report changes the plan

1

TYPICAL FLUTTER

Uses the isthmus. This is most of what we see, and it is the curable one.

2

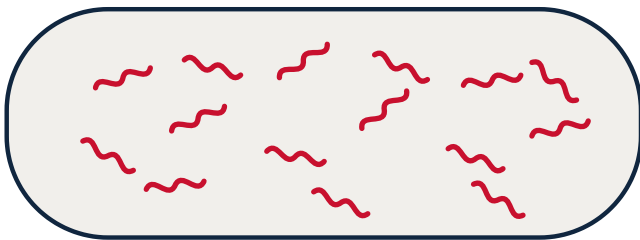
ATYPICAL FLUTTER

Runs on some other circuit, often in the left atrium or through scar left by heart surgery or a previous AFib procedure. Harder to reach, and the response to treatment varies more.

FIGURE 1

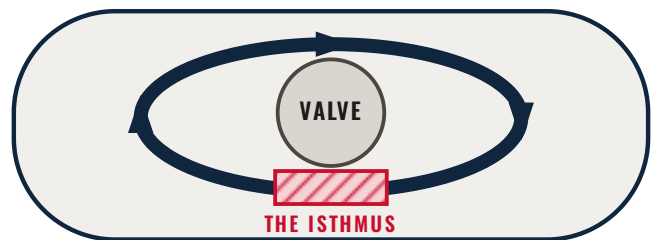
ONE HAS A DOORWAY. ONE DOES NOT.

ATRIAL FIBRILLATION



Hundreds of wavelets. No single circuit.
Nothing to cut, so we manage it instead.

TYPICAL ATRIAL FLUTTER



One loop, running through one strip of tissue.
Close the strip and the loop cannot run.

A schematic of the upper chambers, not an anatomical drawing. The loop in flutter is the whole reason the two rhythms are treated differently.

How do you tell them apart?

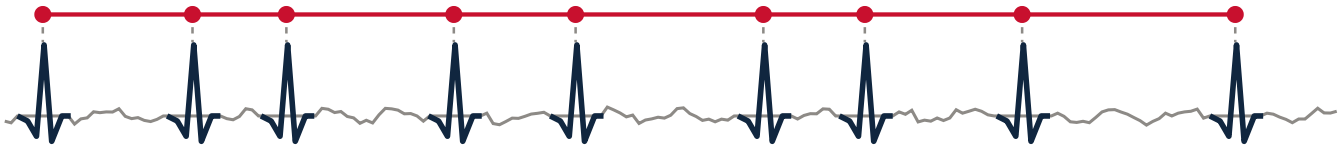
READING THE TRACING

FIGURE 2

THE SAME TROUBLE, TWO VERY DIFFERENT LINES

ATRIAL FIBRILLATION

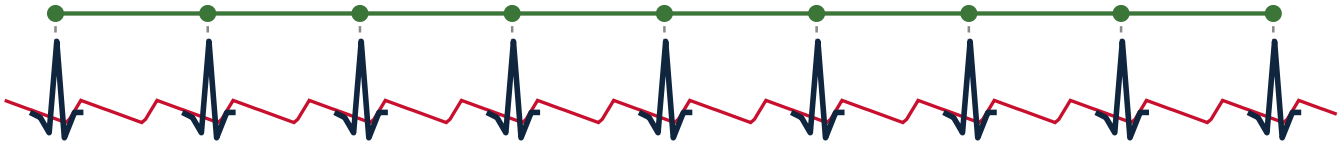
Irregularly irregular. No P waves. A fine, restless baseline.



Every gap between beats is a different length. That is what we mean by irregularly irregular.

TYPICAL ATRIAL FLUTTER

Regular, often exactly 150. A sawtooth that never returns to a flat line.



Every gap is the same length, and two sawtooth waves pass under each beat. That is the gate letting every other one through.

Schematic tracings drawn to show the pattern, not recordings from a patient. Red marks the atrial activity, navy marks the beats that reach your pulse.

FIBRILLATION. The spacing between beats keeps changing, with no pattern hiding in it anywhere. No P waves, the small bumps a healthy upper chamber makes before each beat. The line in between shows fine ripples that are sometimes hard to see. Left alone, the rate often runs in the 100s.

TYPICAL FLUTTER. A regular rate, often locked at 150, because the upper chambers run near 300 and the gate passes every second signal. Look at the bottom leads, labeled II, III and aVF on your tracing. You will find a continuous sawtooth with no flat line between the waves. In V1 they sometimes point up instead.

ATYPICAL FLUTTER. A regular fast rate again, and the flutter waves break the classic shape. They may point upward in the bottom leads or simply look odd, which says the circuit runs somewhere other than the isthmus. Pinning those down takes an electrical study inside the heart with mapping.

The two rhythms also trade places. AFib turns into flutter on its own, and flutter breaks down into AFib. More often than not, they travel together.

What does it actually feel like?

WHAT YOU NOTICE

THE TWO LISTS OVERLAP ALMOST COMPLETELY. Patients describe palpitations as a fluttering, a racing, or a pounding in the chest. Tiredness is the next thing I hear about, and it gets worse the longer the rhythm has been running. Shortness of breath on exertion comes after that. Lightheadedness and the feeling that you might faint show up when the rate is very fast, and more readily in older patients whose hearts have stiffened with the years.

Chest discomfort sometimes rides along, mostly in patients who already have narrowed heart arteries. A fast rate makes the heart muscle ask for more oxygen at the same moment those arteries are least able to deliver it.

THE PATTERN OF ONSET GIVES ME CLUES. AFib often arrives suddenly, stays for hours or days, and then stops, either on its own or with help. Flutter tends to settle in and stay, and patients are sometimes oblivious to a heart rate of 150 for days. Either rhythm can also be completely silent, which happens most in people who have had it long enough that the body has quietly adapted.

A prolonged, uncontrolled rhythm deserves treatment even without symptoms, because the silent damage can be substantial.

WHEN A FAST RHYTHM WEARS THE HEART OUT

Tachycardia-mediated cardiomyopathy, in plain words

A heart beating at 130 or 150 around the clock for weeks or months starts to lose pumping strength. Some patients meet me for the first time in heart failure, and the rhythm behind it has been running unnoticed the whole time.

Get the rhythm back to normal, or get the rate under control, and that weakness usually recovers. It takes weeks to months rather than days, and it depends entirely on somebody identifying the rhythm first.

This is the reason I chase down a fast pulse in someone who feels fine. Feeling fine is not the same as being fine.

SILENT DOES NOT MEAN HARMLESS. WHAT IT IS STILL DOING:

- 1 MAKING CLOTS**
Blood keeps pooling in the appendage either way.
- 2 TIRING THE MUSCLE**
Weeks at 150 weakens the pump on the same schedule.
- 3 BECOMING THE OTHER ONE**
AFib slips into flutter, and flutter into AFib.

PALPITATIONS

Fluttering, racing or pounding. The symptom that sends most people in.

TIREDNESS

Common, and worse the longer the rhythm has been going on.

BREATHLESSNESS

Short of breath climbing stairs or walking the block you always walk.

LIGHTEADEDNESS

Woozy, or close to fainting. Most likely at very fast rates.

Why does a rhythm problem cause a stroke?

THE CLOT IN THE CORNER

THE MECHANISM IS THE SAME FOR BOTH. When your upper chambers quiver or race instead of squeezing, blood stops moving briskly through them. It pools, mostly in a small pouch off the left atrium called the appendage, and pooled blood clots. When normal rhythm comes back, and sometimes during the rhythm itself, a clot can break loose, travel to the brain and cause a stroke.

FOR AFIB WE CAN PUT A NUMBER ON IT. The risk gets scored with a checklist called CHA2DS2-VASc, which counts heart failure, high blood pressure, age, diabetes, a previous stroke, disease in the other arteries, and being female. Men who score 2 or higher and women who score 3 or higher go on a blood thinner, usually one of the newer pills: apixaban, rivaroxaban, dabigatran or edoxaban.

FLUTTER USED TO GET A PASS. For years we taught that flutter carried less stroke risk than AFib. Two decades of study have closed that gap far enough that we apply the same rule to both. Part of the reasoning is the company these rhythms keep. They turn up in the same patients so often that treating flutter as the safer one is a bet I will not make on your behalf.

WHAT THE SCORE COUNTS

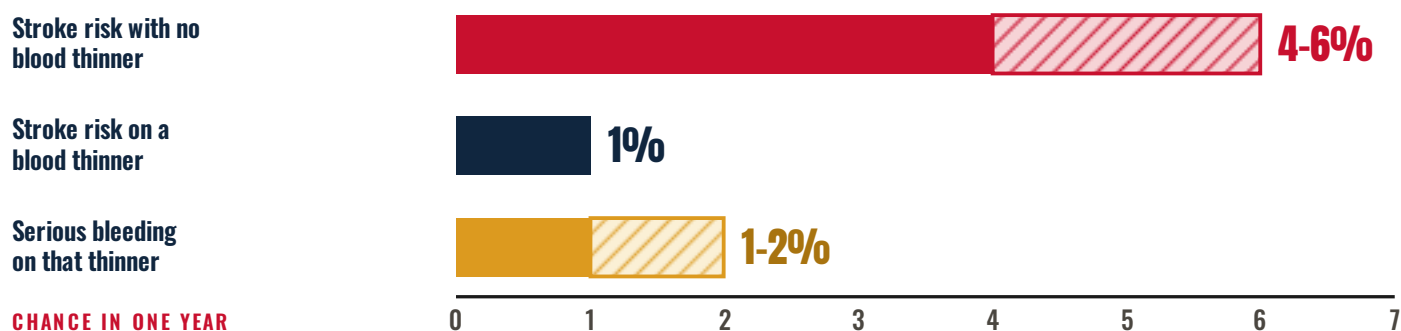
Seven items, and your own answers decide the plan

Heart failure
High blood pressure
Your age
Diabetes
A stroke you have already had
Disease in your other arteries
Being female

Warfarin still has a place. Patients with a mechanical valve, or with a tight mitral valve, stay on it rather than moving to a newer pill.

FIGURE 3

THE ARITHMETIC OF A BLOOD THINNER



The numbers here describe a patient with high blood pressure, diabetes and an age over 65. Your own figures depend on your own score, and the calculation gets weighed differently when bleeding risk is already high.

Can any of this be fixed for good?

THE ONE WE CAN CURE

THE HEADLINE NUMBER

95%

of typical flutter is gone after **one ablation**, a procedure that takes about an hour of table time.

5 TO 10 PERCENT RETURN OVER YEARS

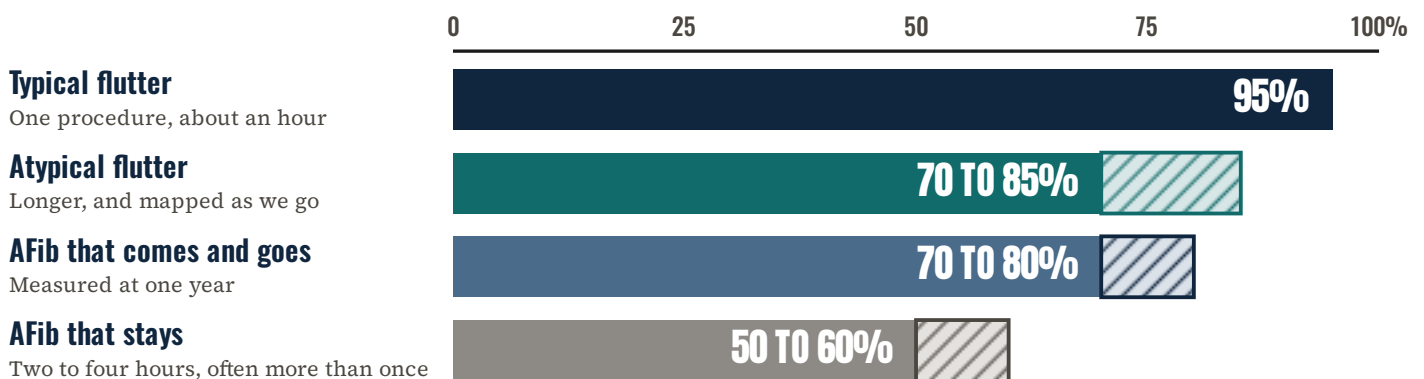
This is where the difference between the two rhythms stops being academic. Typical flutter runs its lap through the isthmus, and the isthmus is a narrow strip of tissue we can reach. The catheter lays a line of small burns across it, the circuit can no longer finish a lap, and the rhythm stops. Most patients go home the same day and are back to ordinary life within a few days.

Recurrence is low, and what does come back is usually not flutter. It is AFib, appearing in people who were already somewhere on that spectrum.

AFib ablation is a bigger undertaking. The usual approach isolates the pulmonary veins with a catheter or a cryoballoon over two to four hours, and the recovery runs longer. Many patients need more than one procedure to hold a normal rhythm. Pulse field ablation, a newer tool, has improved the safety and the results somewhat. It is still a much larger job than closing an isthmus.

FIGURE 4

WHAT EACH PROCEDURE ACTUALLY DELIVERS



Solid blocks show the low end of the published range and hatched blocks the rest of it.

Patients spend years on rhythm drugs for something an electrophysiologist could end in an hour.

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So what is the plan for AFib?

THREE JOBS

Treating AFib comes down to three separate tasks. They run at the same time, and skipping one undoes part of the other two.

- 1 STOP THE CLOT**
A blood thinner, chosen by your stroke score rather than by how often the rhythm shows up.
- 2 HANDLE THE RATE, OR THE RHYTHM**
Slow the pulse down and live with the rhythm, or work to put you back in a normal one.
- 3 CHANGE THE GROUND IT GROWS IN**
Weight, blood pressure, sleep, alcohol, fitness. This is the part people underestimate.

RATE CONTROL. Leave the rhythm where it is and bring the pulse down. For most patients I want a resting rate under 110, lower if you still feel it. Beta blockers do most of this work: metoprolol, atenolol and carvedilol. The calcium channel blockers diltiazem and verapamil reach the same goal by a different route. Digoxin turns up occasionally as a second agent, most often alongside heart failure.

RHYTHM CONTROL. Put you back in a normal rhythm and keep you there. Cardioversion is the fastest route, and in my hands that means a brief, controlled shock under sedation. A drug can do the same thing, and I reach for that far less often. Then come the rhythm drugs. Flecainide and propafenone suit structurally normal hearts. Amiodarone, dofetilide and sotalol are for hearts that are not.

Recent work moved this conversation earlier. Starting rhythm control soon after diagnosis produces better outcomes for many patients.

WHICH PILL DOES WHAT

Three jobs, three kinds of medicine

Rate drugs. Beta blockers and calcium channel blockers slow the gate so fewer signals reach the lower chambers. Your pulse comes down and the rhythm itself is unchanged.

Rhythm drugs. Work on the electrical behavior of the muscle, trying to hold a normal rhythm. Which one you get depends on whether your heart has other structural disease.

Blood thinners. Do nothing at all to the rhythm. They protect your brain, and the math behind them is clear once your stroke score is known.

THE THIRD JOB IS THE ONE PEOPLE SKIP

WEIGHT AND FITNESS

Programs that push weight down and fitness up have cut recurrence substantially, sometimes by half.

SLEEP AND ALCOHOL

Treating sleep apnea cuts nighttime episodes. Pulling back on alcohol helps people who are susceptible.

BLOOD PRESSURE

Getting your pressure down shrinks the diseased tissue both rhythms need in order to run.

And if what I have is flutter?

ABLATE, AND ABLATE EARLY

Everything on the previous page applies to flutter too, with one addition that reorders the whole list. Ablation for typical flutter is effective enough and safe enough that I push for it far earlier in the course than I would for AFib.

IN THE MOMENT. The first move is usually to slow the rate with a beta blocker or a calcium channel blocker. After that it is either a cardioversion or a trip to the lab, depending on how long the rhythm has been running and what you are already taking.

ONCE THE DIAGNOSIS IS FIRM. For documented typical flutter I raise ablation early, often the same day the tracing confirms it. The procedure is short, the recovery is quick, the success rate is high, and what you get back is real: no rhythm drug, no rhythm coming back, and usually more energy than you had. Patients who would rather not can be managed with a blood thinner and rate control, or with rhythm drugs. For most people the long view is better with the ablation.

ATYPICAL FLUTTER IS A LONGER CONVERSATION. The procedure is more complex, the success rate lower, and the circuit is often one feature of a wider pattern of scar in the left atrium that includes AFib. Those decisions get made together with the electrophysiologists who do these procedures every week.

AFTER A SUCCESSFUL ABLATION. The blood thinner question comes back. Whether you stay on it depends on your underlying stroke risk and on whether AFib has been documented or looks likely to arrive. It arrives in a meaningful share of patients after a flutter ablation, so this is a decision we revisit rather than settle once.

BEFORE WE SHOCK YOU

Why the timing question comes first

The classic teaching says flutter running under 48 hours, in someone already on a blood thinner, can be cardioverted with reasonable safety.

In my practice we look first in nearly every case. A transesophageal echocardiogram puts a small probe down the esophagus and gives a clear view of the left atrial appendage. If a clot is sitting in it, shocking you would send it somewhere it should never go.

ONE DRUG TRAP WORTH KNOWING

Rhythm drugs can create the problem they treat

Flecainide and propafenone sometimes turn AFib into a slow flutter, and a slow flutter is one the gate will pass beat for beat rather than every other beat. The result is a dangerously fast pulse. It is one of several reasons a rhythm drug is not something to start casually.

ASK WHICH FLUTTER

Typical or atypical. That one word decides how good the odds are.

ASK ABOUT ABLATION

As a first option, not as the thing we try after everything else fails.

ASK ABOUT THE THINNER

What happens to it after a successful ablation, and when we look at that again.

Can I have both of them?

TWO RHYTHMS, ONE ATRIUM

Plenty of patients carry both, sometimes at different times and sometimes trading back and forth. Which one leads tells me where to start.

FLUTTER IN FRONT. Flutter is the rhythm doing most of the damage, with short runs of AFib in between. Ablating the flutter usually improves the whole picture, and a residual AFib pattern normally stays behind. These patients are good candidates for a flutter ablation as the first procedure, and some of them end up with much less AFib afterward than anyone expected. That hints that the flutter was helping to trigger it.

AFIB IN FRONT. AFib is the dominant rhythm and flutter turns up now and then, often after someone has started a rhythm drug. The flutter can be a side effect of that drug rather than a new problem. Patients in this group usually do best having both rhythms addressed, sometimes in one combined procedure.

SOMETHING NEW AFTER AN ABLATION. A third group develops atypical flutter after an AFib ablation, because the scar left by that procedure gives a fresh circuit somewhere to run. These patients often need a follow-up trip to map and close the new loop.

THE WIDER VIEW. Think of flutter and AFib as two faces of the same tired atrial tissue. Having one of them raises your odds of the other. That is why long-term management is an evolving plan that addresses both rhythms over time, and why the plan I write today is one I expect to revise.

FIGURE 5

THREE WAYS THE TWO RHYTHMS SHARE A PATIENT

Flutter in front

Short runs of AFib between



AFib in front

Flutter appears now and then



A new loop after an AFib ablation



THE ABLATION



■ Flutter

▨ AFib

▨ Atypical flutter

An illustration of the three patterns I see most, not a measurement of how common each one is. Time runs left to right in each bar.

When do I call, and who do I call?

WHEN TO CALL

Three tiers. Cut this page out and put it on the refrigerator, because nobody makes a clear decision about this at two in the morning.

CALL 911 RIGHT NOW

Do not drive yourself

Chest pain.

Severe shortness of breath.

Fainting.

Any of those during a fast rhythm you know about or suspect. Fast rates can starve a heart with narrowed arteries, and the threshold for getting you seen is deliberately low.

CALL US THE SAME DAY

Cardiologist or arrhythmia team

Palpitations that will not stop.

New shortness of breath at rest or with mild activity.

Feeling close to fainting.

Any sense that the rhythm has changed. Many practices run an arrhythmia nurse line that can sort these calls and get you seen the same day.

BOOK A VISIT IN ONE TO TWO WEEKS

Worth an appointment, not an ambulance

New palpitations that come and go.

Mild tiredness you suspect is the rhythm.

Follow-up after a rhythm event we already know about. Bring anything your watch recorded.

ABOUT THAT WATCH

Take it seriously and do not panic. Smartwatches are reasonably good at spotting an irregular rhythm. They are not perfect, and they do not reliably separate AFib from flutter or from several other rhythms that look similar to a wrist sensor.

The right next step is a 12-lead tracing, ideally taken while you feel it. If that confirms AFib or flutter, the workup runs as described in these pages. If the watch turns out to have called it wrong, which happens, nothing more is needed. Watch readings are useful clues rather than diagnoses, and they work best in partnership with somebody who can put them in context.

HAVE THIS READY WHEN YOU CALL

It changes what we can do over the phone

Your pulse. Count it for a full minute, or read it off the cuff or the watch, and say whether it feels steady or all over the place.

When it started, as closely as you can pin it down. The 48 hour question turns on this.

Your blood thinner, and whether you have missed any doses.

The rhythm's name, if you have one yet.

FIVE SMALL MOVES

None of these takes an afternoon, and every one of them changes what your next appointment can accomplish.



1

GET THE NAME IN WRITING

Flutter, AFib, or both, with the date. Not "a rhythm thing." The word on the page changes the plan.

2

ASK ABOUT ABLATION

Especially if the word typical appears anywhere on your report. Ask it as a first option.

3

BRING THE WATCH TRACINGS

Export them before the visit rather than scrolling for them in the room. They often shape what we do next.

4

SETTLE THE SLEEP QUESTION

Snoring, and waking up tired after a full night, is worth a sleep apnea test. Treating it cuts nighttime episodes.

5

TAKE THE ALCOHOL DOWN

One or two drinks a night is enough to set AFib off in people who are susceptible. Try a few weeks without and see.

AND ONE THING **NOT** TO DO

Do not stop the blood thinner on your own and wait to see whether anything happens. The protection ends the day you stop, and the first sign of that can be a stroke.

Tell me the real problem instead. The bruising is embarrassing, the cost is absurd, your dentist told you to hold it, you keep forgetting the evening dose. Every one of those has an answer, and most of them take one phone call.

BRING TO YOUR VISIT

Four things that make the appointment worth more

Any tracing you have, from a watch, a patch monitor or another office.

Every bottle you take, including supplements and anything a different doctor started.

When episodes happen. Time of day, what you were doing, how long they lasted.

What you want out of this. Fewer symptoms, fewer pills, or done with it. Those lead to different plans.

YOUR QUESTIONS

Why is my heart rate stuck at 150?

A pulse locked at exactly 150 points at typical flutter with the gate passing every other beat. The upper chambers run near 300, half gets through, and 150 is what you feel. If yours has sat there for days, get a tracing. Sustained 150 weakens the muscle and carries stroke risk whether or not you feel unwell.

If I have flutter, do I really need a blood thinner?

In most cases, yes. The old teaching that flutter carries less stroke risk has not held up; we use the same score for both. A CHA2DS2-VASc of 2 or higher, or 3 if you are female, means a thinner whichever rhythm you have. After a successful ablation, stopping it can be revisited.

How long does a flutter ablation take?

About an hour of actual procedure time. Total time in the lab, counting preparation and recovery, runs three to four hours, and most patients go home the same day. Success for typical flutter is around 95 percent, complications are uncommon, and most people are back to normal within days.

What are the chances it comes back?

Flutter itself returns in about 5 to 10 percent of patients over five years. More common is new AFib, in roughly 30 percent within five years depending on the tissue underneath. That gets managed on the standard AFib pathway, and the flutter ablation stays effective either way.

A SHORT GLOSSARY, IN PLAIN WORDS

Atria. The two upper chambers of your heart. Both of these rhythms start there.

Isthmus. The strip of tissue in the right atrium that typical flutter loops through.

Ablation. A catheter procedure that places small burns to break an electrical circuit.

Cardioversion. Resetting the rhythm, usually with a brief controlled shock under sedation.

Appendage. The small pouch off the left atrium where most of these clots form.

CHA2DS2-VASc. The checklist that scores your stroke risk and decides the blood thinner.

Can flutter cause heart failure?

Yes. Sustained fast rates from any source can weaken the pumping muscle. Patients arrive short of breath with swollen legs and an echocardiogram showing reduced function. That weakness reverses in most cases once the rhythm is fixed or the rate controlled, over weeks to months.

What lifestyle changes help?

The same list for both rhythms. Weight loss reduces AFib burden substantially. Blood pressure control shrinks the tissue that supports both rhythms. CPAP for sleep apnea cuts nighttime episodes, cutting back on alcohol helps, aerobic exercise helps when not overdone, and moderate caffeine is usually fine.

My doctor mentioned the Watchman. What is that?

A small device that closes off the left atrial appendage, the pouch where most of these clots form. It goes in through a catheter, tissue grows over it, and the blood thinner can usually stop after that. It does nothing to the rhythm. It removes the place the clot comes from, and it is meant for patients caught between a bleeding risk and a stroke risk they cannot accept.

NAME THE RHYTHM. THEN FIX IT.

Typical flutter is one of the few rhythms in cardiology we can end outright. One loop, one strip of tissue, about an hour of work, and it is gone roughly 95 percent of the time. Patients spend years on rhythm drugs for it anyway, and the gap between the effort and the result is hard to look at.

AFib is a longer road. Ablation does real work and no AFib ablation is a guaranteed cure, so the plan combines rhythm, rate, a blood thinner and the risk factor work. Treatment has changed enormously in fifteen years. Patients diagnosed today have options that did not exist a decade ago.

THE PATIENTS I WORRY ABOUT

They are the ones who never quite worked out which rhythm they had, or what could be done about it. Somebody said the word arrhythmia, a prescription appeared, and years went by.

The ones I feel hopeful about got a clear diagnosis, a clear plan, and a standing invitation to keep asking questions as the plan changes.

And both deserve a real conversation about what you want out of treatment, a different question from what is technically available.

IF YOU KEEP THREE THINGS FROM THESE PAGES

1

NAME IT

The word on your chart decides what can be offered.

2

ASK ABOUT THE LOOP

Typical flutter has a doorway we can close.

3

PROTECT THE BRAIN EITHER WAY

Thinner decisions follow your score.

TAKE THIS PAGE TO YOUR DOCTOR

Two questions that change the conversation

1

WHICH RHYTHM DO I HAVE?

Flutter, AFib, or both. And if it is flutter, typical or atypical.

2

IS ABLATION AN OPTION?

And if the answer is not yet, what would have to change for it to become one.



The full article, with every study linked, is at damianrasch.com/atrial-flutter-vs-afib.

Where every number in this guide came from

THE EVIDENCE

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READ IT ONLINE

damianrasch.com/atrial-flutter-vs-afib

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Photographs from Pexels.

Figures 1, 2 and 5 are illustrations drawn to show a pattern rather than recordings or measurements from a patient. The above information was composed by Dr. Damian Rasch, drawing on individual insight and bolstered by digital research and writing assistance. The information is for educational purposes only and does not constitute medical advice. It is not a substitute for consultation with your own physician.