



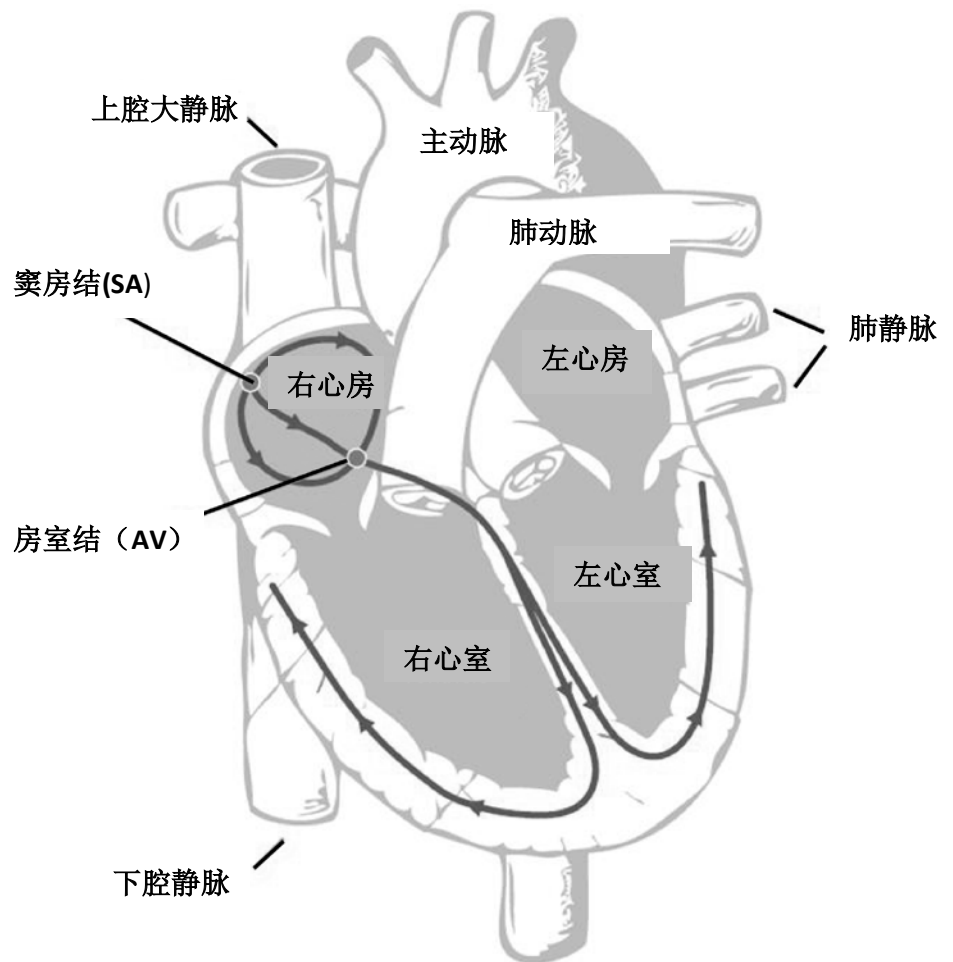
## 房颤

原因、症状、风险及治疗

此讲义为您解说房颤。包括症状、原因、风险因素及治疗。

### 房颤是甚麽？

房颤 是一种心律异常（心律失常）也被称为“房颤”。房颤可以让您的心跳在一个非常不稳定的模式。它可能会使您的心脏跳得很快、或很慢。



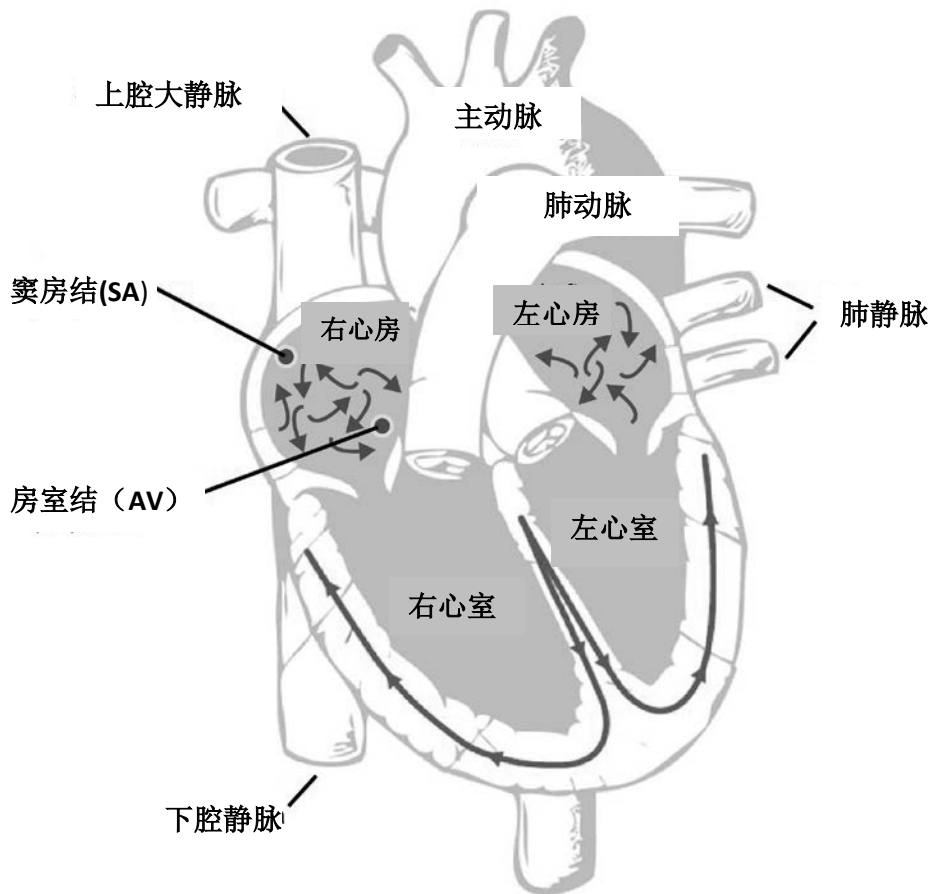
**健康心脏的结构及心律：** 电击信号是由窦房结（SA）开始，包括激活左心房及右心房、按照所绘的深色线条及箭头所示的路线，然后移动到房室结（AV）。然后循着所绘的深色线条传达到心室。

发生房颤时、心脏上部的两个腔室（心房）及下部的两个腔室（心室）步骤不协调。也就是血液从心脏泵到身体的其他部位时不是很顺畅。

正常的心脏每分钟跳动 60 至 100 次。每次心房跳动后、心室以同样的模式及节奏跳动。

房颤是心房跳动得比正常的快（每分钟可高达 500 跳）。心室跳动也加速（每分钟约 100 至 150 跳）。且是以不同的模式、节奏跳动。结果就形成了快速不稳定的心跳。

房颤也可引起血液囤积或涡流在左心房里、这样可形成血栓。血栓可进入血液到脑部。如发生这种情况、就是中风。



**房颤心脏的结构及心律：**所绘的深色线条及箭头显示电击信号的方向。房颤时房室结 (SA) 已不再发动。相反地、按箭头所示，左心房和右心房有不稳定的电击信号导致房颤。电击信号仍然通过房室结 (AV)、然后进入心室。

## 房颤有些什么症状？

房颤的症状因人而异。其症状包括：

- 轻度心悸（快速或不规则的心跳）
- 疲劳、极度疲累、烦躁不安、降低耐力
- 气短
- 胸部疼痛或不适
- 感觉头晕或眩晕
- 晕倒
- 在腿部积水或肿胀

有些房颤的患者没有任何症状。即所谓的 *无症状* 或“沉默”房颤。

## 房颤有那些不同的类型？

房颤有 4 种类型：

- **阵发性（间歇性）房颤**：房颤时发时好。它大概会持续几分钟到一周、然后它会自己消失。
- **持续性房颤**：房颤持续超过 7 天或需要治疗来让它停止。可能要用药物或做心脏复律术。
- **长期持续性房颤**：房颤持续超过 1 年。
- **永久性房颤**：房颤不停。有些情况是虽然经过治疗、但仍然无效。治疗的目的是减轻症状。

房颤是渐进的。即、早期可能会自己消失、但渐渐地就持续得久些。而需要治疗来使它停止。

## 什麼情况会引起房颤？

大多数的情况、房颤是与其他心脏的疾病有关、例如：

- 高血压
- 心血管病
- 心瓣膜不正常、或某种心瓣膜疾病
- 心肌病（增大、乏力）
- 充血性心力衰竭

- 曾经心脏病骤发过
- 以前做过心脏手术
- 先天性的心脏缺陷（出生时就有的状况）
- 心窦综合征（心脏的原本起搏器工作不正常）
- 心包炎、一种心脏的外表面炎症

有时、患房颤的病人并无任何其他的心脏病。这就是所谓的“单独性”的房颤。患“单独性”房颤的病人没有任何心脏损伤或心脏缺陷。心房颤动是他们主要的心脏问题。

## 还有什麼其他的因素会让我有房颤的风险？

其他会增加患房颤的风险有：

- 年龄（在美国 65 岁以上的 100 人中约有 5 位患房颤）。
- 体内甲状腺激素高的人。
- 第一型、二型糖尿病患者。
- 在过去有过中风、小中风（*短暂性脑缺血发作*，即 TIA）、或血块（血栓）在心脏内开始形成。
- 抽烟、咖啡因、喝酒及其他的兴奋剂（它们可导致心脏在一段时间内跳动得很快）。
- 服用某种药物。
- 病毒感染、或全身严重地被感染。
- 肺部的疾病如 *肺气肿*。
- *睡眠窒息症*（睡眠时会暂时停止呼吸）。
- *压力*、不论是身体或心理的压力。
- *肺部血栓*（血栓阻挡了血液通往肺部）。
- 家庭有房颤的病史。

## 如何诊断房颤？

为了诊断、医生需要知道您所有的病史并为您做体检。为诊断房颤主要有两种检测法：

- **心电图**（ECG 或 EKG）来检测您的心跳。做此测试是将导电片贴在胸部的皮肤上。来记录您心脏的电导状况。心电图显示您心律及电流通过心肌强度及间隔的时间。它可以在您的床边做。几分钟就可完成、也不需要为此测试做任何特别的准备。

- **家用心电监测仪。** 这个显示器是一个记录您心率的小仪器。可记录 1 至 28 天的情况。该仪器称为动态心电图监测器、或异常情况监测器。

您可能还需要做其他的测试：

- **验血；** 包括甲状腺功能测试。
- **超声心动图；** 是以超声波来检查心脏是否有任何不正常。以超声波来做心房、心室及瓣膜的造影。是在诊所做此检查、约需要一个小时。您不必为此测试做任何特别的准备。
- **胸腔 X-光；** 是以放射线来做胸腔内部的造影。X-光的胸片可以显示“心影”是否正常。（心脏的影子可显示您心脏的形状及大小）。X-光的胸片也可显示肺部有无积水。是在放射科或您的床边做。一般仅需几分钟就做好。您不必为此测试做任何特别的准备。
- **心导管术；** 是以 X-光引导一条细软的管子（导管）。通到心脏及冠状动脉内。这测试可以测知血液流到心肌的流量、压力及速度。需要在心导管手术室；由心脏医生(心脏专科医生)来做。
- 此测试须时一小时。可以是门诊、也可能需要在医院住一晚。
  - 在测试时会给您镇静剂（让您放轻松的药物）。
  - 在做心导管测试前您需要遵照饮食及服药的特别指示准备。
  - 如您需要做此测试、您的医护人员会给您更详细的说明。

**心脏的核磁共振或扫描；** 它们可以提供更详细的造影。

## 房颤会引起什么其他的并发症？

房颤的主要并发症就是中风及心脏衰竭两个。其他的并发症就如形成血栓、血栓会流到身体其他的器官。这些并发症可能发生在刚开始有房颤或已有房颤多年的患者。

## 如何治疗房颤？

房颤有两个主要的治疗法：

- 控制心率。
- 控制心律。

### 控制心率

在控制心率的疗法是容许发生房颤、其目标是在房颤发作时以控制心率来减轻房颤的影响。如此即可降低房颤对心脏所造成的负担。

有数种药物可以用来控制心率。如您适于这种治疗法、您的医生就会与您讨论这些药物。目标是保持您的心率平均每分钟在 **110** 跳以下。

## 控制心律

在控制心律的疗法的目标是阻止房颤发生、以恢复正常的心律。为达到此目标、医生可能会要您服用药物、或建议您做心脏复律术。做心脏复律术时、会先给您镇静剂让您入睡、再以电击来停止房颤、让心律回复到正常的心律。

## 抗凝疗法

控制心率、心律的疗法的目的是预防左心房形成血栓。预防血栓就可预防中风。预防形成血栓的治疗就被称为抗凝疗法。

这 4 种药是最常用的抗凝药物：

- 华法林 Warfarin (香豆素 Coumadin)
- 达比加群 Dabigatran (Pradaxa)
- 利伐沙班 (Rivaroxaban (Xarelto))
- 阿哌沙班 Apixaban (Eliquis)

有时也使用阿司匹林代替上述的药物来预防中风。

## 心导管消融术

如对控制心率、心律的疗效不理想、医生可能建议您采用第 3 种房颤的疗法、即心导管消融术。

心导管消融术对经常性、短暂性的房颤最有效。消融术有 2 种型式：

- 射频导管消融，使用热量或热能
- 低温气球消融术，使用冷或冷冻能量

“消融”的意思就是销毁。心导管消融术就是摧毁房颤的触发点。一般这触发点是在左心房、肺静脉近旁。

肺静脉是由肺部通往心脏。消融术就是先阻止启发房颤的触发点。

如医生建议导管消融术来治疗您的房颤、可以请医生给您一份“治疗房颤的心导管术”的讲义 以便对它有进一步的了解。

## 您有疑问吗？

我们很重视您的问题。如您有任何疑问或顾虑、请与您的医护人员联系。

华大医疗中心联络中心电话：  
206.520.5000

## 共同合作

您、跟您的心脏医生（心脏医生或心脏电生理专科医生）及您的家庭医生将一起会诊、来决定消融术对您是否为最佳的治疗方法。如您的房颤并没有对心脏造成损害、也无其他并发症的风险、那您和您的医生可能就会决定暂时不做治疗。但日后、您可能需要服用药物、心脏复律术、或消融术来治疗房颤、以免房颤加剧而导致其他的健康问题。

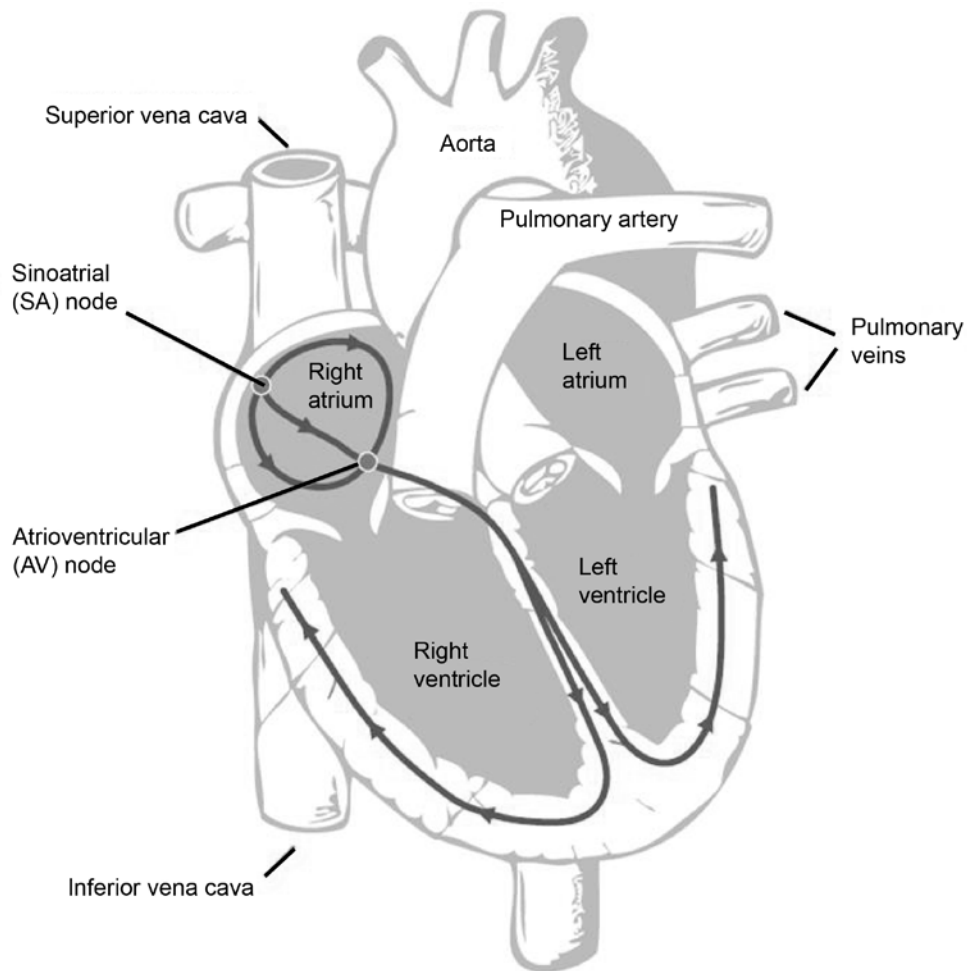
## Atrial Fibrillation

### *Causes, symptoms, risks, and treatments*

*This handout describes atrial fibrillation. It includes symptoms, causes, risk factors, and treatments.*

### What is atrial fibrillation?

*Atrial fibrillation (AF) is an abnormal heart rhythm (arrhythmia). It is also called "Afib." AF can make your heart beat in a very unsteady pattern. It may make your heart beat very rapidly or very slowly.*



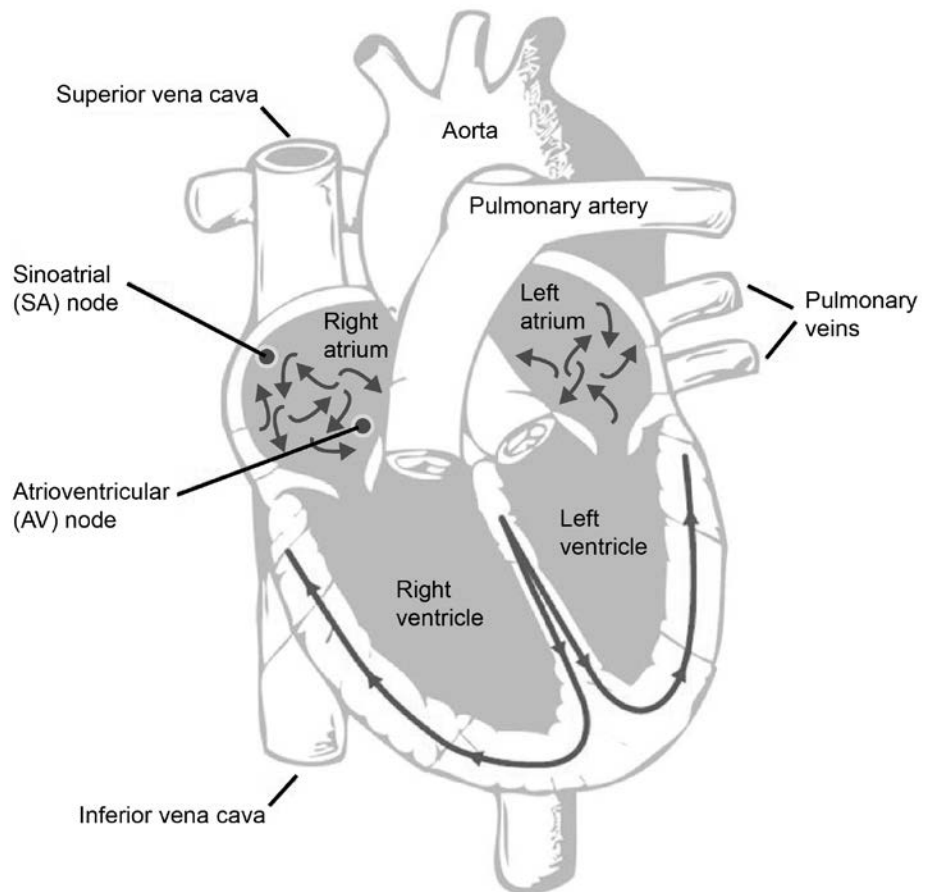
***The anatomy and rhythm of a healthy heart:*** *The electrical signal starts in the sinoatrial (SA) node, follows the dark lines and arrows to activate the left and right atria, and then moves to the atrioventricular (AV) node. It then follows the dark lines to the ventricles.*

When you have AF, the 2 upper chambers of your heart (the *atria*) and the 2 lower chambers of your heart (the *ventricles*) do not work well together. This means blood does not pump smoothly out of your heart to the rest of your body.

A normal heart beats about 60 to 100 times each minute. After each time the atria beat, the ventricles beat in the same pattern and rhythm.

With AF, the atria beat much faster than normal (up to 500 beats each minute). The ventricles also beat faster (about 100 to 150 beats each minute), but in a different pattern and rhythm from the atria. The result is a fast and unsteady heartbeat.

AF can also cause blood to collect or swirl in the left atrium, and this can lead to a blood clot. This clot could enter your bloodstream and go to your brain. If this happens, it is called a *stroke*.



***The anatomy and rhythm of a heart with atrial fibrillation:*** The dark lines show the direction of the electrical signals. The sinoatrial (SA) node is no longer active while the heart is in atrial fibrillation. Instead, as seen by the arrows, the right and left atria have unsteady electrical signals, which causes fibrillation. The electrical signal still goes through the atrioventricular (AV) node and into the ventricles.



## What are the symptoms of AF?

Symptoms of AF vary from person to person. Some symptoms are:

- Mild *palpitations* (rapid or irregular heartbeats)
- Fatigue, extreme tiredness, restlessness, reduced stamina
- Shortness of breath
- Chest pain or discomfort in your chest
- Feeling lightheaded or dizzy
- Fainting
- Fluid buildup or swelling in the legs

Some people with AF do not have any symptoms. This is called *asymptomatic*, or “silent,” AF.

## What are the different types of AF?

There are 4 types of AF:

- In ***paroxysmal (intermittent) AF***, AF comes and goes. It lasts anywhere from minutes to about a week, and it goes away on its own.
- In ***persistent AF***, AF lasts longer than 7 days or requires medical care to make it stop. This care could be medicine or a procedure called an *external cardioversion*.
- In ***longstanding persistent AF***, AF is ongoing and lasts longer than 1 year.
- In ***permanent AF***, AF does not go away. Sometimes treatments have been tried but have not worked. The goal of treatment is to lessen the symptoms.

Atrial fibrillation is *progressive*. This means episodes that go away on their own at first will last longer over time. They may need treatment to make them stop.

## What heart conditions can cause AF?

Most times, AF is linked with having another heart condition, such as:

- High blood pressure
- Coronary artery disease
- Abnormal heart valves, or certain diseases of the heart valves
- *Cardiomyopathy* (an enlarged, weakened heart)
- Congestive heart failure

- Heart attacks
- Heart surgery in the past
- *Congenital* heart defects (these are heart conditions you are born with)
- *Sick sinus syndrome* (the heart's natural pacemaker does not work properly)
- *Pericarditis*, an inflammation of the outer surface of the heart

Sometimes, people who have AF do not have other heart diseases. This is called “lone” AF. People with lone AF do not have any heart damage or heart defects. Atrial fibrillation is their main heart problem.

## What else puts me at risk for AF?

Some other things that increase your risk of having AF are:

- Age (about 5 out of 100 people in the U.S. older than 65 have AF)
- Having a high level of thyroid hormone in your body
- Type 1 or type 2 diabetes
- Having a stroke, mini-stroke (*transient ischemic attack*, or TIA), or another blood clot that started in the heart (*embolus*) in the past
- Using tobacco, caffeine, alcohol, and other stimulants (these cause your heart to beat faster for a short time)
- Taking certain medicines
- Viral infections, or severe whole-body infections
- Lung diseases such as *emphysema*
- *Sleep apnea* (short stops in breathing when sleeping)
- Stress, either physical or emotional
- *Pulmonary embolism* (a blood clot that blocks blood flow to the lungs)
- Family history of AF

## How is AF diagnosed?

To evaluate you for AF, your doctor will take your complete medical history and do a physical exam. The 2 main ways to diagnose AF are:

- ***Electrocardiogram (ECG or EKG)*** to monitor your heartbeat. In this test, electrodes are attached to your skin to record your heart's electrical activity. An EKG shows your heart's rhythm and the strength and timing of electrical currents through your heart muscle. It is done at your bedside and usually only takes a few minutes. You do not need to prepare in any special way for this test.

- **Home ECG monitor.** This monitor is a small device that records your heart rate for 1 to 28 days. The device is called a Holter monitor or an event monitor.

Other tests you might have are:

- **Blood tests**, including a thyroid function test.
- An **echocardiogram**, which uses ultrasound to find out if there are any abnormalities in your heart. This test uses ultrasound waves to make images of your heart chambers and valves. It is done in the clinic and usually takes about 1 hour. You do not need to prepare in any special way for this test.
- A **chest X-ray**, which uses radiation to make images of the inside of your chest. A chest X-ray shows whether your “heart shadow” is normal (a heart shadow shows the shape and size of your heart). An X-ray will also show if you have fluid in your lungs. It is done in a radiology lab or at the bedside and usually takes only a few minutes. You do not need to prepare in any special way for this test.
- A **cardiac catheterization**, which uses X-ray to guide small flexible tubes (catheters) to your heart structures and coronary arteries. The test measures blood flow to your heart muscle and the rate of blood flow and pressures through your heart. It is done in a cardiac catheterization laboratory by a *cardiologist* (doctor who specializes in heart health).
  - This test usually takes 1 hour. It may be done during an outpatient visit, or you may need to stay overnight in the hospital.
  - You will receive sedatives (medicines to help you relax) during the test.
  - You will need to follow special instructions for eating, drinking, and taking medicines before your cardiac catheterization.
  - Your health care provider will give you more information if you are having this test.
- **Cardiac MRI or CT scan**, which creates detailed pictures of your heart.

## What are the complications of AF?

Two complications of AF are stroke and heart failure. Another complication is a blood clot that travels to another part of the body. These complications can occur when AF starts or after someone has had AF for a long time.

## **How is AF treated?**

There are 2 main ways to treat AF:

- Heart **rate** control
- Heart **rhythm** control

### **Heart Rate Control**

In heart rate control, AF is allowed to occur, but its effects are lessened by controlling your heart rate while you are in AF. This prevents heart failure and lowers the stress AF puts on your heart.

Several medicines can be used for heart rate control. If this treatment is an option for you, your doctor will talk with you about these medicines. The goal is to keep your average heart rate below 110 beats per minute.

### **Heart Rhythm Control**

In heart rhythm control, the goal is to keep AF from occurring and to restore a normal heart rhythm. To do this, your doctor may ask you to take medicine, or may advise you to have a cardioversion procedure. During a cardioversion, you are given medicine to make you sleep, and your heart is given an electrical shock to stop the AF and return your heart to normal rhythm.

### ***Anticoagulation Therapy***

The goal of both heart rate and heart rhythm control is to prevent blood clots from forming in the left atrium of your heart. Preventing blood clots will help prevent strokes from occurring. Treatment to keep blood clots from forming is called *anticoagulation therapy*.

These 4 anticoagulation medicines are used most often:

- Warfarin (Coumadin)
- Dabigatran (Pradaxa)
- Rivaroxaban (Xarelto)
- Apixaban (Eliquis)

Sometimes aspirin is used instead of these medicines to prevent strokes.

### **Catheter Ablation**

If heart rate control and heart rhythm control do not work well enough for you, your doctor might recommend a 3rd way to treat AF, called *catheter ablation*.

Catheter ablation works best in people who have frequent, short episodes of AF. There are 2 types of catheter ablation:

- *Radiofrequency* catheter ablation, which uses heat, or thermal energy
- *Cryo-balloon* catheter ablation, which uses cold, or freezing energy

The word “ablate” means to destroy. In catheter ablation, the triggers that cause your AF are destroyed. Usually, these triggers are near the *pulmonary* veins in the left atrium of your heart.

Pulmonary veins lead from your lungs to your heart. The ablation procedure stops the triggers from causing AF in the first place.

If your doctor recommends catheter ablation to treat your AF, please ask for the handout “Catheter Ablation for Atrial Fibrillation” to learn more.

## **Working Together**

You, your heart doctor (*cardiologist or electrophysiologist*), and your primary care doctor will work together to decide what AF treatment is best for you. If your AF is not damaging your heart or putting you at risk of complications, you and your doctors may decide not to treat it at first. But over time, you might need medicines, cardioversion, or ablation to treat your AF to keep it from getting worse and causing other health problems.

### **Questions?**

Your questions are important. Call your doctor or health care provider if you have questions or concerns.

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Center: 206-520-5000