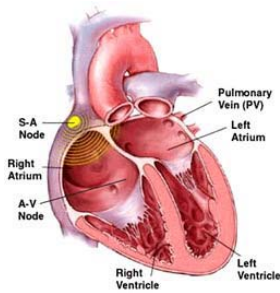
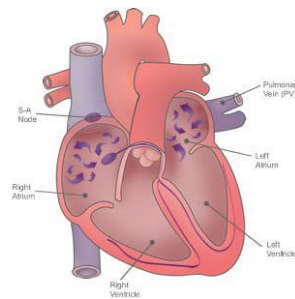


## 1. What is Atrial Fibrillation?

Atrial fibrillation (A-Fib) is a disorder found in about 2.2 million Americans. During A-Fib, the heart's two small upper chambers (the atria) quiver instead of beating effectively. Blood isn't pumped completely out of them, so it may pool and clot. If a piece of a blood clot in the atria leaves the heart and becomes lodged in an artery in the brain, a stroke results. About 15 percent of strokes occur in people with atrial fibrillation.



Human Heart



Heart in Atrial Fibrillation condition

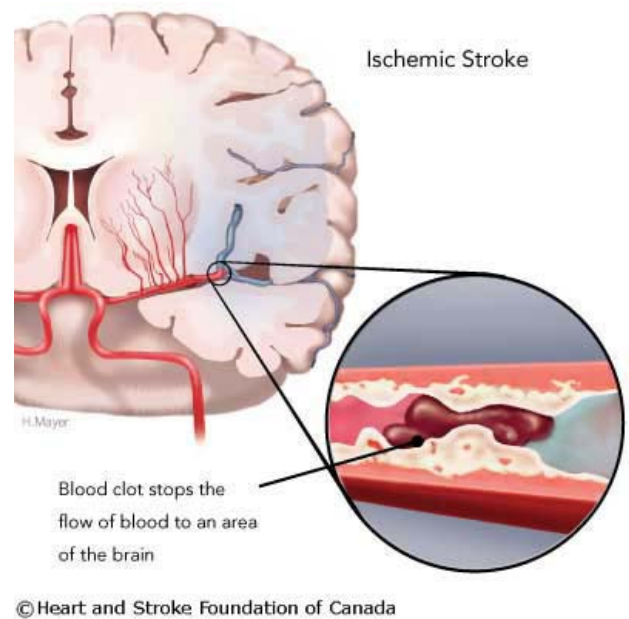
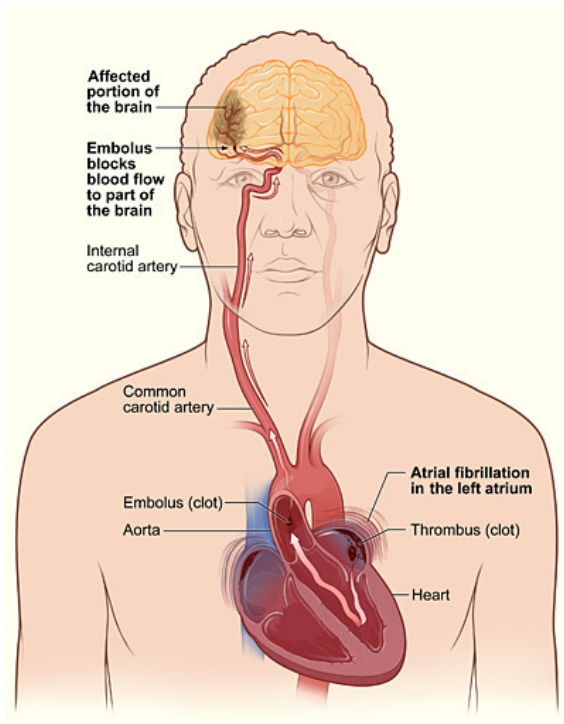
The likelihood of developing atrial fibrillation increases with age. Three to five percent of people over 65 have atrial fibrillation.

## 2. How is Atrial Fibrillation treated?

Several approaches are used to treat and prevent abnormal beating:

- Medications are used to slow down rapid heart rate associated with A-FIB. These treatments may include drugs such as digoxin, beta blockers (atenolol, metoprolol, propranolol), amiodarone, disopyramide, calcium antagonists (verapamil, diltiazam), sotalol, flecainide, procainamide, quinidine, propafenone, etc.
- Electrical cardioversion may be used to restore normal heart rhythm with an electric shock, when medication doesn't improve symptoms.
- Drugs (such as ibutilide) can sometimes restore the heart's normal rhythm. These drugs are given under medical supervision, and are delivered through an IV tube into a vein, usually in the patient's arm.

- Radiofrequency ablation may be effective in some patients when medications don't work. In this procedure, thin and flexible tubes are introduced through a blood vessel and directed to the heart muscle. Then a burst of radiofrequency energy is delivered to destroy tissue that triggers abnormal electrical signals or to block abnormal electrical pathways.
- Surgery can be used to disrupt electrical pathways that generate A-FIB.
- Atrial pacemakers can be implanted under the skin to regulate the heart rhythm.



A-Fib causes Stroke

### 3. AHA Recommendation for Stroke Prevention

Treating atrial fibrillation is an important way to help prevent stroke. That's why the American Heart Association recommends aggressive treatment of this heart arrhythmia.

Drugs are also used to help reduce stroke risk in people with A-FIB. Anticoagulant and antiplatelet medications thin the blood and make it less prone to clotting. Warfarin is the anticoagulant now used for this purpose, and aspirin is the antiplatelet drug most often used. Long-term use of warfarin in patients with A-FIB and other stroke risk factors can reduce stroke by 68 percent.

- Physicians differ on the choice of drugs to prevent embolic stroke — stroke caused by a blood clot. It's clear that warfarin is more effective against this type of stroke than aspirin. However, warfarin has more side effects than aspirin. Examples include potential bleeding problems or ulcer.
- Patients at high risk for stroke should probably be treated with warfarin rather than aspirin unless there are clear reasons not to do so.
- Aspirin is the standard treatment for patients at low risk for stroke and under 75 years of age.

### 4. Stroke Risk Detection by Microlife

During a normal blood pressure measurement, Microlife's Advanced Portable Blood Pressure Monitor uses advanced technology to screen for atrial fibrillation, a heart arrhythmia known to cause debilitating, yet preventable, strokes. This advanced monitor detects the appearance of atrial fibrillation during measurement and gives a warning signal with your reading.

Atrial fibrillation is a common heart rhythm problem. It affects more than 2 million people in North America. It is more common with older age and it is found in 10% of people over 80 years old. It is a common cause of major strokes. About 15% of all strokes are caused by atrial fibrillation. The elderly, or those with high blood pressure, diabetes or heart disease are more likely to get a stroke if they have atrial fibrillation.

Atrial fibrillation is a rhythm problem that can last from a few minutes, to days or weeks and even years. Atrial fibrillation can cause blood in the upper chambers of the heart (the atria) to form clots. These clots can break off and travel to the brain causing a stroke. The use of blood thinners, such as warfarin (Coumadin®), can lower the risk of stroke in patients with atrial fibrillation. A

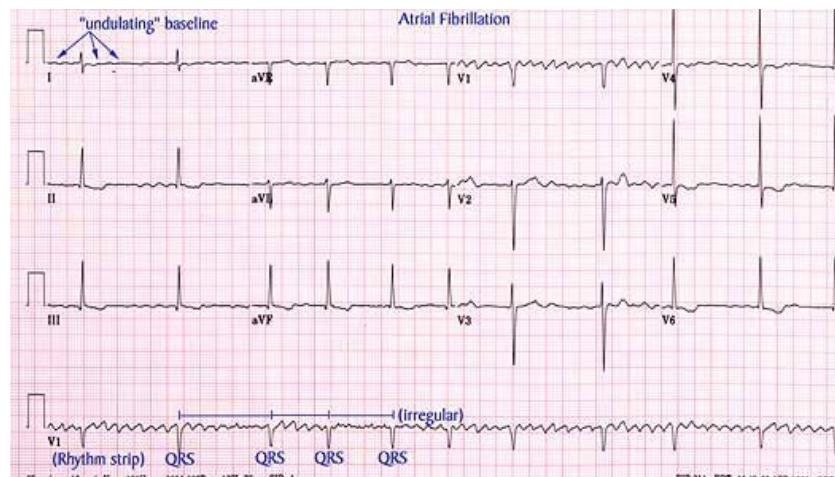
doctor can confirm if atrial fibrillation is present by using an EKG. Atrial fibrillation can sometimes come and go. So a doctor may not see it on regularly scheduled visits. One sign of atrial fibrillation is palpitations. But, many people don't feel anything when they have atrial fibrillation. These people can still get a stroke. These people should check for atrial fibrillation regularly. Finding atrial fibrillation earlier and treating it can lower the chances of a stroke.

## 5. About this Microlife Atrial Fibrillation Detector

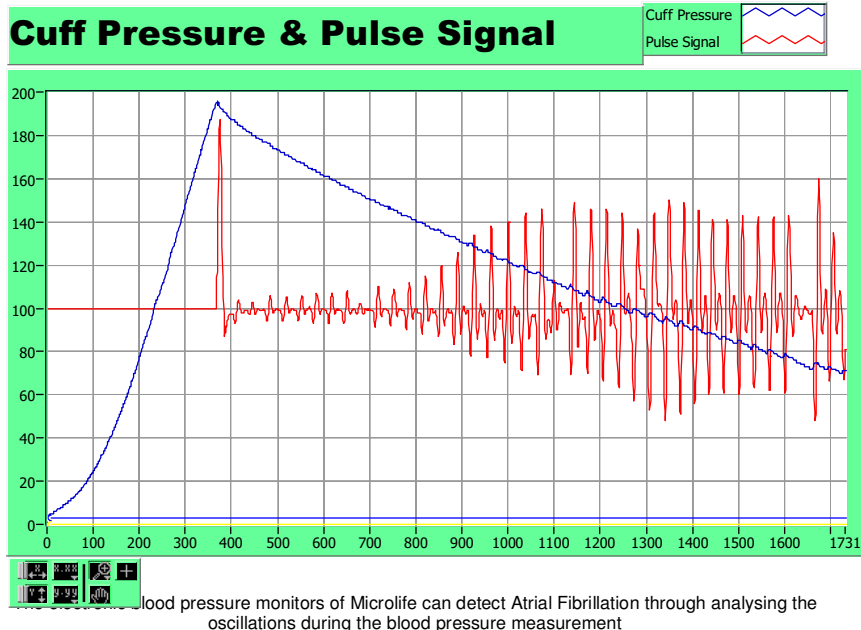
This device is designed to detect atrial fibrillation. It can detect atrial fibrillation if it is there when the blood pressure is taken. Some people can have atrial fibrillation that lasts more than a day. Those people can use this device once a day to pick up atrial fibrillation. Sometimes the device will detect atrial fibrillation even when it is not there. This can happen if the arm moves during the reading. The arm should be kept still during the reading.

Sometimes, this can happen because of other rhythm problems. People with these rhythm problems may not be able to use this device. A visit to the doctor with this device may be necessary to check out these rhythms. This device may not detect atrial fibrillation in people with pacemakers or defibrillators. People with pacemakers or defibrillators should not use this device to detect atrial fibrillation.

After one reading shows atrial fibrillation, two more readings should be done. If two or more of the readings show atrial fibrillation then it is likely to be present.



Atrial Fibrillation in the ECG



Sometimes, atrial fibrillation lasts for only a few minutes. We recommend another reading one hour after the first three readings. If reading shows atrial fibrillation then a physician should be seen as soon as possible.

Bring this device with you to the doctor. This way, the doctor can compare the device reading to the EKG reading.

## 6. Atrial fibrillation detection instructions

- Use this device regularly once a day, to increase the chances of detecting atrial fibrillation.
- If one reading shows atrial fibrillation, take two additional readings.
- If two or more of the readings show atrial fibrillation another reading should be done approximately one hour later.
- **If this last reading shows atrial fibrillation contact your doctor.**
- Bring this device with you when you see the doctor.

## 7. Information for the doctor

This device is designed to detect asymptomatic atrial fibrillation and false negative readings are rare. Though it is programmed to specifically detect atrial fibrillation, frequent premature beats, marked sinus arrhythmia or other rhythm abnormalities have been shown to cause false positive readings. If the patient had atrial fibrillation detected by the device at home, we suggest a repeat reading be done in the doctor's office. If the the atrial fibrillation icon is not displayed with the office reading then the previous abnormal readings may have been due to transient atrial fibrillation. If the atrial fibrillation icon is displayed with the office reading then we suggest obtaining an EKG immediately to determine the exact rhythm abnormality.

## 8. A-Fib and Stroke

As already mentioned before, A-Fib is the key element to cause strokes but it is not the only cause of strokes! This is why we should state "Stroke Risk Detection". It is an important tool to screen for the stroke risk. As suggested by Dr. Wiesel, we can state "This monitor detects A-Fib, a mayor risk factor of stroke".

Furthercauses of stroke next to A-Fib:

Hypertension, Diabetes, Smoking, Cholesterol

## 9. Clinical Studies

Dr. Wiesel and team performed several studies with several hundred patients that show the high reliability of A-Fib. Please refer to the study materials in detail.

Further studies should be done in Europe. Those studies are not very complex. An ECG should be obtained while BP readings are taken. The study should at least cover 20 A-Fib patients. Then it simply should be compared if device detected A-Fib while it was present on ECG or not.

During the next 2 years, Microlife should also conduct studies that show that A-Fib detection by our BP monitor reduces the stroke risk!