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Treating Atrial Fibrillation

The most common abnormal heart rhythm, atrial fibrillation (AF) is a serious medical condition that can dramatically increase the risk of stroke, heart failure and other complications. It can come and go (paroxysmal AF) and may not require treatment, or be an ongoing, long-term problem that lasts for years (persistent AF). Most AF episodes do not cause symptoms,¹ making it challenging to diagnose.

In atrial fibrillation, the upper heart chambers (atria) "fibrillate" – beat chaotically and irregularly – out of coordination with the lower heart chambers. Blood flows poorly, pooling in the heart chambers and causing clots.

How common is atrial fibrillation?

AF is a very common condition and cases are increasing. It currently affects at least 2.7 million in the US.² It affects at least 4.5 million people in the European Union and that number is forecast to increase to at least 14 million by 2030.^{3, 4} Experts believe there are many undocumented cases as symptoms are hard to detect.⁵ The condition is most common in patients over 60, and twice as common in men as women.⁶

What health issues do patients face?

AF patients are five times more likely to have a stroke,⁷ and the condition can be life-threatening. Common complications include high blood pressure, diabetes, heart failure, chronic obstructive pulmonary disease, kidney failure and cognitive impairment. Coronary artery disease, heart valve disease and cardiomyopathy often occur at the same time as AF.

Treatment options

When treatment is necessary, the heart needs to be returned to a normal rhythm. Physicians may recommend medication, procedures and/or lifestyle changes. If medication does not return the heart to a near-normal rate, electrical cardioversion can reset the heart's rhythm to its regular pattern.

Daily monitoring is often necessary to diagnose and treat atrial fibrillation. [BIOTRONIK heart monitors](#), [pacemakers](#), [implantable cardioverter defibrillators \(ICDs\)](#), and [heart failure \(CRT\) devices](#) all feature [BIOTRONIK Home Monitoring®](#), allowing physicians to remotely monitor their patients anytime, anywhere. Home Monitoring enables physicians to alter drug and device therapy at a very early stage to prevent stroke and other complications.

[BIOTRONIK DX systems](#) offer a unique lead design combined with special sensing technology, making them the only single-lead ICD systems that offer true atrial sensing. DX technology is also available in BIOTRONIK CRT-D systems.

Some AF patients may not need or be indicated for an implantable device, but can rather undergo ablation to treat their condition. Radiofrequency ablation is most common, in which heat is used to change the heart's electrical conduction system. BIOTRONIK's [gold-tipped catheters](#) make ablation as precise as possible. The recent CASTLE-AF study also found that ablation of atrial fibrillation in patients who also have heart failure was associated with reduced mortality and hospitalization rates for worsening heart failure.⁸

References:

- ¹ Munger TM et al. Journal of Biomedical Research. 2014. 28(1).
- ² CDC Atrial Fibrillation Fact Sheet, 2017.
- ³ Khawaja O et al. Nutrition Journal. 2012, 11.
- ⁴ Kirchhof et al. 2016 ESC Guidelines for the management of atrial fibrillation developed in cooperation with EACTS. European Heart Journal. Volume 37, Issue 38, 7 October 2016, Pages 2893–2962.
- ⁵ Kirchhof et al.
- ⁶ Kirchhof et al.
- ⁷ CDC Atrial Fibrillation Fact Sheet, 2017.
- ⁸ Marrouche N., Brachmann J. et al. Catheter ablation for Atrial Fibrillation with Heart Failure. New England Journal of Medicine. 2018. 378: 417-427.