Heart rate control

- Check ventricular rate in all AF patients and use rate control medications to achieve lenient rate control (<110 bpm at rest).
- Use increased dosage or additional rate control therapy in patients that continue to have symptoms due to AF.
- For patients with left ventricular ejection fraction (LVEF) ≥40%, diltiazem, verapamil, beta-blockers or digoxin can be used. Where LVEF is <40%, use beta-blockers or digoxin.

Rhythm control

- Restoring and maintaining sinus rhythm is aimed at improving AF-related symptoms in suitable patients.
- Do not use rhythm control therapy in asymptomatic AF patients, or those with permanent AF.

Acute rhythm control

• Electrical and pharmacological cardioversion can be used to restore sinus rhythm in selected patients, after considering and managing the risk of stroke.

Options for long-term rhythm control

- · Anti-arrhythmic drugs, catheter ablation and surgical AF ablation are all potential options for long-term maintenance of sinus rhythm.
- · Catheter ablation (pulmonary vein isolation) should be considered when antiarrhythmic drugs fail, or in selected patients as first-line therapy for symptomatic paroxysmal AF.
- Advanced rhythm control (including surgery) should be discussed with the patient within a multidisciplinary AF Heart Team.
- Anticoagulation for stroke prevention should be continued indefinitely in patients at high risk of stroke, even after apparently successful rhythm control.

Integrated care of AF patients

- · An integrated, structured approach to AF care is recommended to facilitate consistent, guideline-adherent AF management for all patients, with the potential to improve outcomes.
- Integrated care includes a multidisciplinary approach with cooperation of nurses specialising in AF, primary care physicians, cardiologists, stroke specialists, allied health practitioners and informed patients.

Clinical signs calling for urgent involvement of a specialized AF service

- Haemodynamic instability
- Uncontrollable rate
- Symptomatic bradycardia not amenable to reduced dosing of rate control agents
- Severe angina or worsening left ventricular function
- Transient ischaemic attack or stroke (Anticoagulation should be initiated early in all suitable patients and will not routinely require specialist input).

New applications to aid education and management of AF

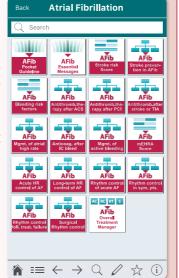
The CATCH ME Consortium (funded by EU Horizon 2020) and the ESC have developed patient and healthcare professional apps for AF.

The new patient app aims to enhance patient education and encourage active patient involvement in AF management.

The healthcare professional app is designed as an interactive management tool incorporating the new ESC Pocket Guidelines on AF.

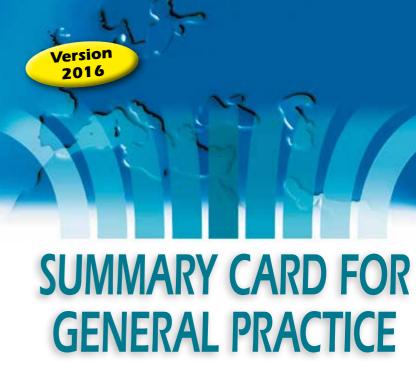
Both apps will be freely available through Google Play, Amazon and Apple App stores in 2017.

The interactive AF Treatment Manager is already available through the freely available ESC Pocket Guidelines app.



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Committee for Practice Guidelines To improve the quality of clinical practice and patient care in Europe





GUIDELINES FOR THE MANAGEMENT OF ATRIAL FIBRILLATION



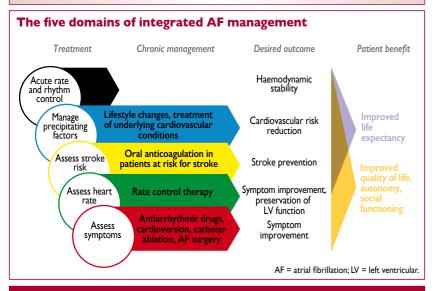
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For more information www.escardio.org/quidelines





Atrial fibrillation (AF) is the most common heart rhythm disorder, with a steep rise predicted in the number of patients in coming years. AF is one of the major causes of stroke, heart failure, sudden death, and cardiovascular morbidity, and is associated with poorer quality of life and adverse symptoms. The management of AF should include treatment of acute AF, cardiovascular risk reduction and treatment of comorbidities, stroke prevention using oral anticoagulation, heart rate control, and in selected symptomatic patients, the use of rhythm control therapy.



Diagnosis & screening

- The diagnosis of AF requires an electrocardiogram (ECG) showing irregular RR intervals and no distinct P waves for at least 30 seconds.
- ECG screening is useful in populations at risk of AF or those at high risk of stroke, including stroke survivors and older patients.
- The pattern of AF can be categorised as:
- First diagnosed
- Paroxysmal (self-terminating)
- Persistent (lasting longer than 7 days)
- Long-standing persistent (continuous for I year)
- Permanent (AF accepted by patient and physician, hence rhythm control is not pursued)

From the ESC Guidelines for the Management of Atrial Fibrillation published in the European Heart Journal (2016) 37: 2893–2962 - doi:10.1093/eurheartj/ehw210.

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Prevention & general management

- Treat underlying cardiovascular conditions adequately to prevent AF, such as hypertension, ischaemia, valvular heart disease and heart failure.
- Evaluate AF-related symptoms using the modified European Heart Rhythm Association (EHRA) score.

Modified EHRA score	Symptoms	Description	
I	None	AF does not cause any symptoms	
2a	Mild	Normal daily activity not affected by symptoms related to AF ^a	
2b	Moderate	Normal daily activity not affected by symptoms related to AF, but patient troubled by symptoms ^a	
3	Severe	Normal daily activity affected by symptoms related to AF	
4	Disabling	Normal daily activity discontinued	

AF = atrial fibrillation; EHRA = European Heart Rhythm Association.

^aEHRA Class 2a and 2b can be differentiated by evaluating whether patients are functionally affected by their AF symptoms. AF-related symptoms are most commonly fatigue/tiredness and exertional shortness of breath, or less frequently palpitations and chest pain.

- A full cardiovascular evaluation, including an accurate history, careful clinical examination, and assessment of concomitant conditions is recommended in all AF patients, and transthoracic echocardiography can help to guide management.
- Weight loss for obese patients, reducing alcohol consumption and more regular (moderate) exercise are useful lifestyle modifications.

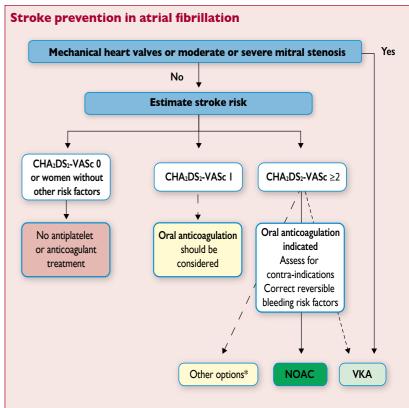
Patient involvement

- Providing tailored information and education to AF patients can empower them to support the management of their condition.
- Shared decision-making can ensure that care is based on the best available evidence and fits the needs, values, and preferences of the patient.

Stroke prevention

- One in four strokes are estimated to be caused by AF.
- Use oral anticoagulation in all AF patients unless they are at low risk for stroke based on the CHA₂DS₂-VASc score, or have absolute contraindications for anticoagulant therapy.
- When initiating anticoagulation, a non-vitamin K oral antagonist (NOAC) is preferred, except in patients with moderate-to-severe mitral stenosis, mechanical heart valves or severe kidney disease.
- Anticoagulated patients with atrial flutter similar to atrial fibrillation.
- Do not use aspirin or other antiplatelets for stroke prevention in AF.
- Reduce modifiable bleeding risk factors in all AF patients on oral anticoagulation, but do not restrict access to anticoagulation based on bleeding risks.

CHA ₂ DS ₂ -VASc risk factor	Points	Modifiable bleeding risk
Congestive heart failure Signs/symptoms of heart failure or objective evidence of reduced left-ventricular ejection fraction	+1	Hypertension (especially when systolic blood pressure is >160 mmHg) Labile INR or time in therapeutic range <60% in patients on vitamin K antagonists
Hypertension Resting blood pressure >140/90 mmHg on at least two occasions or current antihypertensive treatment	+	
Age 75 years or older	+2	
Diabetes mellitus Fasting glucose >125 mg/dL (7 mmol/L) or treatment with oral hypoglycaemic agent and/or insulin	+1	Medication predisposing to bleeding, such as antiplatelet drugs and non- steroidal anti-inflammatory drugs
Previous stroke, transient ischaemic attack, or		Excess alcohol (≥8 drinks/week)
thromboembolism	+2	Potentially modifiable bleeding risk factors
Vascular disease Previous myocardial infarction, peripheral artery	+1	Anaemia
disease, or aortic plaque		Impaired renal function
Age 65-74 years	+1	Impaired liver function
Sex category (female)	+1	Reduced platelet count or function



NOAC = Non-vitamin K oral anticoagulant (apixaban, dabigatran, edoxaban, rivaroxaban).

VKA = Vitamin K oral anticoagulant (e.g. warfarin, with INR 2.0–3.0 and time in therapeutic range kept as high as possible and closely monitored).

* No anticoagulation, or left atrial appendage exclusion if clear contra-indications for anticoagulation.