

TARGET INR BY INDICATION

Warfarin INR goals

Revised 7 July 2026

Scope. Target INR ranges and treatment durations by indication, reconciled to the 2020 ACC/AHA and 2025 ESC/EACTS valvular heart disease guidelines, the 2023 ACC/AHA/ACCP/HRS atrial fibrillation guideline, and current CHEST VTE guidance. Ranges are targets; the prescriber determines the final target. Individualize to the patient and reassess bleeding risk.

1 VTE and cardiac indications

INDICATION	INR GOAL	DURATION AND NOTES
Atrial fibrillation	2.0–3.0	Ongoing, per stroke and bleeding risk.
Elective cardioversion	2.0–3.0	3 weeks before and 4 weeks after cardioversion. Unchanged in the 2023 AF guideline.
VTE prophylaxis, post-op orthopedic e.g. hip or knee arthroplasty	2.0–3.0	Warfarin acceptable. Aspirin 81 mg twice daily is a guideline-endorsed and often preferred option for elective total hip or knee arthroplasty. UPDATED
DVT / PE	2.0–3.0	Provoked by a transient factor: 3 months. Unprovoked or persistent factor: at least 3 months, then extended or indefinite unless bleeding risk is high; reassess yearly. Extended phase: apixaban 2.5 mg BID or rivaroxaban 10 mg daily preferred. UPDATED
LV or atrial thrombus	2.0–3.0	Typically at least 3 months, then reimage and extend if thrombus persists (2022 AHA statement). A DOAC is a reasonable alternative to warfarin. UPDATED
Antiphospholipid syndrome	2.0–3.0	Warfarin preferred. Avoid DOACs in thrombotic APS, especially triple-positive patients (TRAPS). Higher intensity is reserved for recurrent or arterial events. UPDATED

DOAC eligibility. Where a DOAC is noted as preferred or a reasonable alternative, confirm renal function, drug interactions, and indication-specific labeling before switching. DOACs remain contraindicated in mechanical valves and are avoided in thrombotic antiphospholipid syndrome.

2 Bioprosthetic valve replacement

Anticoagulant use marked ** is at the discretion of the provider.

POSITION	ANTITHROMBOTIC	DURATION AND NOTES
TAVR (TAVI), no other OAC indication	ASA 75–100 mg	Single antiplatelet therapy is the default. Routine warfarin and DAPT are not recommended. Use a VKA only for a separate indication such as atrial fibrillation. REVISED
SAVR, low bleed risk **	2.0–3.0	Optional and individualized: warfarin for 3 to 6 months, then aspirin 75 to 100 mg.
Mitral position, low bleed risk **	2.0–3.0	Optional and individualized: 3 to 6 months.
Tricuspid position, low bleed risk **	2.0–3.0	Optional and individualized: 3 to 6 months.

3 Mechanical valve replacement

Lifelong vitamin K antagonist. DOACs are contraindicated in all mechanical valves.

POSITION OR VALVE	INR GOAL	NOTES
Aortic, bileaflet or single tilting-disc, no risk factors *	2.0–3.0	Target 2.5 (ESC 2025 low thrombogenicity).
Aortic, with risk factors *	2.5–3.5	Target 3.0.
Mitral position	2.5–3.5	Target 3.0. Higher thrombogenicity by position.
Mitral and aortic positions	2.5–3.5	–
Tricuspid position	2.5–3.5	–
Aortic, On-X, no risk factors	2.0–3.0 ×3 mo, then 1.5–2.0	Reduced target after the first 3 months requires aspirin 75 to 100 mg daily (2020 ACC/AHA, Class IIb). REVISED
Mitral or multiple valves, On-X	2.5–3.5	Standard intensity. PROACT Mitral did not support a lower target.

WHAT CHANGED IN THIS REVISION

- **TAVR.** Aspirin monotherapy replaces warfarin as the default. GALILEO showed routine rivaroxaban after TAVR raised death and thromboembolism (9.8 vs 7.2 per 100 person-years, HR 1.35, 95% CI 1.01 to 1.81) and bleeding.
- **Unprovoked DVT/PE.** Reframed to extended or indefinite therapy unless bleeding risk is high, rather than a fixed 6 to 12 months.
- **LV or atrial thrombus.** Duration and reimaging guidance added.
- **On-X aortic reduced INR.** The required aspirin 75 to 100 mg is now shown alongside the 1.5 to 2.0 target.
- **Antiphospholipid syndrome.** DOAC avoidance and warfarin preference added.

RISK FACTORS AND DEFINITIONS

* **Risk factors:** atrial fibrillation, prior thromboembolism, LV dysfunction, hypercoagulable state, older-generation ball-in-cage valve.

** **Anticoagulant use** at the discretion of the provider.

Mechanical valve types: ball-in-cage (Starr-Edwards); bileaflet (St. Jude, On-X, Carbomedics); single tilting-disc (Medtronic-Hall).

DOACs are contraindicated in all mechanical valves. PROACT Xa found apixaban inferior to warfarin in On-X aortic valves.

THROMBOGENICITY AND INR TARGETS • ESC 2025

Targets are set by valve thrombogenicity plus patient risk factors.

LOW

St. Jude Medical, On-X, Carbomedics, Medtronic-Hall. Aortic, no risk factors: target 2.5, range 2.0 to 3.0.

MEDIUM

Bileaflet valves with insufficient data, Bjork-Shiley.

HIGH

Lillehei-Kaster, Omniscience, Starr-Edwards; any tilting-disc; any mitral or tricuspid: target 3.0, range 2.5 to 3.5. With a risk factor, target 3.5, range 3.0 to 4.0.

KEY SOURCES

Otto CM, et al. 2020 ACC/AHA VHD guideline. *Circulation*. 2021;143:e72-e227. • Praz F, et al. 2025 ESC/EACTS VHD guideline. *Eur Heart J*. 2025;46:4635-4736. • Joglar JA, et al. 2023 ACC/AHA/ACCP/HRS AF guideline. *Circulation*. 2024;149:e1-e156. • Stevens SM, et al. Antithrombotic therapy for VTE disease: CHEST guideline. *Chest*. 2021;160:e545-e608. • Dangas GD, et al. GALILEO. *N Engl J Med*. 2020;382:120-129. • Chu MWA, et al. PROACT Mitral. *Ann Thorac Surg*. 2023;115:929-938. • Levine GN, et al. LV thrombus: AHA scientific statement. *Circulation*. 2022;146:e205-e223.

For clinician reference; individualize to the patient. **This is a guidance document; it does not replace clinical judgment or a documented order.**