

Guidelines for the management of an elevated INR, with or without bleeding

These recommendations are derived from the consensus guidelines of the Warfarin Reversal Consensus Group, on behalf of the Australasian Society of Thrombosis and Haemostasis (2004).

INR higher than the therapeutic range but < 5; bleeding absent

Lower the dose or omit the next dose of warfarin. Resume therapy at a lower dose when the INR approaches the therapeutic range.

INR 5–9; bleeding absent

Cease warfarin therapy. **If bleeding risk is high**, give vitamin K (1–2 mg orally or 0.5–1 mg intravenously). Measure INR within 24 hours, and resume warfarin at a reduced dose once INR is in the therapeutic range. The risk of bleeding increases exponentially from INR 5 to 9.

INR > 9; bleeding absent

Where there is a **low risk of bleeding**, cease warfarin therapy and give 2.5–5 mg vitamin K orally or 1 mg intravenously. Measure INR in 6–12 hours, and resume warfarin therapy at a reduced dose once INR < 5.

Where there is a **high risk of bleeding**, cease warfarin therapy and give 1 mg vitamin K intravenously. Consider Prothrombinex-VF (25–50 IU/kg) and fresh frozen plasma (150–300 mL). Measure INR in 6–12 hours, and resume warfarin therapy at a reduced dose once INR < 5.

(Examples of patients with a high bleeding risk include those with active GIT disorders, those receiving concomitant antiplatelet therapy, those who underwent a major surgical procedure within the previous two weeks, and those with a low platelet count.)

Any clinically significant bleeding

Cease warfarin therapy and give 5–10 mg vitamin K intravenously, as well as Prothrombinex-VF (25–50 IU/kg) and fresh frozen plasma (150–300 mL). Assess patient continuously until INR < 5 and bleeding stops.

Or, if fresh frozen plasma is unavailable, cease warfarin therapy and give 5–10 mg vitamin K intravenously and Prothrombinex-VF (25–50 IU/kg). Assess patient continuously until INR < 5 and bleeding stops.

Or, if Prothrombinex-VF is unavailable, cease warfarin therapy and give 5–10 mg vitamin K intravenously and 10–15 mL/kg fresh frozen plasma. Assess patient continuously until INR < 5 and bleeding stops.

In all situations, carefully reassess the need for ongoing warfarin therapy.

Note: The injectable form of vitamin K can be taken orally for dosing flexibility.