

Improve Safety With Injectable Anticoagulants

Questions still come up about **properly dispensing injectable anticoagulants (enoxaparin, dalteparin, etc) for blood clots.**

Patients are getting these subcutaneous “low-molecular-weight heparins” (LMWHs) less often...now that direct oral anticoagulants (apixaban, rivaroxaban, etc) are usually preferred.

So when injectable blood thinners are needed, it can be tricky to remember how to dispense them correctly.

Plus they're “high-alert” meds...meaning that even small errors can cause significant patient harm.

Take steps to prevent problems with injectable anticoagulants.

Ask patients for their weight...and document it in their profile. This will help the pharmacist check that the dose is appropriate.

For example, patients with a low body weight may be at increased bleeding risk with normal doses of enoxaparin.

On the other hand, those who have obesity may need higher doses, and may require the patient to use more than one syringe per dose.

Ensure medical conditions on file are current. For instance, patients with severe kidney disease may need lower doses of enoxaparin...since it can accumulate in the body and increase bleeding risk.

Look carefully at the drug strength during product selection. Enoxaparin comes in SEVEN strengths...some with similar-looking packaging.

Review Rx notes for any additional instructions for the patient...and include these on the Rx label. This is especially important when doses are LESS than what's in a standard syringe.

For example, patients prescribed enoxaparin 90 mg/dose would need a 100 mg/mL syringe...since enoxaparin doesn't come in a 90 mg strength. And they'd inject ONLY 0.9 mL (90 mg)...instead of the full 1 mL (100 mg).

Double-check how to enter the quantity of enoxaparin into the computer system...either as milliliters (mL) or the number of syringes.

For instance, entering an Rx for “enoxaparin 30 mg/0.3 mL bid for 7 days” as mL would require entering a quantity of 4.2 mL (0.3 mL/dose x 2 doses/day x 7 days = 4.2 mL)...and dispensing 14 enoxaparin 30 mg/0.3 mL syringes.

Send patients getting injectable anticoagulants to the pharmacist for counselling on injection technique, side effects, etc.

Explore our resource, Appropriate Use of Anticoagulants, for other ways to improve safety.

Key References:

- Liu J, Qiao X, Wu M, et al. Strategies involving low-molecular-weight heparin for the treatment and prevention of venous thromboembolism in patients with obesity: A systematic review and meta-analysis. *Front Endocrinol (Lausanne)*. 2023 Mar 8;14:1084511.
- Chilbert MR, Zammit K, Ahmed U, et al. A systematic review of therapeutic enoxaparin dosing in obesity. *J Thromb Thrombolysis*. 2024 Apr;57(4):587-597.
- Witt DM, Nieuwlaat R, Clark NP, et al. American Society of Hematology 2018 guidelines for management of venous thromboembolism: optimal management of anticoagulation therapy. November 27, 2018. <https://ashpublications.org/bloodadvances/article/2/22/3257/16107/American-Society-of-Hematology-2018->

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guidelines-for (Accessed July 19, 2024).

-Sebaaly J, Covert K. Enoxaparin Dosing at Extremes of Weight: Literature Review and Dosing Recommendations. Ann Pharmacother. 2018 Sep;52(9):898-909.

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